EMERGING IDENTITY AND COMMUNITY IN THE LAMOINE RIVER VALLEY DURING THE EARLY LATE WOODLAND PERIOD: EXAMINING THE CARTER CREEK SITE AS A CASE STUDY

BY

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DISSERTATION

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ABSTRACT

This study attempts to understand how the Middle to Late Woodland period transition resulted in a dynamic and tumultuous early Late Woodland period (250-800 CE) in west-central Illinois and the surrounding regions. This period has long been defined for its drab material culture, but this study adds nuance to this period by looking at the emergence of identities, and the styles that express them, immediately following this transition. The focus of this study is at the Carter Creek site, located in the uplands adjacent to the LaMoine River Valley drainage, and is on the ceramic production techniques used there. I argue that Carter Creek, and other early Late Woodland circular or arcuate villages, were places at which the Middle to Late Woodland transition was directly felt through quotidian practices and interactions. These interactions resulted in a turbulent atmosphere defined by a lack of sameness across the wider region that is reflected in the overall heterogeneity of ceramic vessels during this period.

To examine the emergences of identities and styles, I view this transitional period through the lens of assemblage theory, taking a relational approach that focuses on humans, spaces, places, and things, all at an equivalent level. In taking this approach, I recognize that identity (at multiple scales) and style emerge from the interactions between these people, places, spaces, and things, forming into real and affective assemblages that produce effects in the world. I use the analytical details of things to show how identities and styles assembled across this period, both geographically and temporally, at numerous sites, including Carter Creek, Gast Farm, Rosewood, White Bend, Sartorius, Sartorial Splendor, and Buffalo Chip. Through this examination, the territorialization, deterritorialization, and reterritorialization of past Middle Woodland and newly emergent Late Woodland identities can be traced.

The sites used in this study span the entirety of the early Late Woodland period both in the LaMoine River Valley and in the surrounding regions. Each of these sites shows the unique ways that identities and styles territorialized during the upheaval of the Middle to Late Woodland transition, dependent on the contexts in which people lived. Carter Creek and Rosewood were places at which Middle Woodland identities and styles deterritorialized through active choices to move away from Middle Woodland practices and spaces, such as mounds. Gast Farm and White Bend were places at which the proximity of Middle Woodland spaces and things afforded for both a reterritorialization of Middle Woodland identities and styles, and a territorialization of newly emergent Late Woodland identities and styles. Buffalo Chip and Sartorius/Sartorial Splendor show the ways that the latter portion of the early Late Woodland period had calmed. In the immediate aftermath of the Middle to Late Woodland transition a tumultuous atmosphere emerged, but as this period progressed, this initial chaos subsided, and wider community identities were able to territorialize.

To Barbara J. Kingan (Mom) and Margie Ball (Nana)

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CHAPTER 1: INTRODUCTION

As technology evolves and the world continues to move at a faster pace, people are forced to face constant changes in their lifeways. These changes can be as large as the climatic shifts seen across the globe or as small as the ways in which people now interact through digital platforms. This constant shifting is negotiated on an everyday basis. By understanding how past people negotiated major transitions researchers can better understand how present-day populations can address the constant changes they have to endure. One period in the past that has been relatively understudied, but which could provide archaeologists further knowledge about the negotiation of these transitions, is the shift from the Middle Woodland (100 BCE-300 CE) to the early Late Woodland period (250-800CE) in west-central Illinois. In particular, the LaMoine River Valley in west-central Illinois and the Weaver groups who occupied the region during this period offer a unique case study through which one can see how people negotiate major transitions through the formation and reformation of social identities at multiple scales.

The nature of the shift from the Middle to the Late Woodland has been discussed in various ways, most often relying on a narrative driven by changes in subsistence (Griffin 1960; Hall 1980) or climatic shifts (e.g., Byers 2015; McElrath et al. 2000). Archaeologists have developed good trait lists of various Late Woodland "phases" or "cultures" that can be used to see the major differences between the two periods, and differences within the Late Woodland period itself (e.g., Benn and Green 2000; Green and Nolan 2000; Studenmund 2000). This dissertation project adds to our existing knowledge and offers a unique perspective by using a multiscalar approach that looks at how different groups during the early Late Woodland in Illinois were forming unique identities at household and community levels, and how these different identities were interacting, creating a dynamic early Late Woodland landscape.

As archaeologists have tried to understand the sudden shift from the Middle Woodland to the Late Woodland period in Illinois, they have relied on the concept of the "frontier". Frontiers have often been defined as "underdeveloped or unoccupied areas that [undergo] colonization by a population from an adjacent or distant territory" (Lerner 1984:67). However, in the case of the Late Woodland period a better understanding is of frontiers as "open areas nestling between organized societies, but 'internal' to the larger region in which they are found" (Kopytoff 1987:9). Green (1987, 1993) developed this understanding into a "frontier model" for this period and the specific region on which this dissertation project focuses. Within such a frontier, "numerous new, small-scale, and independent political formations" may develop (Kopytoff 1987:11). The edges of these frontiers are "places of interaction, innovation, and perhaps ethnogenesis" (Green and Nolan 2000:349-350). One can see evidence of the emergence of early Late Woodland identities, households, and communities within and at the edges of these frontiers. Understanding how various identities formed, re-formed, and interacted can tell us about how and why Late Woodland peoples abandoned previously dominant ideologies and practices, and developed new lifeways in new physical and social environments.

To better understand this transition and the newly forming cultural landscape, this dissertation project focuses on the different scales of identity expressed by people along and within an emerging frontier. In particular, how people expressed their belonging in a community and as part of a household can provide archaeologists with evidence of how people negotiated such a major transition. To understand these scales of identity, I employ a relational approach (e.g., Fowler 2010) which views communities and households as assemblages of "people, places, animals, and things bound together…by particular kinds of practice" (Harris 2014:92), both on a physical level and in an "imagined" sense (Anderson 1983). I approach the various parts of a community by applying a concept of style to understand the material assemblages during this period as expressing a "specific manner of doing something" (Sackett 1977: 370) that "transmits information about personal and social identity" (Wiessner 1983: 256). Understanding this expression of identity at multiple scales is central to better understanding this transition and the ways people negotiated their shifting lifeways.

Engaging with these theoretical perspectives on identity, community, households, and style will draw on a wealth of literature that establishes these perspectives as both useful and necessary to understanding our past through the discipline of archaeology. These scales of identity are not static but are active and ever emerging through the stylistic choices people made during this period and the contexts in which those choices were made. As Fowler (2010: 361) observes, identity emerges through "social, political, and cultural relationships," and it is constantly changing at the intersections of these relationships (Diaz Andreu et al. 2005). At the scale of a community, Harris (2014:92, emphasis in original) points out that "communities are not something people and materials have; rather, they are what people and materials *do*". Households, as "emergent institutions" (Wilk 1997:37) can also fit neatly into this perspective as another scale of ever emergent identity through the conduct of everyday tasks. The concept of style ties all of this together as a way of viewing the specific ways people living during this period were engaged in a manner that created affective ties to other people, places, and things (e.g., Hodder 1990).

Bringing all of these theoretical approaches together allows for the multiscalar approach that I use to understand this transitionary time period. This approach is vital for understanding the past through archaeology and is also applicable for understanding the present and the continued changes that all people face. The actions through which different scales of identity emerge are part of everyday life which intertwine with a wider social and cultural landscape to create a constant shifting of identities, communities, and households (e.g., Overholtzer and Robin 2015). These activities, as expressed through style, likely become even more important during times of stress (Bowser 2000) like those faced in the present day, such as major climatic shifts and the loss of individual rights. Therefore, it is vital to understand the ways in which these past practices and the identities that emerge through them intersected, overlapped, and formed during major transitions.

Research Objectives

In this dissertation, I seek to understand how people during the Camp Creek Phase (250-500 CE) of the early Late Woodland period (250-800 CE) in west-central Illinois, specifically at the Carter Creek site (11-Md-817) (see Figure 1.1), were negotiating the formation of newly emerging identities at the household and community level through stylistic expression. I focus on the formation of community and households as different scales of social identities, discerned through stylistic choices made by people in the past. This research explores how these scales of identities emerged through these stylistic choices and intersected to create a dynamic cultural landscape during this period.

My interest in this research stems from the intrigue of how people deal with great turmoil and change. Although my research interests first pushed me towards the cultural patterns of the Middle Woodland period, the nature of the transition from the grandiose Middle Woodland to the less striking early Late Woodland greatly piqued my interest. The understudied nature of this period creates a void of understanding that I hope to help fill. This research compares materials and spaces across the Late Woodland period, both geographically and temporally, in a way that I hope can begin to bring a deeper understanding to the shifting lifeways of that period.

The foundation of this research comes from two main questions: How were the social identities of people at the Carter Creek site tied to a shared past (both locally and regionally)? And how were the social identities of people at the Carter Creek site unique? I am interested in how people during this period actively structured households and communities through the stylistic expression of ceramic decoration and formation, chert tools, use of space, and structuring of space. What were the similarities between these expressions at the Carter Creek site and earlier habitations from the Middle Woodland period? What were the similarities between the Carter Creek site and other early Late Woodland sites both locally and regionally? In answering these questions, I hope to explore how these identities developed and how they can be used to define the early Late Woodland cultural landscape. How do the similarities and differences between these sites reflect a negotiation of the changing cultural, social, and political landscapes?

Significance

The early Late Woodland period in west-central Illinois, and throughout much of the Midwest, is vastly understudied compared to the Middle Woodland and the later Mississippian periods. The Late Woodland period has even been referred to as that of the "good gray cultures" (Williams 1963:297) due to the seemingly less extravagant nature of artifacts. This project adds a great deal to understanding this period and the wider cultural landscape which developed during it, both within the local study area and at a wider regional level. This research allows the early Late Woodland period to be seen as dynamic in its own right. This project also adds to a growing body of studies on how humans respond to climatic shifts, and broader transitions in general (e.g., Jorgensen et al. 2019), and the ways the lessons of such studies can help us to understand the transitions faced by present day populations.

Much of the work done during this period has focused on the more technical side of archaeology, where numerous site reports have been produced (e.g., Fishel 2012f), creating a great deal of data that few have had the opportunity to apply a deeper theoretical perspective to. This is not to say that there have not been formative texts on this period and the Late Woodland as a whole (see Emerson, McElrath, and Fortier 2000) or that archaeologists have not tried to better understand this period by applying larger theoretical ideas and models. Instead, the significance of this research is in pulling together this data and applying a unique theoretical lens from which to view it.

The theoretical foundation of this dissertation comes from a recently developed “third wave” of identity theory which seeks to apply ideas from the “ontological turn” in archaeology (e.g., Alberti et al. 2011) to the concept of identity. I take a similar approach to understanding community and household as scales of identity, and style as something that emerges alongside identity. By using ideas of identity, community, household, and style together, I offer a fresh perspective on the ways people living during this period negotiated their lives at different scales. This research thus produces a strong theoretical foundation for future work to build from. Although the assemblage-based approach I take is not new or unique to archaeology as a discipline, it is a first attempt at this kind of analysis applied to the Late Woodland period and it can create a foundation from which future research can build.

At a wider level, I work to add to a large knowledge base about how past peoples have negotiated climatic shifts, and how this can inform us about what strategies we can use today. For example, Jorgenson et al. (2019) recently combined data across various social sciences to look at the ways past peoples have responded to climate change and how we can use this knowledge to better devise present-day strategies. In doing so, they point out eight avenues for future research that are vital to the advancement of these kinds of studies. Two of these avenues relate directly to this research.

Their first avenue focuses on "a significant need to fill data gaps at household, community, and other local levels," (Jorgenson et al. 2019:11). This dissertation project undertakes this task by examining households at the Carter Creek site to see how people were negotiating a major climatic shift, and social changes, in their everyday practices and interactions. Another avenue points to the "need for much more systematic cross-regional comparisons" of these kinds of transitions (Jorgenson et al. 2019:11). While this research project does not specifically focus on cross-regional comparisons, it adds to a growing foundation of knowledge about human-environment relationships. By doing so, I facilitate future comparison of this research to others, both in different regions and during different periods in history. By providing household-level data in an understudied region, I expand social scientific knowledge that aids future researchers as they discern to identify past strategies that can aid present-day populations in their inevitable struggles with changing climate.

Beyond the climatic shifts seen during the Late Woodland period, the social changes that occurred were also drastic, clearly leading to changes in people's lifeways. Kintigh et al. (2014) defined numerous "challenges" for archaeologists as we move into our future research. As part of this, they compiled a list of topics and questions that archaeologists should look to address.

My research helps in answering some of these challenges. Specifically, Kintigh et al. (2014:880) ask: “How and why do small-scale human communities grow into spatially and demographically larger and politically more complex entities?” and “Why does migration occur and why do migrant groups maintain identities in some circumstances and adopt new ones in others?”. Regarding the first question, this project provides insights into aspects of complexity by contributing to a long-term understanding of cultural dynamics in the Midwestern region. These dynamics certainly played a part in the rise of the complex, Mississippian, culture of Cahokia only a couple hundred years after Weaver materials were no longer found in the archaeological record. My research also specifically relates to the second question posed by Kintigh and his colleagues. By using style to locate identity in cultural practices during the early Late Woodland period, I address why and how groups migrating into the uplands of west-central Illinois did (or did not) maintain ties to their Middle Woodland pasts. My research also tracks how these ties shifted over a wider region, pointing to the varying strategies employed by these groups in expressing their identities over an extended period of time.

My hope is that this dissertation project brings together data from the Carter Creek site and other comparable local and regional sites to shine a light on how identity emerges at multiple scales in a way that allowed for adaptation to shifting cultural landscapes. I hope this project serves the purpose I think we all share in studying the past through archaeology. As Harris (2016:32) states, “it is only by realizing what human beings have in common, not a shared natural biology, but a historical trajectory…that we can trace long-term connections into both the past and the future.”

Approach and Units of Analysis

I approach this research with an understanding of identity as emerging from active conduct (seen as style) and the relationships from which these cultural practices emerge (assemblages) at multiple scales, including the household and community. To do this, I use archaeological data from my excavations at the Carter Creek site, alongside previous data from earlier excavations at Cater Creek to compare to data from other early Late Woodland sites in the region. Through this, I create a robust understanding of the lives of people at the Carter Creek site and the styles through which they expressed their social identities. Combining understandings of identity, community, household, and style permits me to apply a multiscalar approach that allows me to test how people at the Carter Creek site defined their identities in comparison to the past and to other contemporaneous peoples. More specifically, I analyze a household unit at Carter Creek and compare this to households investigated at other sites in the region. I also compare larger site-level data from Carter Creek to other sites.

This research uses multiple lines of evidence to test what differences existed between households and sites during the early Late Woodland period and how those divergences afforded the emergence of varied or similar identities. By defining a household at Carter Creek, I establish a baseline from which I compare other households to test for these differences. The site-level data from Carter Creek is then employed as a baseline to test for differences between other similar sites.

A primary focus of this research is on an excavated household structure and its associated pit features from the Carter Creek site which exhibits an oval-shape (defined by the presence of postmolds). I also use data collected from 1984 excavations at Carter Creek which examined half of a similar oval-shaped structure and its associated pits; data from additional pits associated with this structure that were excavated in 2020 are also analyzed (Figure 1.2). I use ceramic, lithic, feature, and spatial data from these two households to compare to households from the Buffalo Chip (11MG162), Rosewood, Sartorius (11HA360), and Sartorial Splendor (11HA949) sites (See Figure 1.1). I use site level data from Carter Creek to compare with White Bend (11HA398), Rosewood, and Gast Farm (13LA12) sites. The main driver of this dissertation is ceramic data, although the remaining analyses are important in producing a better picture of this period. Ceramic data provides the best view of style during this period.

Organization

After this introduction, I will begin by exploring and defining the theoretical base of this study in Chapter 2. In this chapter, I will examine the history of style, identity, households, and community in archaeological literature. I will then use these histories to define how I will use each term in this study, coming from an assemblage theory perspective. This perspective recognizes the relational nature of people, places, and things, while allowing for a deeper understanding of the past by tracing these relationships as they emerge through analytical data. I then discuss the ways that these assemblages can be explored using the items that archaeologists uncover. I end this chapter by offering a brief explanation for how this theoretical foundation can be applied to data from the early Late Woodland period and what my expectations for the application of this foundation are.

In Chapter 3, I explore the wider culture-history of west-central Illinois, starting with a description of the environmental setting in which this study takes place. I then examine the ways in which the Middle and Late Woodland periods have been framed by archaeologists up to this point, offering commentary on the ways in which these framings have been unsuccessful. I specifically focus on the Frontier Model (Green 1987, 1993; Green and Nolan 2000) and the ways that this framework was developed for west-central Illinois and the Carter Creek site. I also discuss the ways that World Renewal Rituals and flooding are important for understanding both the Middle and early Late Woodland periods. I then lay out a more materially focused history of the early Late Woodland period throughout the wider region, especially focusing on the regions from which I use comparative site data. I end this chapter by summarizing the Middle to Late Woodland transition and the ways in which archaeological studies in this region have set the table for this study.

In Chapter 4, I present the field and lab methods used for this study, along with a brief site history for each site that is discussed extensively in this dissertation. I start with an in-depth discussion about the history of investigations at Carter Creek and the methods that I employed during my 2020 excavations and subsequent lab analysis. I specify how each material category considered in this study was analyzed. I then offer a brief history of investigation for each of the other sites considered in this study, presenting them in alphabetical order. I end the chapter by briefly noting the ways that these methods allow for the tracing of assemblages through the archaeological record.

In Chapter 5 and 6, I explore detailed artifact and feature data from each of the sites discussed in this study. I start with a detailed description of the data from Carter Creek, discussing the unique artifacts and features that were uncovered. I then offer a summary of the data from each of the remaining sites, also pointing to unique artifacts and features from each of them. In Chapter 6, I define the structures at Carter Creek and explore their uses based on the data that was gathered during excavations at the site. To end both chapters, I briefly compare

Carter Creek and the other sites discussed to show the kinds of assemblages and information that can be traced through even simple datasets.

In Chapter 7, I bring all of the data from the preceding chapters together using assemblage theory to show how identities and styles were territorializing at Carter Creek and throughout the wider region. I start by examining the emergence of style and identity at Carter Creek at both of the structures identified. I then examine the emergences of styles and identities at each of the other sites discussed, noting places where a comparison to Carter Creek is warranted. I end this chapter by offering a narrative of the Middle to Late Woodland transition through an assemblage theory lens, as seen at Carter Creek and throughout the region. To do this, I explore the data presented in this study in a regional context. As I show, tracing style and identity assemblages at Carter Creek and throughout the early Late Woodland period highlights the tumultuous nature of this period and the ways in which it settled as time progresses farther away from the Middle Woodland period. These emergences took place within and produced a dynamic landscape that is far from drab or grey. I then end this dissertation in Chapter 8 by offering a brief conclusion that demonstrates the ways in which this study can aid future archaeological research in this region and time period.

By using an assemblage theory approach, I hope I am able to show how the relationships between people, places, spaces, and things produced tangible and affective assemblages that had real effects on the people living during the early Late Woodland period. These effects were felt and experienced on a daily basis. In doing this, I aim to highlight the various processes that resulted in the early Late Woodland landscape that archaeologists uncover today. My ultimate goal in producing this study is to show how the early Late Woodland period is dynamic and complex in its own unique ways, thus demonstrating how this period is more than a placeholder between the Middle Woodland and Mississippian periods.

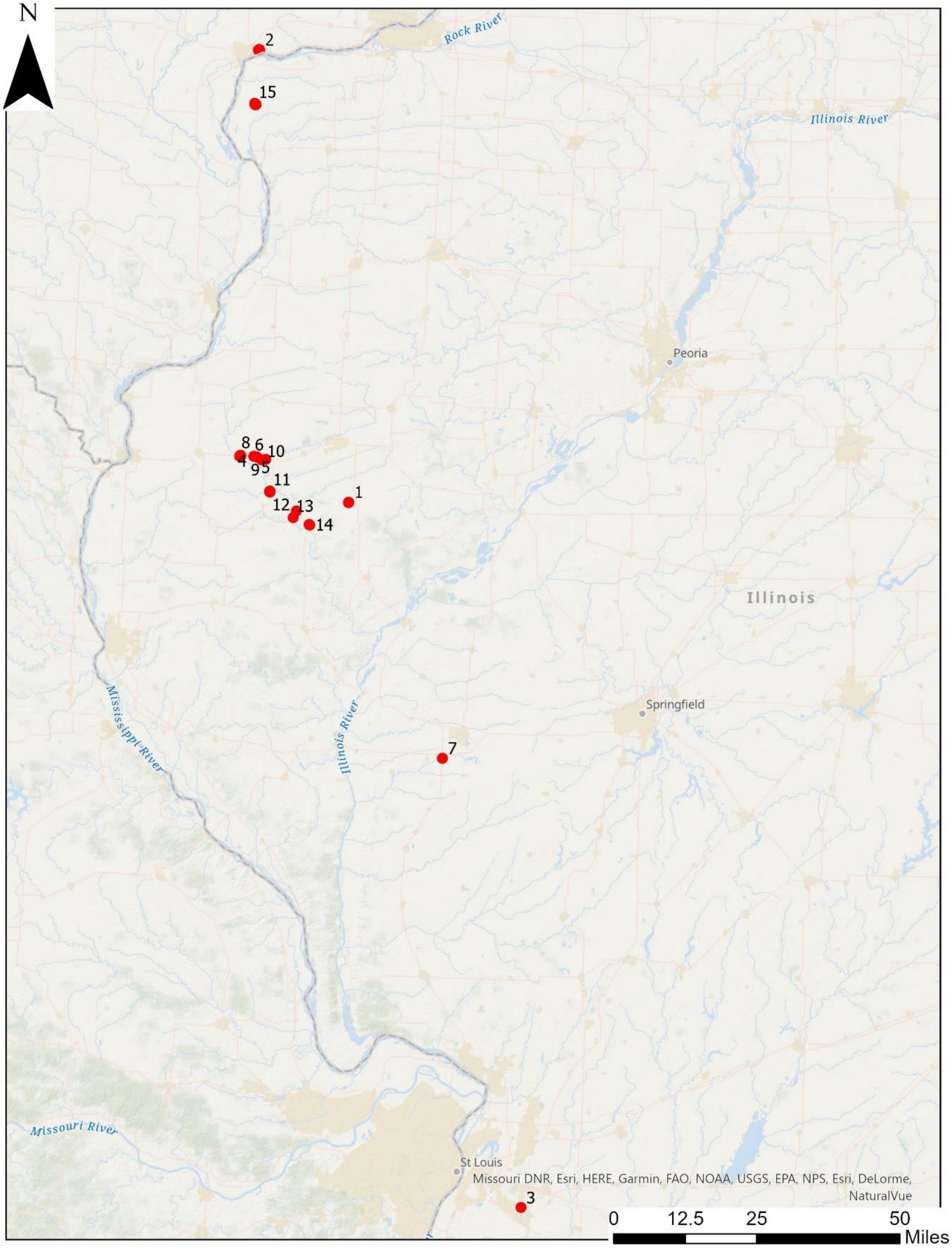

Figure 1.1: A map of sites mentioned in this dissertation in the wider west-central Illinois region. 1) Carter Creek, 2) Gast farm, 3) Rosewood, 4) White Bend, 5) Sartorius, 6) Sartorial Splendor, 7) Buffalo Chip, 8) Marlin Miller #2, 9) Kost #3, 10) Cooper #3, 11) Bell's Terrace, 12) Friendly Neighbor, 13) Dobey, 14) Tortured Oak, 15) Marseton #2.

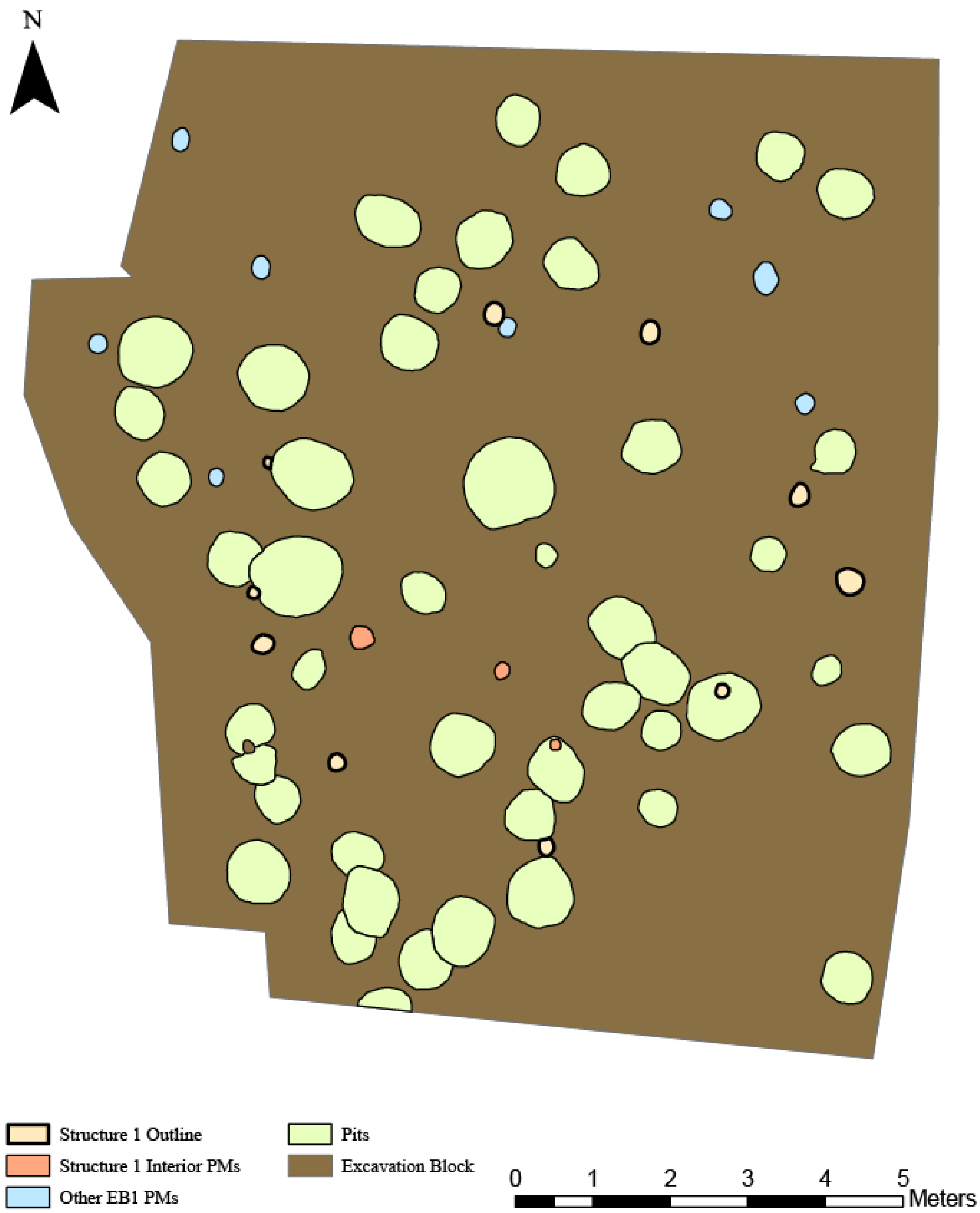

Figure 1.2a: Excavation Block 1 (EB1) from Carter Creek showing all features including pits and postmolds (PMs).

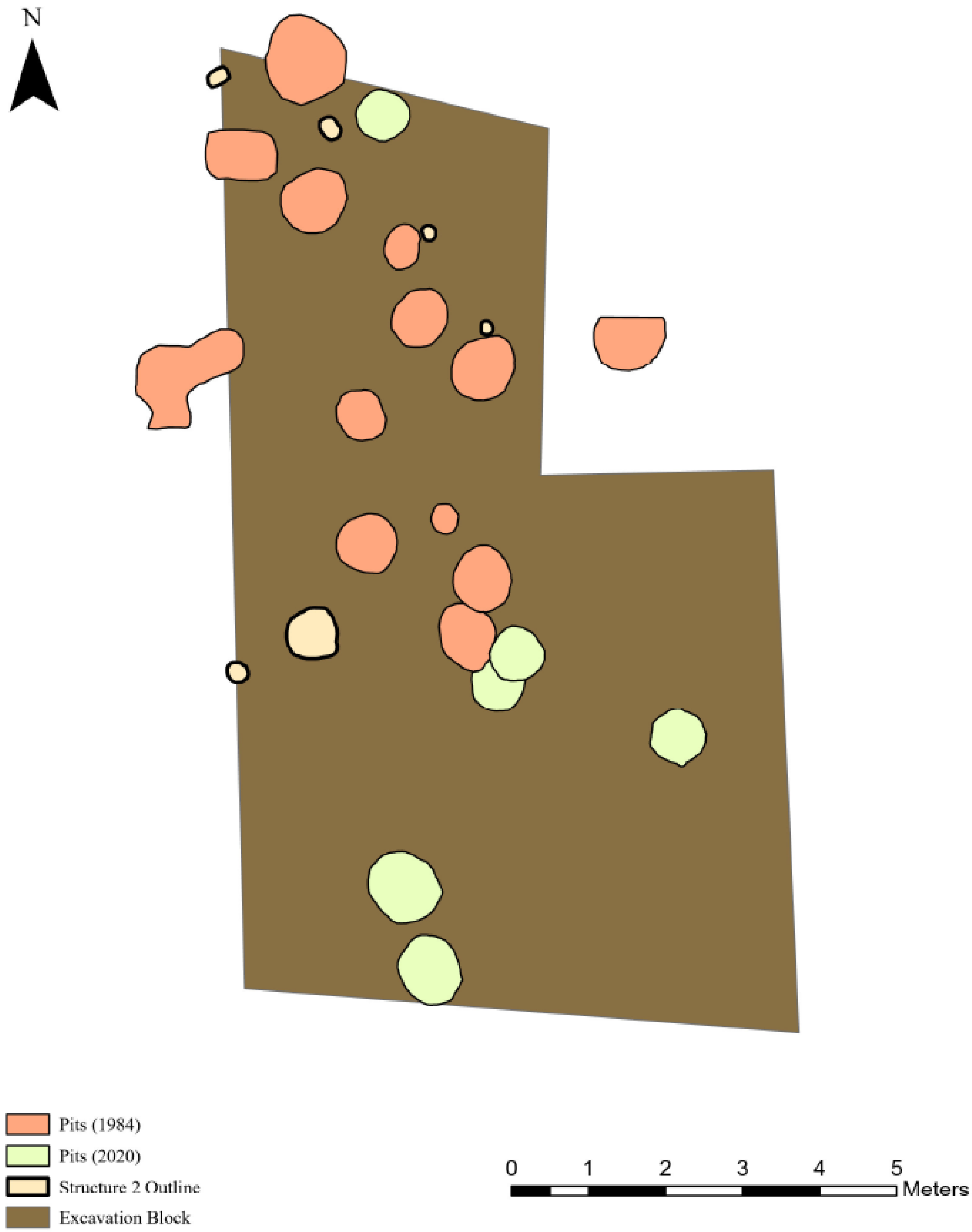

Figure 1.2b: Excavation Block 1 (EB1) from Carter Creek showing all features including pits and postmolds (PMs) from both 2020 and 1984 excavations.

CHAPTER 2: IDENTITY, COMMUNITY, HOUSEHOLD, AND STYLISTIC EXPRESSION

Identity, at its multiple scales and multiple “types” is inherently relational, ever emerging from relationships between people, places, and things (Beck 2018; Harris 2016; Salazar et al. 2022). Identity is fluid, dynamic, and an important way people negotiate their experiences in the world (e.g., Pierce 2016); such as negotiating major transitions in lifeways like identity formation in relation to migration (Halstad McGuire 2016). One way people express and form this identity, I will argue, is through the creation and emergence of style in material culture (e.g., Wiessner 1984). In this sense, identity, at both the household and community levels, can be used to understand how people at Carter Creek, and throughout the early Late Woodland period (250-800 CE) in general, negotiated major shifts in their cultural landscapes related to the diminishment of Havana-Hopewell practices and the rise what have generally been considered more drab lifeways and stylistic expressions (e.g., McElrath et al. 2000; Williams 1963).

Understanding these shifts in the cultural landscape during the early Late Woodland period through this lens allows me to examine how people at Carter Creek, and other sites in the region, were forming newly emergent identities in ways that kept them both tied to the past and fluid in connecting to the newly coalescing world around them. By taking an approach that views identity as relational and emergent, I explore how groups formed from the relationships between people, places, and things through their everyday doings and stylistic expressions. As will be discussed more below, the emergence of these identities was not singular, but instead was diverse both within and between the sites explored in this dissertation. These scales of identity are not separate from one another but interact across time and space. People have multiple identities at once and these identities interact with, and inform, one another (e.g., Gilchrist 2007).

Therefore, it is through these interactions, from the everyday practices of people to the larger social formations these people were a part of, that we can investigate and understand this period better.

In this chapter, I provide an overview of the development of the concepts of identity, household, community, and style, especially as they relate to the way I employ these terms. After exploring and defining these concepts, I explain how we can interpret them through the archaeological record. At the end of this chapter, I briefly outline my plan for this research. In the chapters following this one, I better define what styles and identities emerged during this period and what an early Late Woodland household entailed, whereas this chapter focuses on these concepts on a broader level.

Identity, Community, Household, and Style: A Brief History

To better understand, contextualize, and use larger theoretical concepts, archaeologists must have a basic grasp on the history of their development. Exploring the history of these concepts could, of course, go back many centuries and likely produce many volumes of information. Because of this, I am not attempting to write a comprehensive history of the theoretical concepts I am using to guide this research; instead, I want to offer a brief, somewhat more recent history of each term to better contextualize how I define and employ it throughout this dissertation.

Identity

Identity, for the purposes of my research, is the foundation from which my theoretical perspective is built. The concepts of community and household can both be considered different types of identity emerging at different scales from which archaeological interpretations can be made. Style can be seen as a way to express these identities. At the same time, identity can often be a catch-all term with a wide variety of meanings (e.g., Fowler 2010; Hall 1997), which can leave its potential as a theoretical concept lacking. I strictly define identity as I employ the concept later in this discussion, but I first want to provide a brief history of the concept as it relates to archaeology in general.

Numerous authors have offered detailed summaries of identity and its use in anthropological and archaeological literature and research (e.g., Casella and Fowler 2005; Diaz-Andreu et al. 2005; Insoll 2007; see Fowler (2010) for an especially detailed account). Meskell (2002) showed that the use of the terms “identity” and “politics” at Society for American Archaeology (SAA) meetings increased dramatically from 1999-2001 when compared to the years 1991-1998. Maldanado and Russell (2016:6) have since examined the use of “identity” and “identities” in article titles and abstracts across 28 archaeological journals from 2000-2013. They found that there were noticeable “waves” in its usage, often associated with the publication of influential handbooks on the topic (and it was a volume on identity in which this information was presented, so it would be interesting to see if they set off another “wave” of interest). In between these waves of interest were questions about whether identity is worthwhile to use as a theoretical perspective (e.g., Joffe 2003; Olsen 2001). Yet, we keep coming back to it. Altogether, these examinations of identity show that it is a term which archaeologists cannot do without. Another way to view these trends is that “identity is worth studying not *despite* its slippery nature, but *because* of it” (Maldanado and Russell 2016:10-11, emphasis in original).

Rather than exploring these waves identified by Maldanado and Russell (2016) in detail, I want to offer a brief explanation as to what each wave signified in identity research and how it moved our use of the term forward. Most reviews begin their discussion of identity with the emergence of the cultural-historical approach pioneered by the works of Vere Gordon Childe (e.g., Childe 1926), in which he led archaeologists to identifying ethnic groups by the co-presence of artifact types. This was not necessarily the first wave of identity theory, but it represented a key foundation in archaeological literature.

The true “first wave,” according to Maldanado and Russell (2016:7), came in the 1980s and 1990s and is exemplified by the works of Hobsbawm (1983) and Anderson (1991) as Marxist critiques of identity theory focused on the creation of a collective identity. The second wave was represented by works from Conkey and Spector (1984), Meskell (1996, 1999, 2002), and Gilchrist (1994, 1999) and concerned issues of somatic and sensuous engagement with the world. These perspectives moved beyond the national and ethnic identities that were previously identified and added categories of sex, gender, social status, and race into the mix. After this second wave, Maldanado and Russell (2016:8) note that identity was so heavily deconstructed that it had seemingly lost purpose as an analytical tool. Theoretical perspectives such as object biographies (e.g., Gosden and Marshall 1999) and phenomenological approaches (e.g., Tilley 2004), among numerous others (e.g., Harris and Robb 2012), moved identity to the side as archaeologists began to question if humanity or things were the true center of our investigations. Objects and things began to matter more than they ever had.

From this lull in identity theory and research, Maldanado and Russell (2016:8) argue, came the emergence of a “third wave” alongside the “ontological turn” (e.g., Alberti et al. 2011; Webmoor 2007). This turn allowed for identity to be viewed from a different perspective, one not focused on “finding identity, but on the processes by which [it] emerges through living in a material world,” (Maldanado and Russell 2016:8). I use this third wave as the foundation for my theoretical perspective throughout this dissertation: identity as assemblage (Harris 2016). As I will explain later in this chapter, the goal of my research is not to determine an early Late Woodland identity as a concrete entity in the past, but rather to locate the emergence of identities during this period through the interactions of people, places, and things we see in the archaeological record.

Community

Community can be considered as a different type of identity at a particular scale. Conceptions of communities in archaeological research have their own unique history outside that of identity. Just as with identity, I do not attempt to provide a comprehensive history of the term and its many definitions. Similar to, and often parallel with, identity, the definition of community can be seen as too wide-ranging to have any real use in archaeological research. As Mac Sweeney (2011:1) notes, communities "are everywhere and can relate to almost anything," but this has not stopped archaeologists from trying to define and use this concept in their research.

Mac Sweeney (2011) provides a very detailed summary of the history of "community" across the social sciences and in archaeology in particular. From this work, one can highlight the sources of present-day community research. The idea of a community in social sciences can be traced back to Ferdinand Tönnies (1887) where the idea of community was seen as intimate, involving face-to-face interactions, often in rural settings (as opposed to urban settings for society). In archaeology, community came to mean the general human population at a particular site relating to particular artifacts, coming from Childe's (e.g., 1958) work. In both of these cases, communities were seen as emerging, seemingly naturally, from direct interaction between people in shared spaces. In archaeology, communities were conflated with sites, meaning that the study of a site “naturally” included the study of the community at that site. Eventually, “new” or processual archaeology modified this perspective as they began to view communities more as the constituent elements and processes of complex societies, often as an organizational unit above the household (e.g., Binford 1962, 1968).

All of these formulations treated a community as if it were a natural occurrence based around the interaction of humans in a given place. This idea of a community carried on in archaeology until the late 20th and early 21st-century. Popularity of this concept dissipated, largely because archaeologists stopped engaging with it, finding it to be useless as more than a basic descriptive term. Tringham (1972) even thought that it was impossible to view connections between communities archaeologically, therefore not seeing the use in studying communities at all. Kolb and Snead (1997) were the first to clearly reengage with the concept, but it was Canuto and Yaeger (2000) who were attributed with the reestablishment and reconfiguration of community theory in archaeology.

From their perspective, communities could be better understood as emerging via shared social practices in certain historical contexts. Communities were not eternal social organizations and they could fracture and cease to exist (Canuto and Yaeger 2000). This view was in juxtaposition to previous studies that saw communities as naturally existing formations of humans when they lived in shared geographic spaces (usually at a site level). Canuto and Yaeger (2000) explained how communities emerge from (and disappear because of) social practices rather than being a naturally occurring human phenomena.

During this reemergence of community studies, some archaeologists were drawing on the ideas of Benedict Anderson (1983) and a concept of the “imagined community.” For Anderson, a community did not need direct interaction to exist. Instead, communities could be formed via mental "connections" across wide geographic spaces. Some archaeologists (e.g., Isbell 2000) went as far as to argue for the removal of the spatial aspect of communities altogether. Others still argued that the concept of a community was not useful for the discipline of archaeology (e.g., DeMarrais 2002; Lekson 2002). Still, many used Canuto and Yaeger's (2000) new formulation to expand its study, such as those who looked at "communities of practice" (e.g., Roddick 2009; Sassaman and Rudolphi 2001). In all, this seminal work led to the current foundation upon which archaeologists have continued to hone our understanding of communities in the past.

Two of the most recent influential works on community in archaeological research come from Mac Sweeney (2011) and Harris (2014). Both authors draw from the "ontological turn" in archaeological theory, but they approach the idea of community in noticeably different ways. I will draw heavily from Harris (e.g., 2014) and assemblage theory in my definition, but I also make sure to note where Mac Sweeney's (2011) work is useful. For the purposes of this dissertation, I define community below starting with the foundation of "community as assemblage" (e.g., Harris 2014; Marsh 2016).

Household

The variety of approaches to households and household archaeology do not allow for a perfectly linear understanding of how this concept has been defined and identified archaeologically. Approaches to household archaeology are extremely vast in their breadth (e.g., Arnold III 1988; Grove and Gillespie 2002; Hally 1986). The heterogeneity in approaches to households has ultimately been present since it first became a popular area of study by processual archaeologists (e.g., Flannery 1976). Yet, there are some general themes that can be identified that will better contextualize where household theory is today and how this relates to my definition of households. As with identity and community, I highlight important elements in archaeology's understanding of households and their use in our research. Also similar to identity and community, this concept is best seen as an assemblage.

Some of the earliest formative discussions of the household in archaeology come from processual approaches that often viewed the household from an economic lens or as a task-focused grouping (e.g., Blanton 1994; Wilk and Ashmore 1988; Wilk and Rathje 1982). These approaches often examined the settlement patterns of households, their roles in the political economy of a given community, or couched household analysis in terms of social evolution (e.g., Braun 1991; Flannery 2022; Hirth 1993; Smith 1987). Many of these approaches importantly noted the sociality of the household, while also pointing to the clear differences between the house or dwelling as a structure and the household as a social unit. Nonetheless, not all household approaches were able to separate households and co-residence (e.g., Yanagisako 1979:162).

For example, Winter (1976:25) saw a household as "a group of people who interact and perform certain activities", whereas a household cluster was an archaeologically identifiable grouping of pits, structures, and other features (see also Flannery 1976; Kramer 1982 for similar approaches). Wilk and Rathje (1982:618,620) point to a household as being constituted of social, material, and behavioral parts and note that this configuration does not require co-residence in a "dwelling unit." Unfortunately, these approaches often only viewed households as having an economic "function" (e.g., Wilk and Rathje 1982) and existing only in social evolutionary terms (e.g., Wilk 1997).

As the processual turn in archaeology waned, post-processual approaches took households outside of the economic realm and expanded the ways that these "units" could be understood. This especially included approaches that align with Maldanado and Russell's (2016) "second wave" of identity research as household approaches now explored other aspects of communities and identity, such as gender, sex, ethnicity, and agency (Hendon 1996, 2000; Hodder and Cessford 2004; Gillespie 2007; Rodning 2007). These approaches were essential in expanding archaeological understandings of households and the ways that they always exist within wider societal institutions (e.g., Wilk 1997).

The strength of these heterogenous approaches comes from their ability to link daily practices with larger social processes (Salazar et al. 2022). Both of these approaches viewed the household as a "fundamental building block of larger communities" (Prentiss and Carpenter 2022:1). This perspective is useful in identifying the importance of the household, but it also misses the ways that they are multi-scalar; activities both within the household and outside of it matter (Carpenter and Prentiss 2022:323). This aspect is especially salient in studies which viewed the household as a place of social reproduction, often applying a framework of practice theory (e.g., Bourdieu 1977). More recent studies have emphasized the ways in which household activities can lead to larger social changes as well (e.g., Benson 2020; Marsh 2016). These newer approaches also embrace the relational nature of households.

Relational approaches to households have given archaeologists a better understanding of the ways that this unit of society has wider social, spatial, and temporal connections (e.g., De Lucia and Overholtzer 2014; Hodder and Cessford 2004; Hrynick and Betts 2017; Hutson 2009; Lucero 2008). This includes the ways that social memories are evoked through household practices, connecting household members across wide spaces and times (e.g., De Lucia 2010;

Hendon 2000, 2009; Jones 2007; Joyce 2000, 2018). This kind of approach has been recently taken up in Prentiss and Carpenter's (2022) volume on households in archaeology, and it is from this perspective that I will build my definition of a household as an assemblage (see also Beck 2018 for a view of houses as assemblages).

Style

Style, or stylistic attributes/forms, has long been discussed in the archaeological literature (e.g., Kreiger 1944), but the major developments in its use and the theory occurred in the period of 1970-2000 (e.g., Conkey and Hastorf 1990; Sackett 1977; Wiessner 1983). Because of this, I focus my discussion on the development of the idea during that timeframe. At the same time, I touch on the literature these archaeologists and anthropologists were drawing from. As with the other concepts described above, this is not meant to be a full history of this term or its uses; Conkey (1990) provides a detailed history of style up to that point. Instead, I focus on the variety of ways it has been defined and used to help provide context for how I define and use it in this dissertation.

The earliest perspectives on style took a cultural-historic approach in essentially describing style as a diagnostic feature of material culture, which in turn relied on "space-time systematics" to define the boundaries of certain groups (Hegmon 1992:518). This, of course, falls into the same traps that early uses of identity and community did, in equating these ideas with bounded "social groups" living in defined geographic areas, sharing similar material culture. This renders style as relatively useless and "passive" (Hegmon 1992:518), meaning it only has a place as an analytical tool for archaeologists to describe and define group boundaries (e.g., Whallon 1968). As archaeologists began to engage more with what style does and what it can tell us, two major categories of style emerged, both of which viewed style as active.

The first category of style, known as the information or information-exchange theory of style, was made popular by Wobst (1977) and then better defined and applied by Wiessner (1983, 1984, 1985, 1997). This conceptualization posited that style specifically served to communicate a group identity (e.g., Wiessner 1983). Style, in this way, could be used archaeologically to look at group boundaries and spaces of interaction. Other archaeologists were exploring a second category of style in the form of "social interaction theory" (Wiessner 1983:260). This approach used style to locate social units and understand how they changed (e.g., Deetz 1965; Hill 1970; Longacre 1970; Voss 1977). As these different approaches to style were being developed, archaeologists were especially focused on the active, usually symbolic, role that style played (e.g., Conkey 1978, 1980; Hodder 1982a, 1982b; Plog 1980).

Important in the discussion that surrounded style was the development of different types of style that could be useful for understanding the archaeological record. Wiessner (e.g., 1983), developed concepts of "emblemic" and "assertive" styles. Sackett (1982, 1984) developed the idea of "isochrestic" variation in style, which he used in contrast to what he called the "iconological" style discussed by Wiessner and others.

For Wiessner (1983), style was meant to transmit information about one's social identity through active, usually conscious, choices. Emblemic style was seen as carrying information about groups and boundaries, drawing from a direct referent. On the other hand, assertive style did not have a direct referent and often carried information related more to individual, rather than group, identity. Sackett (1984), in contrast, argued that style came more from choices by artisans that resulted in similar functional ends. The result of these choices can be seen in isochrestic variation, which was learned through social interaction. This kind of style was passive and unconscious. In fact, Sackett's arguments for isochrestic variation can even be seen as anti-style in that they do not necessarily recognize the ways that style does something (e.g., Hegmon 1992) rather than just acting as a passive part of human interactions. The contract between Wiessner and Sackett produced a dichotomy of styles, active or passive, conscious or unconscious.

A recognition of these dichotomies and the problems associated with them led to further developments in the theory of style that showed these dichotomies can ultimately exist at the same time and are better thought of as a spectrum of stylistic realities (e.g., Bowser 2000; Dietler and Herbich 1998). These developments helped to shed light on the various ways style could be used and viewed in the archaeological record (see Hegmon 1992:522-524 for a fuller discussion of these types of style). This understanding of style, as exiting on a spectrum from active (conscious) to passive (unconscious) has been continued to this day and represents the best foundation for understanding how style can be expressed and in what ways it is expressed. I highlight Wiessner's emblemic style later in this chapter when I define the term for the purposes of this dissertation.

All of these discussions and developments in the theory and use of style in archaeology led to a larger volume that brought everything together (Conkey and Hastorf 1990). What style did, or what it could be used to look at archaeologically, was explored in different ways in the various chapters of this volume. MacDonald (1990) developed "panache" and "protocol" as means for understanding how style was created in Plains burials. Plog (1990) explored the use of stylistic variation in the study of culture change in the American Southwest and its shortcomings to that point. Earle (1990) analyzed the ways that rulers in complex chiefdoms could use style to legitimize their positions. Despite the variety of approaches taken in this volume, it was seemingly agreed upon by all contributors that style, at its core, was a “way of doing” (e.g., Hodder 1990).

Style has since been used in a variety of ways that expand upon this volume (e.g., Bowser 2000; Fennell 2007, 2017; Hegmon 1998), but its general usage still follows the same consensus as from the 1990 volume: style is a “way of doing something” (Hegmon 1992:517). Many archaeologists who use the term consider style to represent a “choice among various alternatives” (Hegmon 1992:518) that communicates some sort of information, often relating to individual and/or group identity (following Wiessner 1983). I will take this general consensus on style as a starting point for my definition and use of the term later in this chapter. Ultimately, I will come to a similar conclusion as with identity, community, and household and consider style to also be an assemblage, albeit of a different kind.

Defining Identity, Community, Household, and Style

In this section I define each major theoretical term that I use in this dissertation. I explain how I came to this definition to offer a more complete picture of how I am applying these terms in this research. I argue that communities and households are both different types and scales of identity. Therefore, the definitions of these terms will ultimately be very similar. This is not meant to homogenize the terms in any way or to take away from the unique theoretical history of each; instead, this is meant to outline how archaeologists working on the Late Woodland period can compare data across different scales by focusing on the ways these scales intersect, just as identities interact and emerge within and at these intersections. It is important to understand here that identity is a larger term that encapsulates both community and household. Communities and households are, at their most basic levels, scales of identity that can be identified archaeologically. Households, importantly, are not just structures, but exist in the relationships outside of houses or other shared spaces.

Identity

Identity has been defined in various ways as both the sameness people share with others and as the differences between these same people. As Fowler (2010:353) puts it, identity is "a shared similarity of character for several beings or things - the way in which they are identical - but it also refers to the distinctiveness of any group, being, or thing - its specific identity". This recognition that identity is both sameness and difference is relatively recent (e.g., Sökefeld 1999), as identity prior to this recognition was mostly viewed as similarity (such as that of an "imagined community", Anderson 1983). This inclusion of difference was an important step in understanding how identity can be experienced and identified. As Meskell and Preucel (2004:124) note, identity is "inseparable from the experience of everyday life". This experience is not just a human experience though, it necessarily includes places, spaces, things, senses, emotions, and temporalities. The "third wave" of identity theory I discussed above (Maldanado and Russell 2016) recognizes this and builds from it to show how identity emerges from interactions and intersections between all of these various parts in specific contexts.

The volume on identity theory from Pierce et al. (2016), which includes Maldanado and Russell (2016), is the first to directly point identity theory in this "third wave" direction. At the same time, earlier identity theorists were almost approaching this same perspective. For example, Meskell and Preucel (2004:124) point out, "Some vectors of identity are internalized, others are discursive, yet it is their particular intensities, experienced in certain settings and certain times, that crystallizes into structures". Fowler (2010) recognizes that identity inherently includes things and the interactions of people with these things. Unfortunately, these earlier formulations of identity fall into what Harris (2016:19) identifies as "matters of concern" in earlier identity theory (humanist/idealist/representational). Meskell and Preucel (2004) clearly fall into the trap of centering identity on humans, as they focus more on the social categories held by individuals made popular during Maldanado and Russell's (2016:7) "second wave". Fowler (e.g., 2004, 2010) and other archaeologists (e.g., Chapman 2000; Skousen 2012) focused on identifying personhood through relational approaches, which Harris (2016) notes is the closest any previous research was to escaping these matters of concern. Still, these approaches remain somewhat idealist and too human-centered for the "ontological turn" (Harris 2016:24-25). Harris goes into more detail on these "matters of concern" and the issues they cause, but the main point he is making is that the ontological turn provides a new starting point for identity theory that recognizes identity as an "ongoing outcome of relationships" (Harris 2016:27) and the "ongoing process of becoming" (Maldanado and Russell 2016:4). Or, as Maldanado and Russell (2016:8) put it, this new focus of identity theory is "not on finding identity but on the processes by which this emerges through living in a material world."

Harris' (2016) critique of previous identity research specifically comes from his (e.g., Harris 2014) and others (e.g., Bennett 2010) development of assemblage theory from the writings of Deleuze and Guattari (2004). I draw from assemblage theory to better define identity at its multiple scales, including community and household, as I believe this offers the best path forward for understanding the emergence of identities in the past. At the same time, I am not as well-versed in this literature as Harris and others, so I will not be explicitly applying these same exact ideas, although I will trend as closely to assemblage theory as I feel I can in this research.

Having said that, I think a good place to start in defining what I mean by identity is with a brief explanation of how Harris (2014, 2016) uses the term assemblage.

Harris (2014:90) suggests shifting our focus from networks in the past to assemblages because networks are presented as a-temporal, meaning they are "frozen in time". Assemblages, on the other hand, are "in process rather than being static" (Harris 2014:90). This becoming nature of assemblages necessarily includes humans, things, places, and emotions. When particular sets of these things come together, an assemblage may emerge, and this can be at multiple scales, "from the smallest atom to a nation state" (Harris 2016:25). An important characteristic of assemblages, something that clearly differentiates them from networks, is the ability for an assemblage to maintain even if some of its constituent parts are removed and others are brought in; DeLanda (2006:10-11) defined this as an assemblage's "exteriority," meaning assemblages are not defined solely by their specific parts. If a part of an assemblage is removed, it does not cease to exist; instead, it shifts in its relationships. For Harris (2016:26) this comes from the non-static nature of assemblages as they are constantly "coming together and breaking apart," which draws from Deleuze and Guattari's (e.g., 2004:312, 316) notions of territorialization and deterritorialization. At the same time, this constantly in-flux nature of assemblages does not preclude them from being "real", as assemblages are affective parts of an identity (or a community or a household). The assemblages we can identify archaeologically are not fleeting connections, but important parts of the larger world they emerged within.

Harris (2017) further suggests that assemblages allow for a better understanding of the past at multiple scales, something I am attempting to do in this dissertation. Instead of privileging a singular scale over another (something warned against by Robb and Harris (2103) and Robb and Pauketat (2013)), we need to view all scales as equal and overlapping. There is no need to “presume radically different rules are at play” at different scales, as this might lead to one being considered over others (Harris 2017:127). These different scales, seen as assemblages of different sorts, can be viewed in the same manner, allowing for a proper understanding of the ways in which they interact and intersect. And, as Harris (2017:130) notes, each assemblage contains other assemblages, so “larger-scale” assemblages (such as the early Late Woodland period at large in this research) contain many other “smaller-scale” assemblages (such as a household identity at Carter Creek). The relationship between these assemblages does not presume one is dominant over the other; the larger scale does not impose a reality on the smaller one, and the smaller scale is not just a reification of the larger one.

An important, and similar, concept to assemblages has recently been employed to look at the Middle Woodland period in the Midwestern U.S. This comes from the *Midcontinental Journal of Archaeology* (Volume 45, No. 3). In this volume, the authors argue that we can better understand the Middle Woodland period and its geographic diversity through the use of situation theory (drawing from Zigon 2015). A situation is best described as a “widely diffused social phenomena that manifest through the interaction of multiple assemblages,” (Henry and Miller 2020:193) that “flatten” scales of research. In using this approach, the unique local nature of things and how they tied into widely shared Middle Woodland practices is emphasized. In other words, these authors offer a new and fresh perspective on interpreting the Middle Woodland period from localized settings rather than just widespread shared material culture and practices. This aligns well with assemblage theory and its focus on looking at all scales of archaeology equally. It further aligns with assemblage theory in emphasizing the interaction between these scales. As Baires notes (2020:302) in her comments on this journal volume, situation theory allows us to “move away from culture histories, trait lists, and top-down approaches” and to instead focus on the “multiplicity of situations” that make up the past.

Importantly, both Harris (2017) and the special journal volume on the Middle Woodland period described above, are drawing from Robb and Pauketat (2013) and their discussion of scales and archaeology. In their chapter, Robb and Pauketat (2013) describe a deeper history of scales in archaeology, which I will not rehash here. They ultimately come to the conclusion that most archaeologists (up to 2013) have failed to connect both long-term histories and short-term occurrences in ways that answer how these two scales interact and impact each other. More specifically, the scales that Robb and Pauketat discuss are related to time, unlike my previous discussions which mostly touch on the spatial aspects of scale. As they note, the subject of history (and archaeological study) is “the genealogies of material practice [and] the evolving relationships between them” (Robb and Pauketat (2013:23). It is through this understanding of history that archaeologists can better situate the ways in which “a single act works simultaneously in a multitude of levels of analysis that cannot be separated analytically” (Robb and Pauketat 2013:28). Taken together then, understanding the ways that assemblages exist at numerous and multiple spatial and temporal scales is vital for understanding how assemblage theory can provide archaeologists with an understanding of the past that can be used to trace relationships across time and space.

What then does this mean for the usage of assemblage theory to locate and understand identity in the past? Ultimately, it means that in discerning identity in the past, we are not trying to “get it right” (Maldanado and Russell 2016:10-11), instead we are trying to locate identity because it is slippery, not in spite of it. This means that we are not necessarily defining identity (or its multiple scales) in the past but describing it as it emerged out of particular assemblages.

To discern identity means to follow the lines of a relationship "as they come together…and as they move apart," not as a finished entity, "but as an ongoing process of growth and becoming" (Harris 2016:27) that considers all parts of an identity assemblage. Importantly, using assemblage theory to understand identity means that I am not looking to find or define something as having an essence of "Weaver" or "Camp Creek Phase" components. Instead, I am examining this period and these larger categories as the processes that produced the similar assemblages they contain.

Having laid all of this out, the best definition I can offer of identity for the purposes of this research is: identity is an assemblage of people, places, things, spaces, and emotions that emerges out of particular configurations of these parts, which can be identified through the archaeological record as they come together and break apart. This emergence, and therefore identity, is always in a state of becoming, ever fluid and in-flux. These assemblages occur at multiple scales which necessarily overlap and interact with one another, causing real effects on the world in which they reside. In using this definition, I am not looking to clearly define particular early Late Woodland identities in this dissertation. Instead, I am looking to trace relationships during this period to see where identities emerge and what these emergences can tell us about people living during this transitional time.

Clarifications and Parts of Identities (and Assemblages)

Before moving on to define community, household, and style I think it is important to clarify a few things and also to discuss the different parts of an identity assemblage (and other types/scales of identity). As mentioned above, Harris (2016) notes that earlier identity research often centered humans too much in the identification of past identities. This usually involved some form of putting too much weight into how humans experience the world (e.g., Husserl 1983) and the ways in which this forces things (and their material reality) to be reduced to representations (e.g., Jones 2012). At first glance, this would seem to exclude humans, their experiences in the world, and the ways in which certain material things are representational from an understanding of identity as an assemblage. This is in fact, not the case.

As Harris (2016:31) notes, archaeologists need to decenter the human, but also need to "recognize that our discipline focuses on worlds that include humans, even if we no longer need to make humans our sole focus,". Or, as Olsen (2012:29) posits, "a turn to things does not represent a disinterest in people." By recognizing humans in assemblages and the identities that emerge from them, we are necessarily including human experiences, thoughts, dreams, and beliefs (Harris 2014). We should recognize that this also does not exclude the representational nature of certain things. Instead, these similes and metaphors must also be included in an assemblage when they are present - a beyond-the-representational approach (e.g., Harris 2018). By including humans in our understanding of assemblages, we are recognizing "the differences between different forms of humans" just as we would between different forms of pots (Harris 2016:31). These differences emerge into the identities, communities, and households that we identify and trace through the archaeological record.

In recognizing the many parts of an assemblage and the ways in which these parts interact to form identities, Harris and others are drawing from a wealth of literature on relational archaeology and materiality (e.g., Watts 2013). These contributions that helped to form the assemblage theory espoused by Harris and others are particularly important because they recognize that humans are not at the center of our studies. Instead, humans, places, and things emerge from the relationship between these various things (e.g., Barad 2007). The things that help to form these relationships are material and have certain material properties that are also a part of these relationships (e.g., Ingold 2007). I think it is important here to briefly highlight some of the more well-known literature they are drawing from. Many of these relational perspectives formed alongside one another and often share many similarities, perhaps even being nearly impossible to differentiate.

Importantly, relational approaches to archaeology recognize that the world is dynamic, consisting of interactions and relationships between humans, things, and places from which meaning and experience emerge (e.g., Bennett 2010; Harris and Robb 2012; Hodder 2012). These relationships have been viewed as everything from the assemblages discussed above to rhizomes (Deleueze and Guattari 2004), meshworks (Ingold 2013), entanglements (Hodder 2012), bundles (Pauketat 2013), or networks (Latour 2005). Skousen and Buchanan (2015:4-6) provide a more detailed description of these different ways of viewing relationality in the archaeological record. They also add to our understanding of relationality by pointing to the ways that movement, which includes physical, emotional, and sensorial movement through the world, is central to understanding relationships because it is moving through the world that produces the things we find archaeologically. All of these approaches importantly recognize the ways in which the world emerges through relationships.

One excellent example of a relational approach to archaeology that brings the threads of many relational approaches together comes from Harris and Cipolla (2017). In this book, they beautifully discuss the development of archaeological theory into the ontological turn and the relational approaches that highlight it. In doing this, they are not trying to develop an overarching theory for all of archaeology, instead they are tracing the ways that archaeological thought has opened up new lines of thinking, thus allowing archaeologists to gain the knowledge and theoretical perspectives that we have today. To keep building on our understandings of the past, they argue, we must continue a dialogue and not try to "solve" the past. As they put it: "What allows us to tell stories, as archaeologists, is the fact that we keep trying to ask new questions and rephrase old ones. We develop differing techniques and ways of thinking, dig new sites and work with new people. All of these make the past come alive differently and [create] new kinds of understandings" (Harris and Cipolla 2017:212).

Along with the formation of these relational approaches has been the recognition that materials matter and that materials are active parts of human lives as they form the relationships from which life emerges (e.g., Ingold 2013). This includes approaches that recognize object agency, object biographies/itineraries, and the general importance of materials in shaping human experiences (e.g., Gosden and Marshall 1999; Joy 2009; Joyce and Gillespie 2015). These approaches incapsulate a larger focus on the ways in which materials are active participants in the world (e.g., Ingold 2007a, 2007b, 2011, 2013). Still, some of these approaches do not fit within an assemblage-based approach because they center the human in human-material interactions (e.g., Clark 2009).

Approaches that have often been deemed "New Materialism" take the importance of objects a step further by recognizing the active ways in which materials interact with other members in a relationship on a more level, symmetrical, playing field (e.g., Barad 2007; Bennett 2010). For example, Bennett (2010) recognizes the ways in which materials are vibrant, meaning they have concrete effects on the world and are not just objects upon which a (usually human) subject imposes its will. Humans and non-humans emerge together, in relation to one another, as equal partners (e.g., DeLanda 2002). An important step taken in these approaches is the recognition that assemblages emerge from and along with "affective fields" and are affective themselves; something expounded upon by Harris and Sørensen (2010). Understanding that assemblages are affective is a recognition that the relations of an assemblage imprint things like emotion into the relationships they emerge from. This is true for all parts of an assemblage, including materials. Affective relationships recognize "the ways in which different bodies (human and non-human) press into each other, leaving impressions," (Harris 2014:91).

Going from this perspective on assemblages and the "sticky" relationships that they emerge from (e.g., Ahmed 2004), it is easy to see how the different parts of an assemblage all matter, as they impress upon one another, producing the identities I will attempt to locate in my research. The various parts of identities (at all of its scales) include emotions, places, spaces, things, memories, and temporalities. In order to recognize the importance of some of these parts, I want to give a few examples of how they have been discussed in previous research. The "things" that archaeologists most often find via our research are what will be the most discussed in this dissertation (i.e., ceramics, stone tools, faunal remains, and spatial structuring).

Emotion is something vitally important to consider when trying to understand the archaeological past (e.g., Tarlow 1999, 2000; Whittle 2005). At the same time, emotions are something archaeologists often worry will lead to poor understandings of past behavior (e.g., Thomas 2002). This could be true if we attempted to look for individual emotion in the past. Tarlow (1999:35; cited in Harris 2010:359) has made the persuasive argument that emotion is better considered as contextual, as something that is "constructed through practices and ways of communicating, which we see in the archaeological record." In viewing emotion this way, we can better use it to see how past actions were motivated or provoked by certain emotional responses without universalizing them across time. Emotions are inherently "sticky" (Ahmed 2004), emerging from affective fields, which stimulate an emotional response through the relationships between people, places, and things (Harris and Sørensen 2010:150). The stickiness of emotions and the affective fields from which they emerge are tied to both the places (and spaces) at which these emotions are evoked and the memories which can be tied to these emotions (e.g., Jones 2007). Therefore, we must also consider memory and place as important elements of an assemblage.

Consider, for example, that objects (things) often refer back to previous objects and places, creating a "citational field" (Jones 2001) that connects things to past places and memories. These memories are entangled with these objects and the places with which they have connections (e.g., Roddick and Hastorf 2010). As Casey (2000:205; cited in Harris 2010:360) puts it, things "draw memory and place together." As Ingold (1993:152) observed when highlighting the connections between time and landscape in archaeology (a "dwelling perspective"), "the landscape is constituted as an enduring record of – and testimony to – the lives and works of past generations who have dwelt within it, and in doing so, have left there something of themselves." These connections, of course, are not just across physical spaces, but also exist across different temporalities, connecting people and things with the past through emotions. For example, Halperin (2014), although not considering emotion, discusses how Maya ruins carried meanings across time that connected the people who interacted with them to the past in the physically inhabited present. These ruins, represent a place at which Maya people connected with their past through the materiality and meaning of the ruin; it is not hard to see here how emotion would have certainly been entangled in these interactions.

We must also consider spaces when tracing assemblages in the past. Robin and Rothschild (2002) provide an overview of the general approaches archaeologists have taken on studying space from the functional approaches of processual archaeologists (e.g., Binford 1977;

Flannery 1976) to the more symbolic approaches taken by many post-processual archaeologists (e.g., Hodder 1982). In highlighting the trends in spatial analysis, Robin and Rothschild (2002:161) observe that we need to understand space as "socially constructed and socially experienced" and "inseparable from time." Space is always lived and constructed by the people inhabiting it. This includes spaces beyond just buildings and sites (Knapp and Ashmore 1999). Beyond these lived, inhabited, spaces, we can also consider "empty" spaces (Smith 2008) and the spaces "between" places (Kujit 2022) as parts of an assemblage. Empty spaces can offer "the opportunity for creative acts" (Smith 2008:217). As will be discussed more in Chapter 3, the "empty spaces" of the early Late Woodland period (such as the frontier) will certainly be important for understanding the assemblages that emerged during this period and what they can tell us about the negotiation of the changing cultural landscape during that time.

To better incorporate place, space, memory, and temporalities into assemblages, we can consider the senses. Hamilakis (1998, 2014, 2017) and Skeates (2010) argue for the necessity of using the sensorial in archaeological approaches. Hamilakis (2017) specifically points to the vital nature of senses in assemblages. More specifically, he notes that a fundamental property of all assemblages is their "sensorial and affective" nature (Hamilakis 2017:170). For Hamilakis, the senses and affect cannot be separated, and we can view the senses as the "affective force" of an assemblage (Hamilakis 2017:173). The senses afford stickiness, the ability for things to impress upon one another, to the parts of an assemblage. The senses are inherently tied to memories and temporalities that emerge as parts of an assemblage. As Hamilakis (2017:174) notes, the present necessarily contains all pasts, but it is through the senses (and the memories and affects they invoke) that certain pasts gain increased intensity within an assemblage. The pasts that are invoked also help to guide the memories that may emerge in the future (or may be forgotten), which also points to the political effects of an assemblage. I will not be taking a specifically sensorial approach in this dissertation, but I agree with Hamilakis that the senses are central to understanding the affective nature of assemblages and I will incorporate this line of thought when possible.

An important thing to consider when taking an assemblage-based and relational approach, is that this larger approach aligns with Indigenous ontologies which include non-human persons as equal to humans, ultimately viewing humans as not exceptional in the world (e.g., Deloria 2006; Watts 2013). Humans are just one small part of a world that centers on relationships between constituent parts, which include the various parts one may discuss as belonging to an assemblage. These ontologies have been vital in the continued effort to breakdown the Cartesian dualisms that have plagued much of our older archaeological thought which emphasizes humans as exceptional to the surrounding world (e.g., Harris 2017). I cannot make direct connections between current and past Indigenous ontologies, but I would be remiss if I did not note the importance that Indigenous lines of thinking have had in the larger ontological turn. Crellin et al. (2021) provide an excellent, book-length, dialogue on the ways that modern archaeological theory and Indigenous ideologies and ontologies must be in communication and the ways that archaeologists can use this communication in progressing as a field.

Altogether then, assemblages are formed from humans, places, things, emotions, memories, and temporalities. The meanings of these things and the ideas of humans must be considered as parts of these assemblages. But, in the end, the identity, community, and household assemblages that I trace in this dissertation will not center humans, nor will it center other parts of these assemblages. Both human and non-human elements of an assemblage have varying levels of impact depending on the context in which that assemblage emerges. By recognizing the constituent parts of an assemblage and the multiscalar nature of identities, I am not saying there is no need for other theoretical categories, such as community or household. Identity is not a catch-all term. Instead, assemblage theory allows us to see the ways that identities extend across scales which interact and intersect, producing real effects in the world. Identity is the foundation from which we can study assemblages at multiple scales. Therefore, communities and households can best be viewed as different types of identity which emerge at varying scales, from which diverse types of assemblages are formed from shared and unique parts. It is important to keep in mind, these scales are not separate from one another, instead they are constantly interacting and may even be a part of an assemblage together.

It is important to highlight here again, as I have done above, that assemblage theory developed alongside a multitude of theoretical approaches that center the relational nature of the world as experienced by humans in connection with places, things, spaces, time, emotions, and senses. While I believe any of these approaches (e.g., Hodder 2012) would provide an appropriate perspective on this past, I use assemblage theory as my foundation because I believe it has been the best developed and provides the best terminology to understand the Middle to Late Woodland transition. It is not just at the nodes on a network (or the knots in a meshwork; Ingold 2013) that relationships and their impacts emerge, but through the movement (following Skousen and Buchanan 2015) of people, places, things, and ideas, and the material traces they leave behind in the archaeological record that we are best situated to see the emergence of identities in the past.

Community

The definition of community that I employ in this dissertation is very similar to that of my definition of identity. This builds from assemblage theory in placing the core of a community at the relationships between its parts, always in a state of becoming. The definitions of community provided by Mac Sweeney (2011) and Harris (2014) provide a primary basis for my definition and use of the concept in this study.

Mac Sweeny (2011) ultimately discuses community as "community identity", but I do not think her intention here was to separate her definition of community from its larger history. Instead, she states that she is trying to develop a conceptualization of community that is useful for archaeological research (and methods to do this). In doing this, she is formulating an idea of community as a form of identity that is comparable to other forms of identity (i.e., gender, race, or class) (Mac Sweeney 2011:32). Because of this, she notes that community, much the same as identity, can be seen as both sameness and difference from others.

Where her conception of community differs from other 21st-century formulations is in the focus on both the relationality from which community emerges and on the importance of shared space (at multiple scales); as she puts it, community is "a spatially focused sense of identity" (Mac Sweeney 2011:32). The relationality of community, in her formulation, comes from "social practices and activities" that are consciously emphasized as "togetherness", which promotes "the ideology of group solidarity" (Mac Sweeney 2011:37). This togetherness is a mental construct that emerges from these practices, as opposed to being a natural or structural phenomenon as community was identified in earlier archaeological interpretations. Community identity is tied to a sense of sameness between people that is consciously constructed via social practices in shared spaces, in order to express a group solidarity. Other forms of identity are ones that express differentiation (Mac Sweeney 2011:37). It is within different contexts that community identity, and other forms of identity are emphasized. Looking for these places of conscious emphasis and solidarity is how she thinks we can identify community identity archaeologically to better understand the ways people structured their ways of life.

Harris (2014, 2016) rightfully notes that Mac Sweeney's (2011) formulation of community falls into one of his "matters of concern" when studying identity in that it centers the human by placing community within the conscious choices of human beings, as a "mental construct" (Mac Sweeney 2011:35). For Harris (2014:89), this leads to an idealist conception of communities, when the reality of them does not need to be centered on humans or their conscious thoughts. At the same time, Mac Sweeney's focus on the ways that community emerges from relationships and is geographically emplaced are steps forward in trying to better define this term for use in archaeological contexts. Looking beyond Mac Sweeney's approach, Harris (2014) identifies the major weaknesses in 21st-century approaches to community.

Harris (2014) identifies three major weaknesses with recent community studies that need to be addressed for future research to be impactful. The first weakness is the political nature of the term in modern culture (Harris 2014:86-87). In pointing to this, he notes that the use of the term community to connotate intimate face-to-face interactions can romanticize the term, instead of critically analyzing it. To emphasize the full range of communities, Harris (2014:86-87) argues that we need to focus on both the positive and negative parts (such as violence). The second major weakness noted by Harris (2014:88-90) is the clearly anthropocentric nature of most community studies. As with his discussion of identity and the issues with how it has been approached (Harris 2016), he is arguing that we need to fully embrace the relationality of communities and the ways in which they emerge from the relationships between people, places, and things. He points to studies on personhood (e.g., Fowler 2004) as closely approaching his, but argues that no other community studies have gone quite far enough in decentering the human subject.

The third, and final, weakness noted by Harris (2014:90-91) is the focus on communities as networks and the way that this makes communities both a-temporal and unable to change without the formation of a completely new network, meaning networks have no "endurance" (Harman 2009, cited in Harris 2014a:90). To strengthen community studies, he argues, we need to instead focus on communities as assemblages. An assemblage addresses both of these issues as it is tied to multiple temporalities and is not the sum of its parts but is ever emerging from them (e.g., Harris 2016).

I follow Harris in defining a community as an assemblage "not merely made up of humans but also of things, places, animals, plants, houses, and monuments," which emerge from the relationships between its parts as a real, affective, thing (Harris 2014:77). The sets of assemblages that make up a community always involve humans, but humans are not necessarily centered in these emergences. These assemblages do not require shared spaces like earlier formulations of community or Mac Sweeney (2011) suggest, but they are also not absent of spatial ties (like Anderson (1983) or Isbell (2000) suggest). As Harris (2014:92) observes, communities involve "co-presence" at times, but not "co-residence" and are bound together "by particular kinds of practice and the affective fields they generate."

This definition of a community does little to differentiate between my earlier definition of identity. This may seem to indicate that both terms are essentially the same thing and can be used interchangeably, but that is not the case. Both identity and community can be viewed as assemblages, ever emerging from the variable flow of their different parts coming together and breaking apart. However, these two terms separate in scale. A community is a particular scale of identity. In this, I follow Mac Sweeney (2011) in identifying a “community identity”, although not necessarily one based solely on group cohesion and sameness. Therefore, community can be better understood as a particular kind of identity, tied to a relatively larger spatial scale.

Harris (2017) lays out the necessity of understanding assemblages at different scales, but in doing so does not identify these scales by any particular category. Marsh (2016) on the other hand, looks at different scales of community assemblages to better understand a changing cultural landscape in the Late Formative period (1-500 CE) in Bolivia. Marsh’s identification of different scales of community is useful for differentiating between identity and community in my research. He identifies both household and larger spaces as unique arenas for community interactions. He is essentially looking at two scales of community: intra-household and inter-household (Marsh 2016:308). Both of these scales, he argues, can be used to identify two varieties of community assemblages: those that reproduce community and those that transform it (Marsh 2016:313). Marsh makes sure to point out that in doing this he is not attempting to identify essentialized “types” of community assemblages, which would be antithetical to assemblage theory. Instead, he is tracing the processes that create these assemblages and the spaces of possibility they emerge from and create (Marsh 2016).

Following Marsh (2016), I work to identify community as a scale of identity assemblages that emerges from and creates particular “spaces of possibility”. As Harris (2014:91) notes, communities are “a particular set of assemblages that operate at a range of specific scales,” which will be identified in this research. This scale will be different than that of Marsh, as he focused on a single site and household spaces within it. Instead, I will identify community at scales larger than the household, but not necessarily tied to a particular site. I do not want to fall into the trap of early community studies that equated sites with communities. I also do not want to overemphasize the geographically emplaced nature of a community assemblage. I am not arguing that a community must involve closely shared spaces. However, I am recognizing that archaeology is particularly well suited to study the emergence of communities in particular geographical areas (*sensu* Marsh 2016). As Marsh (2016:307) observes, assemblages are temporally emplaced, meaning their ties to the past can create connections with people, places, and things without direct, physical, interaction.

Marsh (2016:322) notes that "high spatial and temporal resolution" data is the most effective for understanding community assemblages at multiple scales. I do not necessarily have this resolution available for all sites that will be used for comparative purposes. However, I will point to the places that have this and the ways that we can differentiate between different scales of community (and households) during the early Late Woodland and how these scales and assemblages necessarily overlap. Community as an identity assemblage at a larger scale does not separate it from smaller scale assemblages. Instead, it necessarily interacts with those smaller-scale relationships as part of the assemblage from which it emerges. The purpose, and difficult part, of this research will be to trace the emergences of community assemblages at varying scales.

Household

A recent volume by Prentiss and Carpenter (2022) focuses on a new path for household research. This path, as they identify it, sees the household in three important ways that previous studies have not emphasized. First, we should view households as assemblages (Salazar et al. 2022). Second, we should view households within the wider networks they are a part of, not as microcosms of these networks (Quinn et al. 2022), nor as the foundation of them. Lastly, households are vitally important to understanding and identifying transformative change archaeologically. At a household level, we can identify drivers for wider social changes that are often misunderstood or essentialized (Pluckhahn and Wallis 2022).

I do not agree with all of the approaches taken in this volume. Yet, it represents an important contribution to household archaeology in the ways that it is trying to reemphasize an aspect of archaeological research that is often readily identifiable in the archaeological record. The authors are attempting to move the discussion of households in archaeology forward, especially by noting that "household archaeology goes beyond an accounting of what a household does" because we "need to investigate the members and relationships that compose and connect households" as well (Carpenter and Prentiss 2022:8; see Deetz 1982; Hendon 1996; King 2006 for views on what households do). Taking this approach relies on a view of households as assemblages.

Salazar et al. (2022) specifically make the case for viewing households as assemblages to better understand their multi-scalar, relational, nature. In doing this, they are not directly tying this view to the same assemblage theory espoused by Harris (2014) and others (e.g., DeLanda 2006) and instead are attempting to connect household archaeology with a larger relational approach (e.g., Hodder 2012; Ingold 2011). In doing this, they are missing the ways that assemblage theory builds on these other relational approaches and they do not take a concrete stance on what this ultimately provides for household research. Fortunately, other archaeologists have applied assemblage theory to their research in ways that I hope to build on.

Marsh (2016) specifically applies the same ideas as Harris to households and communities in Late Formative Bolivia. He argues that households can "build affective assemblages at multiple scales." He also directly ties the household to "routines" and "daily practices", whereas communities are tied to inter-household interactions (Marsh 2016:308). In doing this, he unfortunately falls into the trap of equating households with specific activity areas and structures, not necessarily tying the household to the wider cultural landscape in which it formed or embracing its wider relationality. In emphasizing the spatially shared aspects of a household he is ultimately creating a reliance on co-residence in his conception of this assemblage; this follows some early household studies (e.g., Yanagisako 1979).

Marsh's shortcomings bring up an important point: houses or house structures or dwelling units are not the same as a household. This was something recognized very early in household studies (e.g., Flannery 1976; Wilk and Rathje 1982) and this emphasis is carried over into Prentiss and Carpenter's (2022) new volume. This is not to say that the spatiality of a house cannot be included in a household assemblage; it is just to say that it should not be assumed. Just as communities are "geographically emplaced" (Mac Sweeney 2011), so are households (or perhaps spatially emplaced may be a better way to put it). This emplacement is evoked through the ways that household assemblages connect the humans that are a part of them to different places, memories, and ancestors (Hendon 2009; Kahn 2016; Nash 2009). For example, how might the decorating and making of pottery, often seen as a household activity, evoke connections to different places, spaces, and the cosmos during the early Late Woodland period (e.g., Benn 2018)?

Drawing from this understanding of a household assemblage as spatially emplaced, but not inherently tied to a particular house structure or activity area, in the remainder of this dissertation, household will specifically refer to an assemblage. When referring to the physical space of a house, I will use house structure. When referring to particular activities that took place within a given space within or near a house structure (such as at Carter Creek), I will use "activity area" (following, for example, Flannery 1976, Gougeon 2012). These distinctions are important because they highlight the ways that a household is best understood through the various parts that intersect and interact to form it.

Marsh (2016) is not the only archaeologist to use assemblage theory to define or interpret households. Benson (2020) also briefly touches on the ways that a household can be best understood as an assemblage while examining the decline of Cahokia in the American Bottom of Illinois. Specifically, she points to the "everyday" nature of the household, as it has often been conceptualized. In doing this, she points to the ways that household archaeology has often drawn from the works of theorists like Bourdieu (1977) and de Certeau (1984) in identifying the importance of everyday activities and routines in reproducing social identity and community. She notes that "everyday" practices, which take place within household groups, are "the scale at which social groups…make choices that constitute their identities, practices, and beliefs" (Benson 2020:26); or, as Marsh (2016:308) puts it, households are the "loci of identity formation".

In identifying these aspects of the household, Benson (2020:26-27) makes the point, also following Harris (2014), that viewing a household as an assemblage necessarily removes some of the issues with its previous formulations. Households are not just a foundation of society, households do not just reproduce a larger social order, and households are not just everyday activities. Instead, they are "micro-communities" or assemblages at a different scale. This view, of a household as an assemblage at a different scale, is the one I also take as I define this term and how I use it in this dissertation.

A household, similar to my definitions of identity and community, must be understood as an assemblage (following Harris 2014). This assemblage, of course, consists of people, places, things, memories, temporalities, and emotions. A household is best seen as a particular type of identity assemblage that takes places at a particular scale. This scale is necessarily different than that of a community. A household assemblage forms at the scale of the "everyday" and in, relatively, small spaces. At the same time, the everyday activities that are part of a household connect to the larger world around them (such as to ritual events, Hendon 2009). A household can be best defined as an assemblage of people, places, memories, things, house structures, and activity areas which takes form through the interaction of its parts at the everyday level. This assemblage exists at multiple scales. Identifying these assemblages will involve the tracing of their parts at specific scales, as does the identification of all assemblages through the archaeological record.

A household approach to the early Late Woodland period in Illinois and the surrounding region will be difficult. This is due to the very limited number of structures or other household spaces that have been identified (e.g., Fishel and Emerson 2013). Importantly, Prentiss and Carpenter's (2022) volume attempts to address how archaeologists can better identify households and their importance without the actual presence of house structures (see Pluckhahn and Wallis 2022). My research will be doing something similar. While Carter Creek and some other sites in the region have identifiable house structures (e.g., the Rosewood site, Jackson and Fortier 2014), other sites only have identifiable household clusters (e.g., Fishel 2012f; Fishel and Emerson 2013), and most sites do not have any clear indication of household spaces (e.g., Fishel 2013b).

Because of this, my attempts to trace household assemblages during this period can be seen as a preliminary foray into household archaeology. My hopes are that this dissertation will serve as a foundation from which other archaeologists working in the region can build, furthering our understanding of households in a region and period where archaeological preservation is not necessarily conducive to this line of inquiry.

Style

Style can be described as "a specific manner of doing something" (Sackett 1977:370) that "transmits information about personal and social identity" (Wiessner 1983:256). This definition of style is a good starting point for the purposes of this dissertation, but the ideas behind it need to be explained further. In further expanding on what style is and how it will be useful for this research, I come to the conclusion that style is also an assemblage. In defining style this way, I want to explore characteristics of it, which make it different than the kinds of assemblages I have described above. To do this, I will start with a discussion of Wiessner's (1983) emblemic style and how it directly relates to my usage of the term. I will then move on to discuss Hodder's (1990) conception of style and how it is also applicable.

According to Wiessner (1983:257), emblemic style has a direct referent, usually something within a defined social group, and "transmits a clear message…about conscious affiliation or identity." Most often emblemic style will only show gradual change unless its referent changes, in which case it can shift rapidly. Archaeologically, this kind of style should be relatively uniform and clear. Wiessner (1983, 1984, 1985, 1997) observes that style is not just an expression of identity in the present, as all expressions of style draw from the past. Other archaeologists (e.g., Bowser 2000) have pointed out that this consistent, uniform, style can both express difference to outside groups and allyship within groups. In this way, style can sometimes be seen as a strategy for dealing with stressful times (Bowser 2000). The use of emblemic style is in contrast to "assertive" style, which is more personal and individual in its expression (Wiessner 1983:258). Because of the scales of data used in this dissertation, looking at personal, assertive, style will be very difficult, but tracing a consistent, emblemic, style is useful in seeing ways that people negotiated the Middle to early Late Woodland transition. There are some issues with this view of style that do not necessarily make it compatible with assemblage theory, which I will discuss later in this section.

Hodder (1990:45-47) looks at style as powerful and takes a view of it as a "relational property" that involves "aesthetic, emotional, and sensual perspectives" that attempts to create "coherence" through "way[s] of doing." For Hodder (1990:46), style involves three main attributes: 1) is has a spatial and temporal patterning that we can track archaeologically, 2) it is an assessment of both similarity and difference that links the general "rules" of a social group, and 3) it has power, the potential control of meaning to those who interact with it. Through its consistent patterning and use of "rules" it gains its power and has the ability to create an *apparent* sameness (Hodder 1990:51, emphasis added). Breaking this down and combining it with Wiessner's emblemic style, style is a relatively consistent and uniform pattern of doing something that draws from the rules of the social groups it is displayed within, which gives it the power to create a feeling of sameness within that group (or difference outside of the group). This power is, at least partially, generated through the aesthetic, emotional, and sensual ways that style effects members of the group. In conceptualizing style in this way, one can define it as an assemblage. Before making this full connection, I want to address a couple of issues with Wiessner's (1983) and Hodder's (1990) uses of style.

In both of these formulations, style is viewed as being a "conscious" choice that involves a person's or group's identity. They also, as do many views of style, see it as having a symbolic communication. Viewing style as conscious and symbolic inherently creates a human-centric, representational, view of its power. Hodder has even been referred to as having a "cognitive" approach to style (Hegmon 1992:518). A human-centered use of style is not how I intend to define it, but I also think it is important to remember that Harris (2014, 2016) makes sure to point out that humans are necessarily a part of assemblages. He contends that we cannot exclude the symbols, metaphors, and representations that are a part of human experience (Harris 2016:31); it is just that we must decenter them. It is my hope that by defining style as an assemblage of a specific kind, I am including, but decentering these human elements. As Harris (2016:31) states, we must be able to look at "the differences between different forms of humans" just as we would between a serving vessel and a cooking vessel, or in this case, between varied stylistic choices involving humans.

Archaeologists working in the US Southwest have discussed style in ways that remove the necessity of style being a conscious choice (e.g., Clark 2001; Lyons 2003). To look at this, style can be seen as being either low-visibility or high-visibility, which impacts how this kind of style is experienced by different groups. Low-visibility style is mostly associated with "technological style" and includes things like ceramic vessels and stone tools, which express identity, but can be best understood as "style without a message" (e.g., Carr 1995). High-visibility styles include things like design or decoration on any medium or luxury goods, which express a clear and deliberate identity to those who interact with it (e.g., Clark and Laumbach 2011). In looking at these different displays of style, these authors get at how style can be both conscious and unconscious in its display. Importantly, both conscious and unconscious styles can be traced archaeologically and have real impacts.

These authors were specifically using these conceptions of style to discuss prehistoric migrations patterns in the Southwest which resulted in different groups of people coming together (e.g., Lyons 2003) within one group's already defined territory. Br tracking changes in both low and high-visibility styles, these archaeologists could see the impacts of different migrations (e.g., Clark and Laumbach 2011). As will be discussed later, Carter Creek represents a space that did not "belong" to anyone prior to its occupation. This difference is important in discussing the results of data from these different areas, but the contribution of an understanding of style as both conscious and unconscious, and what kinds of style may be part of those categories, is important.

In continuing this use of assemblage theory, I want to define style for the purposes of this dissertation as an assemblage that expresses identity at multiple scales (Wiessner 1983) to both people within and outside of a given group. This kind of assemblage is affective in that it creates aesthetic, emotional, and sensual (following Hodder 1990:46) effects on humans that experience it. Through this affectiveness, style has power; in other words, it is particularly "sticky" (Ahmed 2004) in its ability to impress upon other parts of an assemblage, especially the human parts. This powerful nature of style also resides in its consistent and uniform expression, which creates an apparent sameness (Hodder 1990:51) except when detached from its referent (Wiessner 1983:257). Most often, style as an assemblage is expressed through symbols, such as decoration on a ceramic vessel, that are recognizable to group members (whether they connotate sameness or difference), but these symbols do not have to be in the form of decoration.

It is important to note here that style is not just any "choice" made by a person. Instead, it is an expression of identity (at any scale) that communicates that identity (or is in opposition to an identity). This expression is an assemblage of many parts that come together to create an affective field, from which this identity can be understood by others. The assemblage of style is, of course, part of the larger identity assemblages that it is expressing. This expression can be both conscious or unconscious and the difference between the two does not overtly change the ways that style can impact humans. In fact, it is not my intention to define each kind of style I discuss as conscious or unconscious, but it is important to understand that style is not always an "active" choice, but may come from learned behaviors (e.g., Carr 1995) expressed through uniform production of some items (e.g., stone tools). This will be especially important to keep in mind for the early Late Woodland period, as places like Carter Creek represent spaces in which numerous unconscious styles are being expressed alongside myriad conscious choices to decorate (or not decorate) ceramic vessels in certain ways.

To reiterate, these categories of conscious and unconscious style do not mean that everything we find archaeologically is style and that style must always be expressed. Instead, it is an archaeologist's job to highlight when style is being conveyed. In the case of tracking migration patterns, it is more important to differentiate between conscious and unconscious style. When looking at the early Late Woodland period, these distinctions become less important as people move into "empty" and messy spaces where seemingly unconscious stylistic choices may have become more in "focus" (Fennell 2007:18). Perhaps there were more assertive styles present during this period as more emblemic styles fell out of favor. A brief example will help to elucidate this and my definition above.

Take, for example, the heterogeneity of White Hall Phase ceramics during the early Late Woodland period compared to the relative uniformity of Middle Woodland ceramics (e.g., Martin 2013). Fortier (2013:279) argues that "diversity may be the unifying factor" of the Lower Illinois River Valley, where the White Hall Phase is geographically located, during this period. Perhaps, upon a detailed comparison of ceramics from different White Hall sites, we could locate different styles of ceramic decoration at each site. These styles, as assemblages, would not just be the nodes or punctates on the vessel, but would also include clay and temper used to make the vessel, the human who formed and decorated it, the symbolic meaning of these decorations to those who interacted with the vessel, and the emotions these symbols evoked.

The specific decorative choices made by these people would have been high-visibility and likely came from conscious decisions to display changing identities during this period. The choices of clay and temper may have been more unconscious, or at least low-visibility, and better reflect learned behaviors of how to make a ceramic vessel (the same is also likely true of the use of grit temper in LaMoine Valley vessels). These varying stylistic assemblages (which would also be a part of household and community assemblages) could be reflective of the emblemic style of the Middle Woodland detaching from its referent, leading to many geographically distinct styles emerging as new referential assemblages were being attached to and formed. This could also be applied to the ways that identity may have been expressed through spatial structuring during this period or which chert sources were chosen for tool production.

In laying out the definitions of identity, community, household, and style in this section, I hope to have outlined the foundation from which my data can be analyzed and understood. All of these terms can be best understood as assemblages of different varieties that can be traced through the archaeological record. Identity is at the base of each of these ideas, as it is an assemblage that emerges to create sameness and difference among people. Community is an identity assemblage that will be traced at scales larger than the household. The household, for the purposes of this research, is the smallest scale of an identity assemblage, that will grapple with the everyday lifeways of people during this period. Style, an assemblage itself, is the way that these different forms of identity are expressed. The next section of this chapter explores what the archaeological record, through tracing the interactions and intersections of these assemblages, can tell us about how people during the early Late Woodland period negotiated a major transition in their lifeways.

Assembling Identity, Community, Household, and Style

The earliest approaches to studying identity, community, and households all focused on the general sameness shared by people living in defined and bounded physical spaces. Style, in its early formulations, did not focus on sameness or bounded space but did reside in the conscious thoughts and actions of humans. These approaches ultimately missed the nuance that has since been identified through a more rigorous and thoughtful approach to these terms and archaeology at-large. As I have shown above, recent literature in these areas has moved alongside the ontological turn, thus allowing for an even deeper understanding of these concepts. The larger approach that I am applying in this dissertation, assemblage theory, inherently starts from the materiality of the archaeological record and the myriad relationships between the artifacts, ecofacts, and features that we find. These relationships are not as immediately identifiable as the trait lists and shared spaces that were previously the focus of archaeological research, but they nonetheless offer a picture of the past that considers all parts of the archaeological record equally. As Harris (2014:77) suggests, assemblages are real, material, affective things that we can identify and trace as they emerge. Ceramic vessels, chert tools and debitage, cooking pits, the spatial structuring of villages, and the symbols in ceramic decorations are all considered through the assemblages they are part of. In identifying and tracing the relationships between these various parts of past assemblages we will get a clearer picture of the past and the messy, sticky, relationships that make it dynamic.

This approach necessarily starts from the materiality of the past. This means we must "follow the material" as Weismantel and Meskell (2014) have argued. This approach coincides with those laid out by Harris (e.g., 2018) and other archaeologists (e.g., Marsh 2016) in that it moves "beyond-the-representational" to focus on the various aspects of things and the relationships between these things and other parts of a community. We must not focus only on the meaning behind materials, we must also consider their qualities and relationships (e.g., Harris 2016; Ingold 2012). This decenters humans and refocuses the goal of archaeological research on understanding the past and all its constituent parts on level ground. Decentering humans should not automatically lead to an approach that devalues them (e.g., Harris 2016), but it should consider which parts of an assemblage have power in which contexts, therefore not necessitating a central role for humans in all understandings of the past. It is not just the things that humans engaged with that mattered, but the physical and relational qualities of these things that must be considered.

Take, for example, "object biographies" (e.g., Gosden and Marshall 1999; Kopytoff 1986). The best way to understand an object biography is the ways that objects gain meaning through social interactions with humans over time (Gosden and Marshall 1999). In taking this approach, objects were often seen as following a seemingly human life cycle, through birth, life, and death (e.g., Joy 2009). The importance of an object was linked to its connections with humans. Joyce (2015) recognized the issues with approaching objects as if they are humans and argues for the use of object "itinerary" rather than biography. In this formulation, objects go through moments of stasis and movement through which we can study "the strings of places where objects come to rest or are active, the routes through which things circulate, and the means by which they are moved" (Joyce and Gillespie 2015:3). These approaches, especially as they have been put forward by Joyce (2012, 2013, 2015), help to center the material and trace its relationships in certain ways, but they also fall into a trap of viewing objects as fully formed. This approach fails to consider the properties of the materials that make up an artifact itself (e.g., Ingold 2012). To put it in other terms, these approaches may look at the ceramic vessel itself, but do not discuss the clay, water, and fire that are "baked" into the assemblage that make up the vessel.

Weismantel and Meskell (2014) provide an important framework to move beyond an object itinerary approach and into one that focuses on assemblages and the relationships from which they emerge. Although they are explicitly discussing human effigies and figurines, their approach is easily applicable to all of the materials an archaeologist may work with. In their framework, deemed "following the material", they argue we need to shift our focus from "images [and] datasets" to "the thing itself" (Weismantel and Meskell 2014:234). This will give archaeologists a "necessarily fragmentary but inherently dynamic reconstruction" of past material and social relationships (Weismantel and Meskell 2014:234). Just as Harris (2016) argues, this does not mean to remove the representational from our understanding of the past, but rather to allow it to "emerge from our data" (Weismantel and Meskell 2014:243).

To take this approach, they argue that archaeologists should start with the things they are already good at, namely technical analyses of artifacts and spatial analyses of sites (Weismantel and Meskell 2014:234). By starting here, archaeologists can first study "material substances" and then move onto understand “material contexts”. We should start by understanding the materials that artifacts are made from and then move on to look at the places these artifacts were “produced, circulated, and deposited,” (Weismantel and Meskell 2014:234). In doing this, they argue, we can begin to approach an archaeology that is similar to Geertz’s (1977) “thick description”, in which we are able to develop a deeper, denser, understanding of the past. Through this approach, we will not see humans as trait lists, but will instead see them appear “as engaged actors enmeshed in the material life of their societies,” (Weismantel and Meskell 2014:243).

Weismantel and Meskell (2014:239) still fall into the trap of centering humans in some ways, even though they are telling archaeologists to “follow the material”; but their approach aligns very well with that of assemblage theory. Their focus on material substances is inherent in that of assemblage-based approaches. For Weismantel and Meskell, starting with the inherent qualities of a material is akin to Hamilakis (2017) arguing that senses are central to understanding the affective nature of assemblages. It is through a sensual engagement with the materials and things that the affective properties of an assemblage emerge, therefore starting with these qualities of materials is only fitting. For example, archaeologists will measure and describe the paste color, thickness, temper, decoration, and surface treatment of a ceramic vessel. These technical analyses can easily bring into focus the material qualities of the clay and temper used to make the vessel and the ways that the person making it (and then those using and viewing it) would have interacted with these qualities. This interaction between the different materials used to form a ceramic vessel and the people and things interacting with it, is the next step in Weismantel and Meskell’s (2014) framework. Marsh (2016:309) argues that we must understand assemblages at smaller scales to help identify where different, sometimes larger, assemblages overlap. Starting at a foundation of "material substances" is an example of doing just that.

From this focus on material substances, comes a shift to material contexts (Weismantel and Meskell 2014:234). Context is key in understanding all archaeological materials. This is obvious in that archaeologists studying identity, community, households, and style have all recognized the importance of context (whether during archaeology in practice or the ways that all parts of a society interact) in various ways (e.g., Harris 2014, 2016; Wiessner 1983; Wilk 1997). The essential nature of context has been especially prevalent with the ontological turn and the various relational approaches that have been taken in archaeology (e.g., Hodder 2012; Ingold 2012). In these approaches, it is through the relationships between humans, things, places, and spaces that our understanding of the past emerges. This contextual understanding includes recognizing the relationships between assemblages at different scales (e.g., Marsh 2016:309). As Harris (2016:27) puts it, the purpose of a relational, assemblage-based, approach is to follow the lines of a relationship "as they come together…and as they move apart," not as a finished entity, "but as an ongoing process of growth and becoming". The job of an archaeologist is to trace the constantly shifting relationships between people, places, things, spaces, and emotions in order to understand where different forms of identity, community, households, and style emerge. A couple of examples will help to explain how and why assemblage theory can utilize context in greater detail.

Marsh (2016) uses an assemblage-based approach to better understand community formation at the Late Formative town of Khonkho Wankane in the southern Lake Titicaca Basin. In this article, he attempts to view different scales of assemblages within this town to elucidate how this approach is useful. He recognizes two "varieties" of assemblages: those that reproduce community and those that transform it (Marsh 2016:313). A basic understanding of these different varieties is assemblages that reproduce often involve daily habits and routines (usually more conservative practices), while those that transform are less frequent and involve larger, more diverse, elements. He points out that these assemblages are not exclusive to one another and often overlap and interact. He provides an overview of the materials and spaces at Khonkho that form the assemblages.

For Marsh (2016:313-316) an assemblage that reproduces at Khonkho relates to a patio group and the shared spaces within a given group. Within these shared spaces, he identifies numerous materials that relate to the daily, routine practices, that help to form these assemblages. For example, he notes that we can identify hunting and collecting through the presence of animal bones, eggshell, and lithic tools. Farming and herding are seen through domesticated animal remains, along with artifacts like lithic hoes and deer antlers used for planting seeds. Herding of animals like llamas and alpacas is also inherently tied to the long-distance travel required to receive items such as obsidian from over 300 kilometers away. He shows how both food production and ceramic production took place within the patio group and how these two processes overlapped as pots were used for food storage and cooking. Lastly, he notes that the physical spaces bounded by the architecture of a patio group would be a part of this assemblage as well. Overall, he argues, this assemblage consists of routine practices involving face-to-face interactions between members within a community that, probably unconsciously (e.g., Harris 2014), reproduce a wider sense of community at this site and in the region. Importantly it is not just the physically bounded space of the patio group that delineates these assemblages, but rather they interact across the landscape through long-distance trade/travel, and herding/farming practices.

The same spaces, practices, and materials that are part of the reproductive patio group assemblage, are also part of transformative outdoor gatherings at Khonkho (Marsh 2016:318). In identifying these outdoor gatherings, he points to a specific patio group that has a larger collection of serving vessels (which were also more diverse in appearance), along with a higher density of food production equipment (such as grinding stones). Although there is a higher density, he also notes that there does not appear to be any specialized food production equipment, likely meaning that the same items used for everyday (reproductive) food production were also used for this purpose. This patio group also showed evidence for incense burning, which may have been related to these gatherings and was seemingly rare at this site. He also highlights the large outdoor space in this patio group that would have facilitated this kind of interaction and the gatherings it would entail between groups within the town and those visiting from elsewhere.

These two different kinds of assemblages share food production items, spaces, and humans. These shared things start from something as simple as the material qualities of clay as it is made into a pot or serving vessel; or from the material qualities of a grinding stone that allow it to aid in food production activities. From these qualities, Marsh (2016) shows that the context in which these items are found (i.e., the other artifacts, spaces, and ecofacts that these items are relating to) is pertinent to identifying these assemblages and the nuanced relationships that form them. These differing relationships are seen by focusing on the context in which these materials and spaces are found and the relationships this context entails. It should not be lost that these assemblages are constantly coming together and moving apart (e.g., Harris 2016:27) across a variety of scales, as parts of these assemblages are literally moving and interacting within a variety of contexts.

Harris (2017) approaches assemblages in a slightly different way, but also shows why context matters and how it can be examined at different scales. In an article, Harris does not attempt to define different "types" of assemblages or the kinds of effects they may have on a given community. Instead, he focuses on how we can use assemblage theory to view archaeological materials across multiple scales in ways that consider their entire context at these scales. This approach "allows us to treat different levels of analysis in the same ontological fashion" (Harris 2017:129). To show how this can be done, Harris starts with a single pot from Early Neolithic southern Britain, more generally known as P2307 or M79.

Harris (2017:130-133) explores first how the pot itself is an assemblage made up of the clay and temper used to form the pot, along with the person who molded it together. This includes the measurable characteristics of the pot, such as its diameter and the incisions made on it. This pot then moves on to become part of another assemblage with fire and burning materials as it is heated to its useful form. After this, the pot was likely used for cooking or storage, bringing it into even another assemblage with both those who used it, the materials cooked or stored in it, and the animals or plants from which these materials came. From there the pot was deposited in a ditch that is part of a causeway enclosure (a monument) along with a fox skull, another small pot, and a deer antler comb. This is the next scale of analysis discussed by Harris.

This deposit is an assemblage that includes the pot and the items it was deposited with, but this assemblage goes further and includes the representational nature of foxes as powerful beings during this time. It also includes the explicit choices made by humans to deposit these items together in this place, while at the same time having a real effect on those that watched this deposition but were not directly involved in it. This then extends outward into Harris' next level of analysis, the causeway enclosure itself (Etton). This assemblage includes the various ditches dug to construct it, along with the numerous deposits made in it over a couple of centuries; we can also include the people who dug these ditches, and the tools they used. Beyond the physical structure of the enclosure, he also notes that it was likely flooded for part of the year, so this assemblage necessarily includes these flood waters as well. Lastly, he points out that this enclosure is a part of the larger assemblage of causewayed enclosures throughout southern Britain during this period.

In exploring the numerous assemblages that may extend from a single pot, Harris (2017:133) makes the point that all of these assemblages are not "neatly nested", but instead all operate at multiple scales simultaneously. For example, the pot (M79) is not just the assemblage of the physical pot itself or a part of the other assemblages he discussed, it is also part of the larger assemblage of pots being made and used during this period. All of these assemblages necessarily overlap and intersect as they shift throughout the early Neolithic. This pot and the numerous assemblages it is part of, are all in the process of becoming at the same time, shifting with the rhythms of this period at different scales. This point is the most important one he makes. To understand the multiple contexts (and scales of these contexts) in which archaeological materials participated, we should trace the various assemblages they were a part of, always recognizing that these assemblages are forming, moving, and breaking apart at the same time. To do this, we should use all of the available information to explore the contexts of these assemblages, thus allowing for a more complete view of the numerous overlaps, intersections, and interactions that were occurring in the past.

Additional concepts that can help us understand how to identify and trace identity, community, household, and style in the past come from Deleuze's concepts of territorialization and deterritorialization (e.g., Deleuze and Guattari 2004; Harris 2013). Using these concepts provides a framework to inspect the ways that assemblages overlap, intersect, and impress upon one another at a variety of scales (both temporal and spatial), just as Marsh (2016) and Harris (2017) do. Territorialization refers to the strengthening of boundaries and increased homogeneity, while deterritorialization is the opposite. It should be noted that both can occur at the same time in different parts of an assemblage. Together, these concepts relate to the active becoming of assemblages as they "strengthen" in some areas and become "fuzzy" in others. I believe that style, as an especially affective expression of identity, can help to identify these processes through the archaeological record.

Additionally, I will use the term reterritorialization in this dissertation. This process is similar to territorialization in that it involves the strengthening of boundaries and an increase of homogeneity within an assemblage, but is also slightly different, especially as it pertains to the early Late Woodland Period. For this period, I use the term reterritorialization to refer to instances in which newly emergent early Late Woodland assemblages draw directly from the Middle Woodland past to create new assemblages that necessarily include ties to the past and present. These ties to both past and present necessarily include a restrengthening and inclusion of Middle Woodland elements in an assemblage. As Harris (e.g., 2014) has noted, assemblages do not cease to exist because of the loss or addition of constituent parts. In the case of reterritorialization, the addition of Middle Woodland components to an emerging early Late Woodland assemblage, makes it a unique process that I feel should be specified in this dissertation.

An important aside must be made here that notes an understanding of the ways that terms like territorialization and deterritorialization sound as if they are linked to colonization and Western influences on archaeology. While Deleuze and Guattari's (2004) ideas have certainly been taken up by anthropologists (and others) who would agree with the lasting effect of colonialism in archaeology, this connection has not been addressed. While I am not taking the time to fully flesh out the issues with these terms and their potential ties to colonialism in archaeology, I would be remiss if I did not highlight that there are numerous examples of decolonizing practices in archaeology, especially that related to the Indigenous pasts of people in North America (e.g., Atalay 2006; Oland et al. 2020; see also Crellin et al. 2021:194-196). In using these terms I am not trying to ignore these conversations, I am solely tying this research back to the beginnings of assemblage theory as it has been developed. It should be noted that other ideas, such as "bundling" (see Pauketat 2013) have been used in similar ways as assemblages to highlight some more Native ways of thinking.

A good example of these concepts can be extrapolated from Pluckhahn and Wallace (2022) who use pottery to examine the interconnection of households in the Woodland period Southeastern US. Using sourcing of pottery and matching of paddles used to decorate the pots, they argue that Middle Woodland Swift Creek vessels represent the interaction of households at ceremonial centers, as these vessels were brought to these centers for ritual occasions. But it is not just the literal interaction at these ceremonial centers that mattered. The making of these pots, and the carving of the paddles used to decorate them, would have been a daily practice that tied these households to a larger, shared, social memory related to these ceremonial centers and the events that took place at them. These vessels are often found in domestic contexts, so their usage appears to extend between a variety of sites. This contrasts to the Late Woodland period in which a specialized vessel, called the Weeden Island type, becomes more prominent in mortuary contexts. These vessels were also clearly differentiated from those found at habitation sites and may have been made by specialists, as opposed to the household production from the preceding period.

If we view these two periods through the framework of territorialization and deterritorialization, we can see how the Middle Woodland represents a period in which household assemblages and community assemblages were coming together and strengthening through the use and decoration of Swift Creek vessels. This includes the sensual experience of carving these paddles and forming these pots, which would have been an especially affective expression of a group style that was shared within the home and at larger gatherings. During the Late Woodland period, more specialized, unique vessels replaced seemingly utilitarian pots in mortuary contexts. These pots did not share decorative patterns and seemingly blurred the boundaries of the former Middle Woodland community assemblage through a change in style that represented a potential focus on "clan identity" (Pluckhahn and Wallace 2022:42). These styles were not just the decorations found on the pots but were the assemblages that emerged from the actual doing that was the production and use of these vessels. The production and use of a Swift creek vessel, in both domestic and ritual contexts, produced a distinctive style that affectively bonded households throughout this region through a shared social memory of ritual events. During the Late Woodland period, the specialized production of Weeden Island vessels and their use in only mortuary contexts produced a style that was not carried over into the household, therefore untethering connections that were previously held.

An additional point needs to be made here. In examining the contexts in which we find and describe archaeological materials, we can often be drawn into separating "ritual" items and "mundane" items. As Pluckhahn and Wallace (2022:37-41) show in their discussion on Swift Creek vessels, the making of a utilitarian pot is not just a mundane activity. In their example, the making of this pot not only extends to the physical experience of ritual events where some of these pots were deposited, it also connects the makers and users of these pots (and the paddles used to decorate them) to these wider social events through social memory. The making, using, and depositing of these pots are all part of a larger community assemblage, which included numerous household assemblages, that interacted and intersected in both mundane and ritual contexts.

Thus far, I have addressed the general ways that we can use assemblage theory to understand the archaeological record by "following the material" (Weismantel and Meskell 2014). In order to further show this, I will now briefly address the major material categories that are the focus of this dissertation and the ways that we can understand each starting with their material qualities and moving outwards to their material contexts. In doing this, I explore how these materials come together with others to form the assemblages that I trace in this dissertation. I hope this clarifies how and why assemblages, and the materials which they emerge from, matter.

Ceramics

Ceramic assemblages, archaeologically speaking, have been considered vital for understanding past groups and their territorial boundaries from the time of Childe (1958), who used these kinds of traits to define communities. Early Late Woodland research in Illinois and the surrounding region has also focused somewhat, although not exclusively, on exploring ceramic assemblages and the boundaries of different decorations, temper types, and vessel shapes (such as the differences between White Hall and Weaver pots, e.g., Fishel 2013d; Fortier 2013; Figure 2.1)). On the other hand, a relational assemblage of ceramics, includes these previous ideas and moves beyond them, further highlighting the importance that ceramics play in our understandings of the past. Ceramics, at a basic level, are “made from clay, temper and hands coming together, the latter mixing the former together, shaping and coiling the mixture into the right shape” (Harris 2017:130). The production of ceramic vessels “involves earth, water, fire, and human hands” (Weismantel and Meskell 2014:236). These parts of ceramics come together and territorialize into ceramic vessels and the fragments that we find archaeologically, but the relationships embodied within a vessel extend well beyond its physical presence in the world.

Figure 2.1: (a) a standard Weaver cordmarked rim from Carter Creek, (b) a White Hall cordmarked rim from the Carlin Site.

As I have explored above through Harris (2017), Marsh (2016), and Pluckhahn and Wallace (2022), the myriad relationships that a single ceramic vessel, or group of vessels, can have is quite extensive. This includes relationships with specific clay sources (e.g., Roddick 2015), temper types, decorations/surface treatments, and people who make and use these vessels. We can further extend these relationships to the foods cooked and stored in the vessels and the wider landscape from which these items were collected (e.g., Marsh 2016). In using the vessel, certain aromas and flavors would emerge, which would directly engage with the senses of those in its presence. The senses would also be engaged in the molding, forming, and decorating of the vessel. Decorations and surface treatments may reproduce symbols that extend these relationships beyond the inhabited world (e.g., Benn 2018). This further includes the places and ways that these vessels are deposited. The original assemblage may be “deterritorialized” as the vessel is broken and deposited (Harris 2017:133) into new relationships and assemblages.

Ceramic vessels travel across long distances in some cases, creating additional relationships with places, spaces, and people. We should also consider the wider assemblage of ceramics that share similar characteristics, not as a set of shared traits or given features, but as a shared historical process (Harris 2017:134).

A couple of examples from the Woodland period in the Midwestern US can help to further elaborate on these relationships. Fishel (2018) explores ceramics from the Marseton #2 site, located in the Mississippi River Valley. This site is multi-component, but a majority of its occupation was represented by a Weaver ring midden that was occupied around 500 CE (Carter Creek is also a Weaver ring midden, although it was occupied 100+ years prior to Marseton #2). In analyzing the ceramics from this site, Fishel found that there were an unusually large number of non-local, non-Weaver, sherds. The non-Weaver ceramics found at this site were similar to a style (Linn ware) from areas to the north (see Figure 2.2 for an example of Linn Ware from Carter Creek). I should note that Weaver does not equate to a single entity or shared sense of community (e.g., Green 1999), but instead is represented by shared patterns of lifeways across a wide geographic region during this period. The presence of a non-Weaver style of ceramic vessel at a Weaver site is not rare during this period (Fishel 2018:266), but the large number of these vessels is. He highlights three potential scenarios that could explain how these vessels arrived at the site: 1) the vessels were brought as trade items, 2) the vessels were made by (very likely) female potters living at the village, or 3) the vessels were made by a household of non-Weaver people living at the site (Fishel 2108:272-273). He makes the case that the third option is the most likely scenario. All three possibilities show the wide-ranging nature of ceramic assemblage relationships.

Figure 2.2: A Levsen style (Linn Ware) body sherd from Carter Creek.

If the vessels were brought in as trade vessels, they would carry connections to non-local clay and temper sources, non-local potters, and unfamiliar decorations/surface treatments. They would also have likely been used to carry a product that would also have these connections to non-local places and landscapes. A trade vessel would also inherently create connections between the people doing the trading, as different groups would come together for these purposes. In this scenario, we may even see an assemblage that can "transform" the community at Marseton #2 as more diverse, less frequent elements were brought into relation with one another (following Marsh 2016:313). In either of the other scenarios, these ceramics would have been a part of relationships to non-local peoples living and interacting with the people, places, spaces, and things of the village at Marseton #2. These connections would be similar to those from trade but would also differ in their configuration as the use of these pots by non-local peoples living at the village would likely have produced much stronger affective ties to their previous habitations and lifeways. A non-Weaver person producing a non-Weaver pot at a Weaver village would likely feel stronger affective ties to their homelands as they made and used this pot than would a Weaver person to the same non-Weaver places and people. These different scenarios would result in different forms of assemblages that connected to multiple scales in different ways, but that would have been mediated by the production and use of these vessels.

Benn (2018) presents another interesting example from a completely different perspective. He argues that early Woodland ceramic vessels in the Upper Midwest can be seen as cosmograms through the various decorative motifs and patterns displayed on the vessels. He defines a cosmogram as "anything that expresses a belief system…by reducing a belief to its essence in symbolic form" (Benn 2018:120, citing Sundstrom 2012). As a cosmogram, these vessels would have been "alive" to those using them, meaning any use of the pot (and the production of the pot) would have been a potentially meaningful interaction. He argues that many of the decorative motifs used during this period would have created connections to the wider cosmos (both the above and below worlds) both through the production and use of the vessel (Figure 2.3). Taking this discussion at face value, it is easy to see how ceramic vessels during the early Woodland would have been parts of a wide array of assemblages. The assemblages that included the wider cosmos would be more intense during moments of use and production, but may deterritorialize when not in use or when broken and deposited.

Figure 2.3: A vessel from Carter Creek (V46-3) showing exterior tool modifications above a smoothed band at the neck/shoulder of the vessel with cordmarking below.

These make the larger point that ceramics, from both an archaeological and relational perspective, can be viewed as ideal materials to study. This is partially due to the numbers in which they are found at archaeological sites, but also considers the numerous relationships they are inherently part of. These relationships include everything from the formation and firing the vessel to the final breaking and deposition of that vessel. Ceramics have the potential to be traced across the varied, multi-scalar, assemblages they are a part of in ways that help to elucidate wider connections between people, places, and things in the past.

Lithics

Lithics, just as with ceramics, are also parts of numerous, varied, and multi-scalar assemblages that can be traced archaeologically. Also similar to ceramics, lithics have been used to define roughly bounded geographic areas and time periods (e.g., Justice 1987) based on shared characteristics of projectile points. In some cases, the production of certain lithic tools may also be used to help define a time period (e.g., Lamellar blades during the Middle Woodland period, Montet-White 1968). At the same time, the material qualities of lithics are vastly different from ceramics, affording different kinds of interactions and relationships. Lithic tools and debitage are made from stone that has been worked by a person into a usable form (such as a projectile point). The stone used in this process must be sourced from somewhere, whether near or far. A large amount of fire-cracked rock and other stones are also found at sites as part of the larger lithic assemblage. This process of procurement and production ultimately territorializes into a finished tool that can be considered an assemblage itself (of the stone, the tools used to shape it, the person who shaped it, and the location it was procured from), but the assemblages that lithics are part of extend much further than this.

This can include the same assemblages as ceramics. Take, for example, the use of grinding stones to process seeds and nuts, or the use of lithic points and blades to hunt and process animals. These steps in food production are just as necessary as the cooking and serving of the food, and ultimately exist alongside them in assemblages. There is also a connection with fire as chert may often be heat treated to improve its productive qualities, while also giving it a distinctive luster or coloration; non-chert stones are also used as heating implements to help boil water. Lithics may also have a style that can afford the same kinds of affective fields that a decoration on a ceramic might. At the same time, the production of a lithic tool does not necessarily involve the same elements and actions as that of a ceramic vessel; it does not require water and fire and the molding of clay and water into a particular form. Lithics are generally more durable than ceramics and can be reused numerous times. There are even potential examples of people during the early Late Woodland period finding, repurposing, and using Middle Woodland tools (e.g., Jackson and Fortier 2014), which would create another layer of relationships to the past (Figure 2.4).

Lithics, differently than ceramic clays and tempers, can sometimes be sourced from quarries hundreds of kilometers away. For example, obsidian found at various Middle Woodland ceremonial centers has been sourced to present-day Wyoming and Idaho (Hatch et al. 1990; Hughes 2006). Middle Woodland peoples are thought to have traveled to these sources, ultimately bringing this stone back with them, producing relationships across a wide geographic space that would materialize into an assemblage as these materials were deposited in burial mounds. In one case, hundreds of obsidian bifaces and the by-products of their manufacture were cached in a single mound (Shetrone 1930). In another example from the Middle Woodland, Lepper (2006) contends that people coming to ceremonial events in Ohio were given Flint Ridge flint as a token to remember these events by. These pieces of flint would inherently connect people to these events, the ceremonies that took place at them, and to a wider “Hopewell” community assemblage. These are all examples of relatively extraordinary uses of lithics, but most of the chert tools and debitage archaeologists study comes from more mundane contexts.

During the early Late Woodland period in west-central Illinois, a period when obvious ritual activities seem to disappear, people were almost exclusively using local, sometimes low quality, cherts usually of a Burlington variety (e.g., Esarey 1983; Green and Nolan 2000). There are examples of non-local cherts being used during this period (e.g., Esarey et al. 1984), such as Cobden/Dongola chert from southern Illinois, but usually this is in small amounts (Figure 2.5). This use of local cherts coincides with a general lessening of regional interaction and can be seen to reflect changing relationships between people, places, and things. In the case of lithics, this use of local cherts is just one part of a wider assemblage that no longer connects to a large, diverse, region in the same ways. People were literally connecting with new, localized, parts of the landscape through chert sourcing and production. There is also a shift in lithic production practices. It is thought that early Late Woodland lithic assemblages usually reflect a more expedient, less formalized, use of lithics (e.g., Nolan 2013b). This would represent a different engagement with the material itself that can be seen as a newly forming assemblage between chert and the people knapping it; this also extends to those using these tools as they would take different forms as well.

Figure 2.4: Two heat-treated, repurposed Snyders PPK made from Burlington-Keokuk (BK) chert. (a) From F27, repurposed for cutting activities; (b) from Mike Black's collection (MB81), repurposed for scraping.

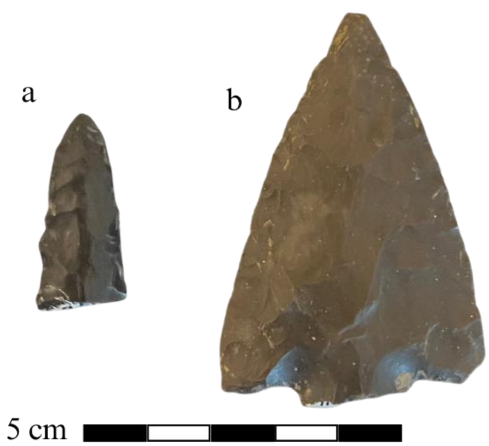

Figure 2.5: Two tools from Mike Black's collection made from Cobden-Dongola (CD) chert. (a) MB24 an indeterminate PPK tip; (b) MB64 a Snyders PPK.

In all, lithics represent another great tool for archaeologists to use in tracing the assemblages of the past. As with ceramics, the contexts in which we find lithics can be both mundane and exotic, but in any case, they are definitively relational. From the procurement of chert at a quarry, to the knapping of the chert into a usable form, to the resharpening of a lithic tool, to its final deposition, lithics are part of wide-ranging assemblages that be traced across multiple scales. Through these processes, lithics create real, material and affective connections between people, places, landscapes, and animals.

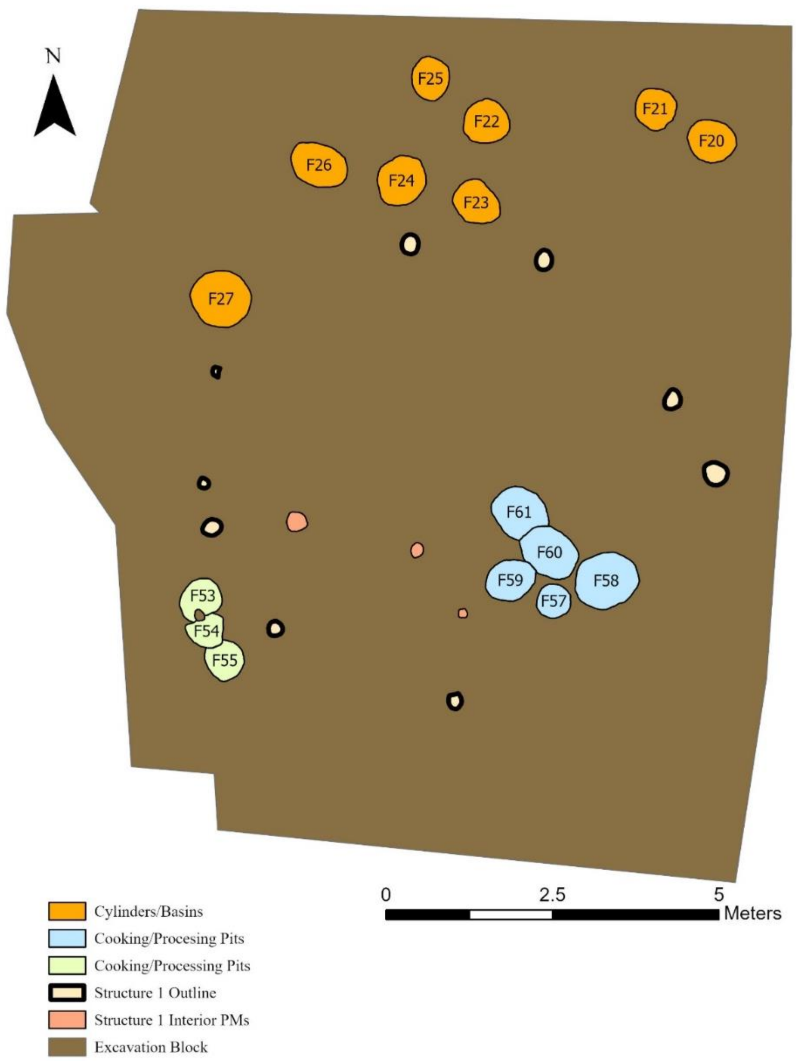

Figure 2.6: Clusters of pits in Excavation Block 1 (EB1) at Carter Creek that have similar uses and may represent activity areas.

Features and Spatial Patterning

Features and spatial patterning can include the spatial structuring of small-scale places like a house structure, the spatial patterning of a village, the distance between pits, the distance between house structures, the direction in which a house structure opens, the depth and layering of a pit/postmold, and activity areas associated with a household. From an archaeological perspective, features are vitally important, as they provide additional context within which we can place the artifacts and ecofacts we find. Features, and the spatial patterns between them also provide archaeologists with a way to define spaces, such as a house structure or site. From a relational perspective, features are larger scale assemblages than just a pot or lithic tool. At the same time, they include these pots, tools, and other features and exist as assemblages themselves, which are parts of even larger assemblages. An important aspect of features that differentiates them from ceramics and lithics is their physically stationary nature. Unlike a ceramic vessel or chert tool that can travel far across the landscape, a feature is inherently tied to a defined space. This connection to a bounded space does not impede the ability for a feature to form relationships across a wider area because features are formed from the literal gathering of materials and people.

One of the focuses of this dissertation is to trace and identify a household at Carter Creek during the early Late Woodland period in west-central Illinois. There are few sites within the region that show any presence of the physical structure of a house (e.g., Jackson and Fortier 2014) and in only a few cases (e.g., Fishel and Emerson 2013) clusters of pits have been labeled as households, delineating the shared space of a small group of people. Because of this, I am limited in my ability to discuss certain qualities of buildings that have produced fruitful archaeological research. For example, without the material correlates to trace it, I am not able to examine how buildings, like and as assemblages, are never finished, always in a state of being built (Beck 2018; Ingold 2013). With limited data on the physical structure of houses during this period, I am not able to examine how these structures afforded movement within and through them (e.g., Weismantel 2013). At the same time, I use other features, like pits, to explore these ideas in different ways.

Activity areas, or spaces in which people perform particular activities within and around a house structure, have been defined and discussed extensively in archaeological research, even if this exact term is not always used (e.g., Flannery 1976; Marsh 2016). These can be understood by looking at the clustering of specific artifacts in pits, or the size and shape of a pit, and this can tell us how it was used (possibly for cooking or storage; Figure 2.6). In doing this, I can work to assess the aromas, sounds, and other sensorial experiences that would have occurred in and around house structures without always knowing the exact physical shape of the structure itself. These affective sensorial experiences are central to the ways that household spaces create and emerge from assemblages.

I can examine the layering and superposition of pits to see how people were using and reusing these household spaces in the past. For example, a storage pit would be an assemblage of the literal soils it was dug into, the items stored in it, and the people who dug and used this pit. When this pit was filled with refuse, possibly multiple times, it would have been deterritorialized from its former use but would shift into another assemblage that includes the refuse deposited in it. We can also use layering to see how a pit was used over time, possibly indicating shifts in activities, and relationships, near the pit (Figure 2.7). When examining super positioning, we can see how a given space changed uses over time. This may not reflect the building and rebuilding of a structure, but it can show how relationships within a household space shifted. The ways that household spaces, and pits were structured, used, and reused over time is valuable for understanding the relationships between smaller assemblages that formed these spaces and the larger landscapes in which these assemblages interacted with others. These are just some examples at the household and house structure level, but this dissertation also explores other aspects of spatial patterning that were important to the assembling of identity assemblages during this period, specifically the circular layout of Carter Creek and other early Late Woodland villages.

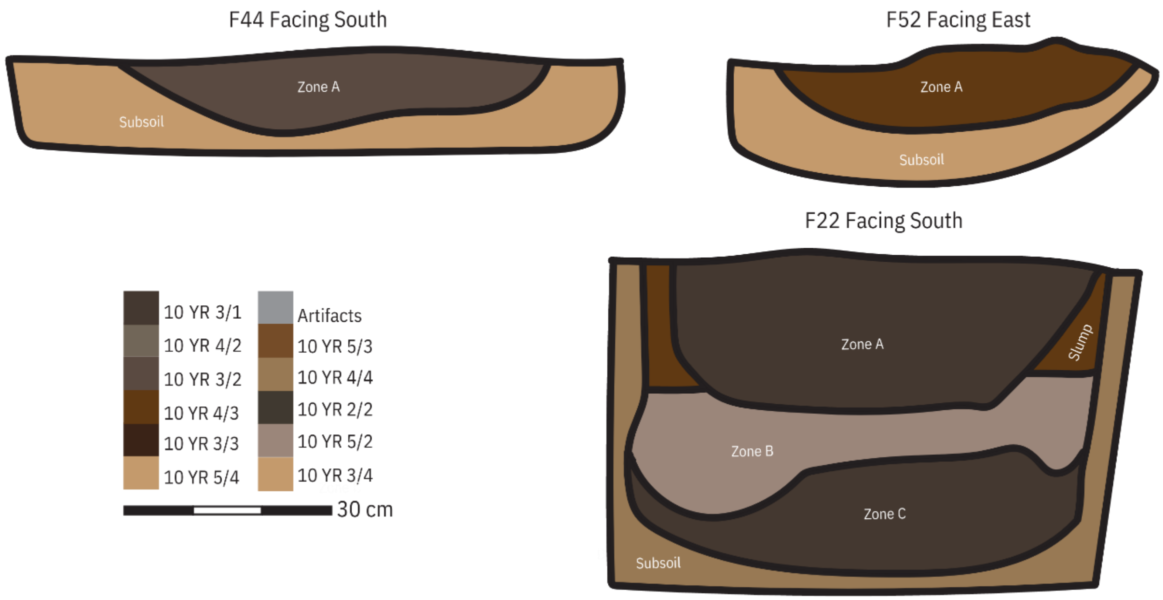

Figure 2.7: Examples of single-zoned and multi-zoned pits from Carter Creek.

By investigating features and the spatial patterning they created from an assemblage-based perspective, I work to show how these aspects of the archaeological record constitute unique parts of assemblages that can help us to trace these materializations at multiple scales. Starting at the household level is especially important during the early Late Woodland period because there are few ceremonial sites to instruct us on more widely shared practices and the sites that we do know about certainly do not approach the grandeur of those from the preceding period (e.g., Green and Nolan 2000). As Harris (2014, 2016, 2017) notes, we can understand the large scale through the small scale and vice versa as we see the ways that different assemblages impress upon one another and interact across multiple scales. Tracing household assemblages will allow me to understand wider social relationships during this period in ways that show how these multiple scales of sociality were constituting each other.

Just as with ceramics and lithics, features and spaces are not just assemblages in their own right, they also existed as members of other assemblages, which constantly overlapped and intersected as these assemblages formed, territorialized, and deterritorialized. Harris (2017:132) puts it in this way: “Assemblages always exceed themselves and bring about new capacities in the world to affect and be affected.” It is these capacities, these places of emergence and affordance that I trace through the materials found in the archaeological record. These analyses unavoidably start from the material substance and the traits and characteristics I can define from this, but they also necessarily connect to the material contexts that existed during this period and the assemblages that I locate and trace through this information.

Early Late Woodland Identity Assemblages and Expectations

The early Late Woodland period was first identified as consisting of the “good gray cultures” (Williams 1963:297) due to the lack of exotic artifacts and complex ceremonial centers. This, it was originally thought, was due to a “Balkanization” of groups during this period, as people retreated into the uplands of Illinois, secluding themselves from any consistent widespread interaction (McElrath et al. 2000:16). Research over the past few decades has shown that this formulation of this period was ultimately overblown (e.g., Green 2015). As the dynamic nature of this period emerges through this recent research, it can be said that this period is far from “gray”. To examine this period further, and to define identities at multiple scales during it, does not assume static groupings of people, subscribing to a general set of "Weaver" traits; the material character of this period cannot be defined just by the how "simple" it seems at first glance. Instead, we must recognize the material diversity during this period and the ways that this presented itself through the emergence of multiple early Late Woodland identities at varying scales.

These identities emerged at Carter Creek and other sites during a period of great social transformation that was reflected through the conscious choice to abandon previously dominant practices and habitation sites. In doing this, people during this period were having to contend with a reformation of their identities at all scales. The diversity of this reformation is what makes this period so interesting, but also so difficult to comprehend. Each group of people, moving into a variety of new and old spaces, would be engaging with this newly forming cultural landscape in unique ways. Some people may have expressed a disconnection from the Middle Woodland, while others would continue to tie their identities to it. Because of this, a full understanding of this period requires the tracing of these identities that recognizes the heterogeneity of this period. Therefore, this dissertation does not define a "Weaver" or "early Late Woodland" identity, instead it recognizes the assemblages that formed during this period and the different scales of identity that emerged from them. This includes the acknowledgement that all materials, places, spaces, and experiences. make up these identity assemblages.

As I show in the next chapter, the Middle Woodland period (100 BCE-400 CE) exemplifies widespread connections between diverse communities as reflected in shared material traits and practices. The mound building practices and exotic materials that defined this period lasted for a few centuries, centering in Ohio and spreading throughout much of the Midwestern US (e.g., Caldwell 1963). Due to myriad factors that caused the downfall of existing social systems and connections, these dominant practices and materials traits began to wane, eventually transforming into early Late Woodland practices in west-central Illinois around 250 CE (other parts of this shared identity lasted for centuries longer, such as in Ohio where it is thought to have continued until ~400 CE). The deterritorialization of these widespread, seemingly homogenous, practices and material traits, shifted into a smaller scale, more exclusive cultural landscape. In some cases, in Illinois and outside of it, this Middle Woodland identity continued in new ways, while in other places it was seemingly forgotten. The practices and material expressions that signified a Middle Woodland identity changed and reformed into newly emerging identities.

The main questions I ask in this dissertation are: 1) How were people at Carter Creek actively connecting to, or disconnecting from, previously dominant Middle Woodland practices? How does this display itself at multiple scales of identity? 2) How does the emergence of identity at Carter Creek compare to other sites? At the household level? At the community level? 3) How were different forms of identity assembling across the wider early Late Woodland cultural and temporal landscape? What differences and similarities can be identified between earlier and later habitations during this period? And is there any form of shared or common identity that emerges during, and lasts throughout, this period? 4) What do the emergences of identity during this period tell us about how people were negotiating the transition between the Middle and early Late Woodland periods?

If people at Carter Creek and other early Late Woodland sites were actively disconnecting from Middle Woodland practices, then there should be clear evidence of changing practices and relationships between these periods. This may result in more locally defined identities associated with distinct sites and regional characteristics. Archaeologically, this can be traced through newly emergent identity assemblages at multiple scales. If early Late Woodland peoples were actively connecting (or reconnecting) to Middle Woodland practices, then there should be clear evidence of shared practices and relationships between these periods. This may result in similar practices and relationships between sites during this period. Archaeologically, this can be traced through the extension of Middle Woodland assemblages into this period, even if they take slightly different forms.

This same logic can be applied for comparisons between Carter Creek and other early Late Woodland sites, as well as comparisons between geographically and temporally distinct communities. If these communities were sharing identities, we would expect to see shared practices and relationships between different sites and phases. If these communities were forming unique, local, identities, we would expect to see differing practices and relationships between different sites and phases. The materials compared between households, sites, and regions may appear similar in some cases, so we should understand the contextual relationships between these materials and assemblages to see where shared or distinct identities were emerging. In all possibilities described above, there is a middle ground in which people are connecting and disconnecting from the Middle Woodland at the same time or are sharing identities at some scales and not others. Tracing the fine-grained relationships and assemblages across this period will allow for a view of these nuanced realities.

I argue that the wider early Late Woodland landscape as a whole represents a deterritorialization of Middle Woodland assemblages, along with the simultaneous emergence of newly formed identities at multiple scales. This is not represented by a complete disjuncture from the Middle Woodland period, but instead includes active connections to this period in some contexts and active disconnections in others. This can present itself in two ways, which represent two parts of a spectrum and more than completely separate realities. First, people may completely abandon Middle Woodland practices, and materialities representing a complete disconnection with this period. On the other hand, and what I argue occurred, wider Middle Woodland assemblages and practices would be deterritorialized, resulting in a mosaic of newly emergent identities, which entangle with these deterritorialized assemblages in some contexts.

Tracing this dynamic landscape at multiple scales allows for my fourth question to be answered. The active choices and relationships that are found during this period emerge into myriad assemblages that show how connection and disconnection from previous practices can lead to reformation into new, vibrant, communities. The ways in which past assemblages were deterritorialized and reterritorialized are windows into the ways people during this period negotiated the changing cultural landscape. Tracing the newly emerging relationships between people, places, things, and spaces during this period shows that the drastic changes seen in material culture during this period were not a loss of anything, but instead reflect active choices and strategies by different communities.

CHAPTER 3: CARTER CREEK WITHIN A WIDER REGIONAL CONTEXT

The early Late Woodland period is largely seen as a lull between the cultural climaxes of the Middle Woodland and Mississippian periods in the Midwestern U.S. Yet, cultural remains of that time still provide useful information about the dynamic nature of people and groups in the past. Evidence from the Late Woodland can show how these groups first negotiated the transforming cultural landscape from the Middle Woodland and then set a foundation for the rise of Cahokia during the Mississippian. The widespread interaction and mound building practices of the Middle Woodland period that brought "exotic" artifacts from all across the continent dissipated during the early Late Woodland. The Late Woodland instead exhibits a reformation into more localized groups who actively chose to limit their spheres of interaction.

McElrath et al. (2000:15-16) have described this shift as a "true collapse (*sensu* Tainter 1988)" represented by a "Balkanization" of groups throughout the Midwest. This transformation represented the deterritorialization and reterritorialization of assemblages across the wider cultural landscape. These trends resulted in a less grand archaeological record from this period. As one of the earliest known forays into the uplands during the early Late Woodland period in west-central Illinois, the Carter Creek site represents a unique opportunity to trace these changing assemblages.

In this chapter, I start with consideration of varied ways of conceptualizing of collapse and social complexity. I next turn to a brief discussion of the environmental setting of the Galesburg Plain, where Carter Creek and other La Moine River Valley sites are located. Although I will discuss the Buffalo Chip (11MG162), Gast Farm (13LA12), and Rosewood sites in this dissertation, I believe it is most important to contextualize Carter Creek's location, as it is the center of this study. After a discussion of the environmental setting, I provide a larger examination of how the Late Woodland period has been theorized and discussed to this point. I will focus this discussion on the La Moine River Valley and the early Late Woodland, but it is also useful to consider how archaeologists have formulated this period as a whole. Within this wider discussion on the Late Woodland, I touch on the ways that the Middle Woodland period has been theorized.

Importantly, I will examine the concept of World Renewal Ritual and how numerous archaeologists have understood this idea to be represented in many Middle Woodland practices (e.g., Byers 2015). I conclude this chapter with an outline and discussion of William Green's (1987, 1993; Green and Nolan 2000) "Frontier Model," which has been developed specifically to address the larger transformation seen in west-central Illinois during this period. Importantly, the ideas from this framework can be applied, at least generally, to other regions of Illinois (e.g., Sutherland 2018). After setting this foundation, I provide a more detailed, materially focused, consideration of the archaeological chronology of the La Moine River Valley and the wider region (from the Middle Woodland to the Late Woodland periods). I focus on the regions from which sites will be compared to Carter Creek; this section will touch on some Early Woodland traits as well.

Before getting into the wider context of this study, I want to briefly discuss the argument from McElrath et al. (2000) that the early Late Woodland period represents a "collapse" and a marked decrease in interaction between groups. Collapse, according to Tainter (1988:4), whom they reference, refers to "a rapid, significant loss of an established level of sociopolitical complexity." Tainter (1988:15-16) even briefly mentions the Middle Woodland period in the Eastern Woodlands as an example of collapse. This "loss" of complexity would seemingly have led to the decrease in interaction that McElrath et al. (2000) predict as a result. A decrease in interaction (or an increase, as suggested by Braun and Plog 1982) is something that will be discussed more later in this dissertation through my analysis and interpretation of data, but I first want to address the concept of collapse briefly below.

The argument of collapse during this period necessarily views the Late Woodland as diminished or lesser in comparison to the Middle Woodland. This perspective falls into the trap of seeing that time and place as consisting of "good gray cultures" (Williams 1963:297), which I believe McElrath et al. are purposefully trying to counteract. A purported loss of complexity implies that the Late Woodland period was not complex at some perceived scale of significance. Yet, it is important to see the complexity of the Late Woodland where it actually existed. The Middle Woodland period exhibited clear examples of widespread interaction and ceremonialism that allows for an easy, often top-down, view of that period as complex (although see Miller 2020 for an example of Middle Woodland complexity at smaller scales). The loss of these characteristics may make the Late Woodland period seem "un-complex" in comparison, but I believe this complexity lies in a different location: the small scale of the everyday.

To be fair to McElrath et al. (2000), they were writing before a great amount of data had been collected and analyzed from this period, so they were drawing largely on a limited dataset. It is my hope that this dissertation can continue to provide further data, discussion, and context to this period that will allow for a more nuanced formulation. The use of assemblage theory discussed in the previous chapter will allow for the Late Woodland period's complexity to be drawn out of the relationships that existed at smaller scales than those most often studied during the Middle Woodland. There was no collapse of Middle Woodland practices, but rather a reformation into new and unique styles and forms. To better look at these unique reformations, I turn next to wider contexts.

Environmental Setting: Galesburg Plain, West-central Illinois

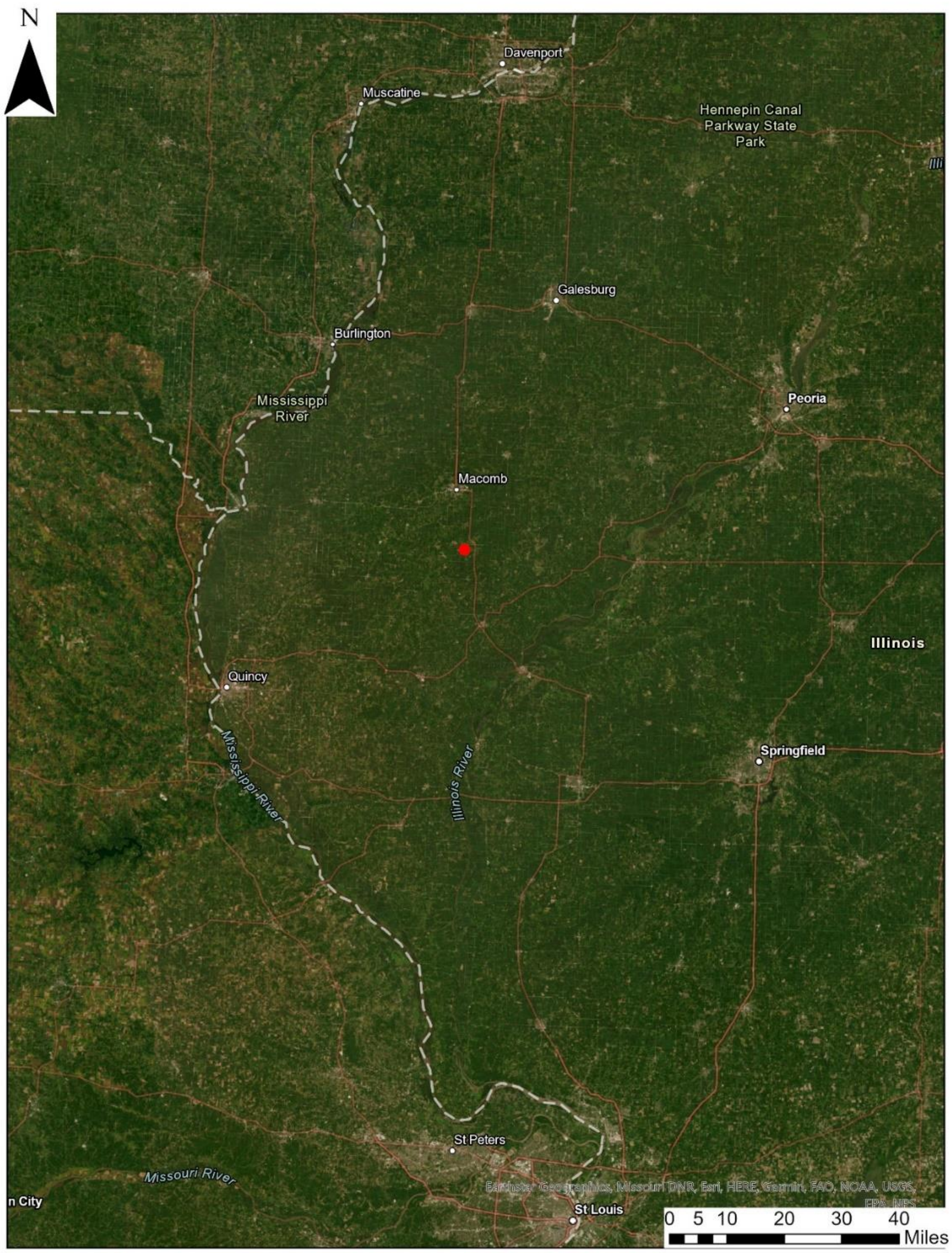

Figure 3.1: A regional map showing the location of Carter Creek within west-central Illinois.

West-central Illinois (Figure 3.1) broadly encompasses the Illinois and Mississippi River valleys and the uplands and tributary valleys in between from the Illinois-Mississippi River confluence on the south, up to the Green River drainage to the north. The southern portion of this area consists of the lower Illinois River Valley and the adjacent Mississippi River valley with the uplands between. The Galesburg Plain makes up the northern, roughly two-thirds, of this area including the central Illinois River Valley and adjacent Mississippi River Valley with the uplands and tributary valleys between (including the La Moine River drainage). The Galesburg plain is approximately 150 miles north to south and 100 miles east to west at its maximum extent (Caspall 1965; Leighton et al. 1948). This area has previously been broken into four rough environmental zones: Illinois and Mississippi River valleys, major tributaries, creek valleys, and adjacent uplands (Munson 1976). However, for the purposes of this discussion I will treat them together to offer a general understanding of the wider environmental context for the study region of this dissertation.

Most of the bedrock in this region is from Mississippian and Pennsylvanian systems (e.g., Wanless 1957) and includes many limestone outcrops with areas like stream beds usually including high-quality cherts. This includes Burlington and Keokuk limestones, which were extensively used, along with St. Louis limestone that was also exploited (Esarey 1983). Overall, much of this region is an Illinoian drift plain and is covered by a thick mantle of Late Pleistocene loess (e.g., McKay 1979). The topography of the region is nearly level throughout the uplands, other than the various narrow river and creek valleys that dissect it.

The La Moine River valley (Carter Creek lies within its drainage) and the Spoon River valley are the two largest that feed into the western side of the Illinois River. The La Moine River valley covers an area of approximately 1,360 square miles (Green and Nolan 2000:346).

The floodplain for the Illinois River is extensive and has numerous backwater lakes that have been drained or inundated due to damming (e.g., Cantwell 1980). The Mississippi River has relatively small tributaries in this region and only one major floodplain lake, Lima Lake (Conrad et al. 1986). The uplands across this region contained many glacial kettles that would have held water seasonally until they were drained for agricultural purposes (e.g., Caspall 1965).

This region contained wide swaths of both forests and prairies that offered a wide variety of plant species that could be exploited for a variety of purposes (e.g., Schwegman 1973). The uplands especially contained large prairies with "several hundred species of grasses and forbs" along with "marshes and prairie potholes" (Schwegman 1973:19) (forbs are flowering plants other than grasses, such as sunflowers, and prairie potholes are small depressions in formerly glaciated regions that will seasonally fill with water). These prairies dominated the northern portions of this region, including the area where Carter Creek sits (although it is located near the forest-prairie edge). The southern portions would have had a higher proportion of forests (Green and Nolan 2000:347). Fauna in this region, both aquatic and terrestrial, were extensive, with the Illinois River floodplain being especially abundant (e.g., Mills et al. 1966). Upland forests had large deer and mammal populations; the upland prairies were relatively resource poor with the exception of birds and waterfowl in wetter areas (e.g., Carmichael 1977).

Overall, this area had abundant resources to be exploited for the various populations that lived there. This included both floodplain and upland regions. As Green and Nolan (2000:347) state, the region supported "extensive settlement in all zones except the heart of the prairies" and "cherts, clays, water, timber, wild foods, and arable land all were plentiful." The choices made by people living in this region were likely not driven by a need for, or lack of, resources due to their ample availability. With this general environmental setting for the Galesburg Plain as a backdrop, I turn to a consideration of how this period has been modeled and theorized up to this point. At the end of the next section, I will pay particular attention to the Frontier Model developed by William Green (e.g., 1987) as it is still considered a viable window into the dynamics of this period.

Framing the Late and Middle Woodland Periods

An informed understanding of the Late Woodland period necessarily requires a comparison to the preceding Middle Woodland. Because of this, I want to start with an overview, mostly looking at the "highlights", of how the Middle Woodland period has been discussed. Outlining those discussions provides a foundation for understanding why the Late Woodland period has been conceptualized the way it has and why it has continued to be understudied and undertheorized (outside of cultural resource management projects). Up to this point, Green's Frontier Model (e.g., Green 1993) is the only major attempt to better understand the dynamics of this period in west-central Illinois. Other attempts have been made to look at adjacent or nearby regions using modified versions of this model, such as in the American Bottom (e.g., Koldehoff and Galloy 2006). In using the term "model" throughout this chapter, I do not necessarily mean a robust, predictive, model based on quantitative data, but rather a framework through which archaeological data can be examined and understood.

Middle Woodland Approaches and Theories

The Middle Woodland period in the Midwestern U.S. dates to roughly 200 BCE-400 CE, although these dates shift depending on the geographic region. For example, in the central Illinois River valley, the early Late Woodland period is thought to start around 250 CE (Fishel 2013d). This period is most connected to the Hopewell tradition, which was centered in Ohio and entailed long-distance trade and interaction which spread from Florida to New York and Virginia to as far west as Kansas (e.g., Struever and Houart 1972). This tradition is generally thought to consist of "societies participating in some expansive form of riverine-specific regional integration materially reflected through large-scale earthworks and/or earthwork centers and exotic artifacts principally deposited in funerary contexts" (Abrams 2009:172). West-central Illinois, and especially the Illinois River Valley, was a prominent region involved in this widespread manifestation and is more generally known as the Havana-Hopewell tradition. For the purposes of this section, I will be discussing the Hopewell tradition more generally. It should be noted that a majority of Hopewell research focuses on communities and ceremonial centers in Ohio, most often the Scioto River Valley, but the larger models I will discuss are generally applicable across the Hopewell world.

Interest in the Hopewell can be found as far back as the 19th century when many of the mounds associated with this tradition were first explored (Squier and Davis 1848). It was not until the second half of the 20th century that more detailed models were formulated for this period. Interest in this period has not waned and continues to produce large volumes to this day (e.g., Carr 2021). The first major attempt to model this period and tradition comes from Caldwell (1964) and his coining of the term "Hopewell Interaction Sphere." He uses the term "Interaction Sphere" because of the distinct regional differences that had been noted in "domestic and non-mortuary artifacts," which contrasted with the "list of exact similarities in funerary usages and mortuary artifacts" (Caldwell 1964:138) across many sites spread throughout the Eastern United States. He used these regional differences to define six different Hopewell Regions: Havana, Crab Orchard, Adena-Scioto, Northeastern, Southern Appalachian, and Gulf. He did not attempt to fully explain why and how this interaction was taking place through a systematic study of artifacts. Instead, he was just providing an overall idea as to how these different regions were all interrelated through interaction and exchange.

It was not until Struever and Houart (1972) elaborated upon the nature of the interaction that this model really gained traction. Struever and Houart (1972:52) looked at artifact types, classes, and styles in and across the previously defined regions and came to the conclusion that this interaction sphere was defined by “regional transaction centers.” They argued that these centers received raw materials from across the United States and then distributed them to more localized centers, who then distributed them to individual households and communities. They described a system in which the regional centers were prominent in interregional and intraregional interaction and the local centers were more prominent in localized interaction. They also argued that this trade must have been temporally regular in order for it to take place over such long distances and for such a long period of time. Another important aspect of their model was the elaboration upon Caldwell’s (1964) regional traditions. They recognized, “that the Hopewell interaction sphere…was not a single, homogenous unit,” instead, “tradition-defining artifacts and interaction sphere-defining artifacts [were] not coextensive” (Struever and Houart 1972:78). This framework set important precedents for future models of Hopewell culture. Their recognition that the regional traditions defined by Caldwell were not one homogenous group was particularly notable.

In *The Hopewell Interaction Sphere: Evidence for Interregional Trade and Social Complexity*, Mark F. Seeman (1979) evaluated Struever and Houart’s framework using additional archaeological evidence. Seeman came to the conclusion that their model was incorrect in some of its assessments. Rather than the interaction sphere being temporally regular, Seeman argued that it was unstructured. By unstructured, he meant that the interaction took place sporadically over the Middle Woodland, which helped to explain, in his arguments, why many sites had very few or no exotic artifacts and why others had so many. Seeman pointed out that the Scioto Valley region in Ohio had more artifacts than most of the other regions combined, centering it in the Hopewell world. One area where he did agree with Struever and Houart was the idea of regional transaction centers. He found no evidence to prove this characterization wrong, and rather, found further evidence in support of it. Few sites had a great number of artifacts and at these centers there seems to have been a transfer from raw materials to finished products. The ideas of "transaction centers" and an "interaction sphere" fit in with the structural-functional theoretical leanings of the time but have since been reexamined (e.g., Abrams 2009).

Two major volumes on the Middle Woodland period were published in the 2000s, both representing critiques of and additions to the original formulations of the Hopewell Interaction Sphere. Christopher Carr and D. Troy Case (2005) published *Gathering Hopewell: Society, Ritual, and Ritual Interaction*, and Douglas K. Charles and Jane E. Buikstra (2006) published *Recreating Hopewell*. In both of these volumes, numerous contributors discussed various aspects of the Hopewell world within and between regions. Most importantly, these volumes attempt to add nuance to our understanding of this period by examining the Hopewell world in finer detail than previously was done. The wide breadth of these volumes could be discussed at length, but I want to highlight a few contributions from them that build from the original ideas around the Hopewell Interaction Sphere.

Carr (2005:577) questions if the concept of the interaction sphere is relevant to Hopewell archaeology at all. He answers affirmatively that it is relevant and that all of the previous formulations of it have actually benefitted the study of the Hopewell tradition because most were complementary, rather than competing. This is important because he believes "interregional

Hopewell is a multidimensional and composite phenomenon," for which "no single mechanism is a satisfactory explanation of much or all of the spreading of Hopewellian ideas, practices, and material culture" (Carr 2005:607). He contends that the interaction sphere (what he terms "interregional Hopewell") was not "a single, coherent, or high volume economic exchange", "a single kind of social organization", or "a coherent cult, ritual, or ritual system." Interregional Hopewell was also not "a consistent symbolic meaning system of shared, specific, indexical meanings", "a single mechanism of disposal of raw materials, artifacts, artifact styles, and cultural practices and ideas", or "a phenomenon…that originated in one place" (Carr 2005:616-618). For him, it is much more complex and nuanced than this. He thinks in order to understand the Hopewell we must consider "who was doing what and for what possible social or individual motives, instead of simply tracking the movement of objects over a landscape" (Carr 2005:607). Because of this he finds that interregional Hopewell was an interaction sphere and a "composite palimpsest in its contents" and that the "boundaries…are fuzzy rather than clear cut" (Carr 2005:619). He contends that Interregional Hopewell was tied together by "essential, widely shared, shamanic concepts" (Carr 2005:620). For Carr then, the Hopewell Interaction Sphere is a complex set of interactions that take place across a dynamic cultural and physical landscape with individual actors fulfilling varied motives. This means that the interaction sphere was dynamic and cannot be explained simply through a single or few mechanisms.

Lepper (2006) presents a framework that refocuses the Hopewell world on the shared ritual characteristics of this period, rather than the "economic" interaction that Struever and Houart (1972) and Seeman (1979) emphasized. Instead of a focus on regional transaction centers, he presents an idea for "ceremonial centers"; he especially highlights this part of the Ohio Hopewell world. These ceremonial centers served as religious, ideological, centers, to which people of the Hopewell world would take pilgrimages. On these pilgrimages, they would bring exotic artifacts as gifts to present in religious rituals and ceremonies. The case study he uses to support this is the conglomeration of artifacts at specific sites, such as Mound City, Ohio, and the possible presence of a "Great Hopewell Road" running from Newark, Ohio to Chillicothe, Ohio. He argues that this great road may have served as a path for pilgrims traveling to these centers. He admits that there is limited evidence for the presence of a Great Hopewell Road, but he presents an interesting theory that accounts for the movement of artifacts in a religious/ritual manner, rather than just through economic interaction.

Jeske (2006) also presents a model that departs from the idea of regional, economic, transaction centers. Rather than attempt to explain evidence from the entire Hopewell area, he focuses on southeastern Wisconsin and northeastern Illinois. Jeske thinks it may, with further evidence, be possible to expand his theory to cover the entire Hopewell world. He argues that the Wisconsin/Illinois region can be best understood in terms of a "core-periphery" model. This approach is derived directly from world systems theory (e.g., Wallerstein 1974), a theory intended to explain the model of interaction between powerful western nations, and the smaller countries they colonized. He alters this model to fit the Hopewell by removing the political and militaristic domination by the core from the equation. He argues that the core does not have to be dominant over the periphery in the way the original model intended. Instead, the core and the periphery are defined by their asymmetrical social and economic relationships. He also argues that the Hopewell cannot be looked at as having one core, but rather was made up of many smaller cores and peripheries that also interacted with each other (similar to regional transaction or ceremonial centers). This model, he admits, needs vast amounts of evidence that would show the presence of his revised core-periphery model in other local Hopewell areas, to further prove its widespread utility. He also notes that this model is not just focused on trade and exchange, but rather on many other ideas as well, such as military relations and ideological similarities. Overall, he comes to the conclusion that this model may represent a way that we can begin to refocus on the Hopewell in a new way, but that we need to do more research to fully understand its applicability.

In all of these more recent perspectives on the Hopewell world, the nuance and dynamism of this period is emphasized. These authors recognize that this period cannot necessarily be understood in simplified, cross-regional, models, but instead we must see the local and intraregional variation that created the Middle Woodland landscape that we understand today. Recently, in a special volume of the *Midcontinental Journal of Archaeology (MCJA)* (Volume 45, Issue 3), archaeologists working throughout the Midwest have formulated similar ideas using “situation theory” (which they modify from Zigon 2015). I briefly mentioned this idea in Chapter 2, but I want to elaborate on it here because it represents an approach to understanding this period from a multi-scalar perspective that does not afford primacy to any level of archaeological data. This approach closely mirrors that of assemblage theory (assemblages are also referenced in the MCJA volume), which I will employ in this study.

This journal volume, as with much of the major Middle Woodland research in the Midwest, focuses on the Ohio Hopewell and closely adjacent regions, but that does not make it any less applicable to this period in other regions. This use of situation theory explicitly addresses ceremonial situations, but again, this does not mean it is not applicable to more mundane or domestic contexts (not that we can necessarily separate the ceremonial from the domestic). As the authors in this journal note, archaeology on the Middle Woodland in the Midwest has continued to “highlight the geographic diversity” of this period (Henry and Miller

2020:188). They believe the use of situation theory will better allow for interpretation of this diversity, rather than just a recognition of it. This is a problem also faced in analysis of the Late Woodland period and something I am attempting to address in this dissertation.

In the MCJA volume, situations are best described as “widely diffused social phenomena that manifest through the interaction of multiple assemblages” (Henry and Miller 2020:193) that “flatten” scales of research. This formulation of a situation is used to look at everything from geometric earthworks in Kentucky (Henry et al. 2020) to chipped stone bladelets (Miller 2020). In all of the case studies provided, analysts emphasize the often-unique local nature of things and how this ties into the widely shared Middle Woodland practices that have been heavily studied. These authors offer a new and fresh perspective on interpreting the Middle Woodland period from localized settings rather than just widespread shared material culture and practices. As Baires notes (2020:302) in her comments in this MCJA volume, situation theory allows us to “move away from culture histories, trait lists, and top-down approaches” and to instead focus on the “multiplicity of situations” that make up the past.

The information presented above is far from a comprehensive review of the countless articles and books published on the Middle Woodland period. There have been numerous others that contain valuable contributions to understanding this period and its complexities. Some of these approaches look at the period as a whole, attempting to provide explanations and analytical frameworks as to the wider socio-political formations found during this period (e.g., Byers 2015), while others have focused on specific artifact types, regions, and/or sites (e.g., Carr and Sears 1985; DeBoer 2004; Fie 2008; Martin 2013). Overall, the Middle Woodland is very well studied and understood, with large amounts of past and continuing research that continue to add to our knowledge of this complex and dynamic period in pre-contact history. This extensive foundation of knowledge contrasts sharply with that from the Late Woodland period, which I will discuss below.

Late Woodland Approaches and Theories

Emerson et al. (2000) offered the first extensive discussion of the Late Woodland period throughout the Midwest and into the Southeast in the volume titled *Late Woodland Societies: Tradition and Transformation across the Midcontinent*. This volume emerged from a conference they held in 1997 and was meant to focus on “establishing an identifiable chronology and a working understanding of the Late Woodland phenomenon in the context of a regional culture-historic framework” (Emerson et al. 2000: xvi). The goals of this conference and subsequent volume were not to develop models and theories around Late Woodland data, but to bring this data together in a way that established the local histories of various Late Woodland regions. Even with this stated goal and the general lack of theorization in this volume, it clearly represents the first major step in bringing to light the cultural dynamics of this period across a wide region. I will draw from this volume in much of my discussion on the Late Woodland period as a whole, as I believe it still provides an excellent overview into how this period has been conceptualized and understood.

Specific frameworks of the Late Woodland period are discussed by McElrath et al. (2000) as they also examine theoretical lenses from which they believe we should view this period. In the Midwest generally, and specifically in western Illinois, this period is broken into the early Late Woodland, “middle” Late Woodland, and terminal Late Woodland periods, all representing distinctive changes that can be traced archaeologically. This exact terminology is not necessarily used, but this period is generally considered to have three distinctive timeframes or "horizons" in most regions, such as southeastern Iowa (Benn and Green 2000).

The shift from the Middle Woodland to the early Late Woodland (around 250-400 CE) can be seen, to put it simply, as an end to previously dominant Middle Woodland practices (such as mound building and the widespread exchange and procurement of long-distance artifacts). The change from the early Late Woodland to the middle Late Woodland (occurring sometime between 600-800 CE) was marked most explicitly by the adoption of bow and arrow technologies. The end of the middle Late Woodland and change to the terminal Late Woodland was marked by the arrival of maize in this region and represented the first reliance on this crop prior to the emergence of Cahokia (this occurred after 800 CE and ended around 1000 CE depending on the region). This general framework provides a foundation for how archaeologists have tried to conceptualize the changes we see during the Late Woodland period as a whole. It should be noted, of course, that these changes were not seen everywhere or at the same time in every region, so in order to truly understand this period, we need to better develop interpretations at a smaller scale.

McElrath et al. (2000) discuss both frameworks that have been applied to the Woodland period in general and frameworks that they believe may offer interesting avenues for research. At the same time, they are very explicit in stating that the intent of their contribution, and the volume as a whole, is not to model the Late Woodland, but instead to present "*what* happened" at a basic level (McElrath et al. 2000:11, emphasis original). From their discussion, it is easy to see that this period has not just been understudied via archaeological fieldwork but has also had little deeper theoretical examination. They start by pointing to various frameworks that have been used to help explain social evolution across the Woodland period in general; this includes population-driven (e.g., Hall 1980), technology focused (e.g., Braun and Plog 1982), socially driven (e.g., Bender 1985a, 1985b), and coevolution (between plants and people) approaches (e.g., Braun 1987; O'Brien 1987, 1996). They argue that Braun and Plog's (1982) framework has gained the most traction, but in their opinion, it is flawed (they were not the only archaeologists to argue this, e.g., Cobb and Nassaney 1995).

The basic argument behind Braun and Plog's (1982; Plog and Braun 1984) approach is that the Late Woodland period has increased interaction between intraregional groups, established in nonhierarchical social networks, as a response to increasing environmental stressors. For them, this can be seen from the seeming homogeneity of artifact "styles" during this period. McElrath et al. (2000:6) argue that this view was based on incomplete data and does not track with more recent information. More specifically, they point to the abandonment of the American Bottom towards the end of the Middle Woodland as evidence that the homogenous material culture of this period could have come from a shared homeland, rather than increased interaction and need for reliable social networks.

After pointing to the flaws in Braun and Plog's (1982) approach, they move on to discuss the coevolution framework developed by O'Brien (1987, 1996). This framework, in a basic sense, posits that plants and people co-evolved as people made unconscious decisions that ultimately led them to rely on certain plants for subsistence needs. This eventually leads to a co-reliance that results in sedentism. McElrath et al. (2000:7) rightly point out that this approach, along with the others listed above, relies on a narrative of unilineal evolution throughout the history of the Eastern Woodlands, which misses the historically dynamic nature of the region. To address this more sufficiently, they propose a combination of approaches that have been developed, but not necessarily used explicitly to view the Late Woodland period.

They argue that we need to combine a world-systems approach with a multiscalar framework to better situate the Late Woodland period within the wider historical context of the Eastern Woodlands. They point to ways that some world-systems approaches have defined the core-periphery relationship as nonhierarchical, instead based on other forms of differentiation (e.g., Chase-Dunn and Hall 1991). This, in combination with a multiscalar approach that highlights the need to view the larger social landscape in addition to smaller social units (e.g., Cobb and Nassaney 1995; Nassaney and Sassaman 1995), can provide a view of the Late Woodland that places it in its "historically contingent chronology" rather than an evolutionary sequence (McElrath et al. 2000:9).

In doing this, they believe archaeologists will be able to better recognize two major aspects of the Late Woodland that prior approaches could not address: 1) the Late Woodland period is a phenomenon of the wider midcontinent and Northeast and 2) this period is diverse rather than homogenous (McElrath et al. 2000:10). This perspective, in their opinion, would offer a dynamic view of this period that sees local and regional responses to larger social changes. This approach unfortunately falls short to me, in that is seems to favor a top-down approach to understanding this period (as they point out, this is a response to the processual focus on smaller social units; McElrath et al. 2000). At the same time, their emphasis on a multi-scalar approach is being followed in this dissertation. As I laid out in the previous chapter, we need not view scales from different perspectives, nor should one be considered as the driver of others, instead, we need to treat all scales of archaeological data as existing in the same ontological reality (Harris 2017).

McElrath and his co-authors were not attempting to form a fully fleshed out model. They were mainly trying to provide a foundation of data for other archaeologists to build from and they were very successful in that regard. As more data has been collected on this period, mainly through cultural resource management projects, archaeologists have become more comfortable in applying larger theoretical ideas, especially in smaller regions (just as happened with the Middle Woodland). One such idea comes from Fishel (2013d) and focuses on the early Late Woodland period in west-central Illinois.

Fishel (2013d) in a research report on excavations at the White Bend site, briefly discusses the Middle to early Late Woodland transition in the La Moine River Valley, offering a potential explanation for the drastic changes seen between these periods. Starting from the perspective of the Late Woodland as a “Dark Age” (Deuel 1958:34-35) consisting of ceramics that lack “visual attractiveness” (Braun 1988:158), Fishel (2013d:305) argues that the plain material culture seen during this period was not a loss of cultural complexity or grandeur, but rather a “conscious effort” by Late Woodland groups to move away from more extravagant Middle Woodland practices and displays (Figure 3.2). In making this argument, he compares this transition to that of architectural styles and furniture from the Victorian Era to the “Arts and Crafts” movement in Europe and the United States during the 19th century.

Just like the Middle Woodland period, the Victorian Era was seen as rather extravagant and grandiose in the outward display of style. The Arts and Crafts movement however, similar to the Late Woodland, represented a shift to minimal decoration and more straightforward designs. This shift in material culture was part of larger social reform that pushed back against industrialist and capitalist practices from the Victorian era. He notes that there are other similarities between these two social transformations (e.g., increased trade; Fishel 2013d:306), but does not have the space to expand upon these comparisons any further. In offering this perspective, Fishel was not attempting to develop an overarching framework for this transition, nor was he trying to offer a single explanation for these changes. Instead, he was starting a conversation that can be carried by archaeologists into the future.

It should be noted that "why" this transition occurred has been discussed extensively. Griffin (1960), arguing from the belief that Middle Woodland peoples relied on maize, contended that climatic shifts led to a shorter growing season. This made a reliance on maize untenable and caused a cultural decline into the Late Woodland period. Hall (1980) argued that the adoption of maize and the bow-and-arrow allowed for groups to exploit wider ecological zones. In turn, this deemphasized the resource rich floodplains, allowing for the movement of people into the uplands and away from Middle Woodland ideologies. In both cases we now have more information that shows maize (e.g., Simon 2017), and the bow-and-arrow were not used until later in this period.

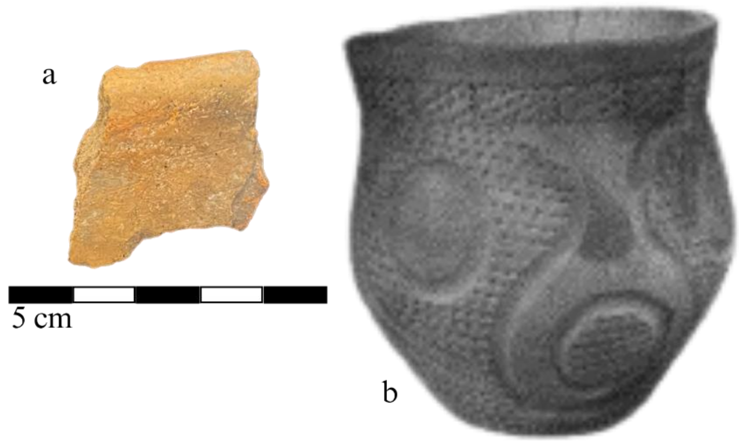

Figure 3.2: (a) A Plain Weaver rim (V900-5_ from Carter Creek; (b) A Middle Woodland ceramic vessel from the Havana Mound Group showing elaborate, zoned decorations (image from Taylor 1929). The scale is only for the Weaver rim and the Middle Woodland vessel is approximately 25 cm in height.

McElrath et al. (2000:15) argue that flooding in the major river valleys caused a multitude of problems, eventually leading to the end of Middle Woodland practices. They use the depopulation of the American Bottom floodplain at the end of the Middle Woodland and into the early Late Woodland period as evidence that the floodplain was uninhabitable during this period. They contend that the widespread demise of Middle Woodland practices across the Midwest over a short period of time points to a larger cause of these changes. Even with the emphasis on flooding, they are not arguing that climate change was the sole cause of this shift. Instead, climatic shifts exacerbated social and ideological issues, eventually leading to the collapse of Middle Woodland practices. Byers (2015) and Van Nest (2006) push a similar argument in which climatic shifts lead to a breakdown in social and ideological structures.

Fishel (2013d:305) argues for this transition as a "conscious effort on the part of Late Woodlanders to tone down the flamboyance of their Middle Woodland predecessors." However, he also does not dispute the effects of climatic shifts during this period, so social reform is just one of many aspects of the transition (personal communication, 2018). In fact, this climatic shift could be similar to those seen in the Maya region where Maya elites lost ceremonial power due to droughts (e.g., Lucero et al. 2011). As flooding increased, Middle Woodland shamans (e.g., Carr and Case 2005) may have lost control of the social and ideological systems they previously managed. I agree with the many archaeologists who have argued that climatic shifts worked in tandem with a changing social landscape to lead to demise of Middle Woodland practices and interaction networks.

Fishel's (2013d) unique perspective represents the most recent attempt to see this period on a deeper level. This is important because it shows the lines of thought that can open for archaeologists once sufficient data is collected and interpreted. At the same time, foundational frameworks are necessary to help to examine our data, even decades after they have been developed. In the case of west-central Illinois during the Late Woodland period, one such framework exists: William Green's Frontier Model (1987, 1993; Green and Nolan 2000).

The Frontier Model

William Green's Frontier Model (1987, 1993; Green and Nolan 2000) lays out a foundation for how technological development, changes in lifeways, and population movement all worked together in west-central Illinois during the Late Woodland period. These dynamics created a complex social landscape and generated distinct Late Woodland identities that can be understood both within and outside of their ties to earlier and later periods. Green's framework was developed particularly for west-central Illinois, in which the Carter Creek site sits. However, other archaeologists have used a slightly revised version of this approach in the American Bottom (Koldehoff and Galloy 2006), in areas directly in-between the Weaver and White Hall regions (Fishel and Emerson 2013), and in the White Hall region alone (Sutherland 2018).

Green points out that the frontier in his framework represents "a newly occupied territory rather than just the edges or boundaries of the [previously occupied] zone" (Green 1993:204). This is important because it signifies the ways that people during this period were moving around a little-known landscape as "pioneers" of the surrounding uplands. These pioneers settled this new area, the "internal frontier," in four stages during the Late Woodland. Of these four stages, the first two are of most importance to this research. An important addendum to this framework was provided by Green and Nolan (2000) where they pointed out that it was not just along this internal frontier that the Late Woodland should be understood, but also along newly forming "frontier-boundaries." These boundaries can be understood as "zones of cross-cutting social networks" (Green and Nolan 2000:349) where we can see Late Woodland peoples interacting, producing innovation and cultural change. It is through an understanding of both the internal frontier and the frontier boundaries contained within it that we can begin to better understand early Late Woodland social dynamics in the La Moine River Valley.

The first stage in Green's framework ran from 300-450 CE and is characterized by "the movement of entire villages…into a variety of new locations" as people slowly began working their way into the surrounding uplands via "small creek valleys" and "minor streams" (1993:205-206) and out of the major river valleys they previously inhabited. Despite the movement of large groups of people into new environmental zones, the subsistence practices of these groups remained roughly the same, as would the general organizational structure of their settlements. This organization would remain village-level, as would the decision-making among these groups during this stage. Archaeologists have not specified the exact kind of governance these village-level groups may have had, but it seems likely that some kind of village council or group of elders was in charge. Green argues (1993:206) that this period ended because these communities were unable to support themselves in their new, less productive, locations.

This exhaustion of resources led to the second stage, which ran from 450-600 CE. During this stage villages were abandoned for more dispersed communities located typically on upland ridges (Green 1993:206-7). These dispersed communities kept their previous subsistence practices, albeit on a smaller scale, but organization and decision making shifted from the village to the household. Green notes that "the temptation to retain traditional settlement…could well have led to a return to the major valleys" (1993: 207). He points out that some communities from the first stage were still around during the second phase, so the phases are not completely distinct. No major technological differences yet occurred, with the main difference being site location and structure (from village to household). The end of this period was marked by population growth and the arrival of new technologies in the region (Green 1993:207).

The third stage in the model (600-950 AD) was the "fluorescent stage of upland settlement" (Green 1993:207) in which occurred the introduction of the bow-and-arrow and more constricted necks on ceramic vessels. More distinct ethnic identities formed during this period, as well as the occupation of "multigroup aggregation" centers in the major river valleys. The fourth stage (950-1200 AD) began with the first signs of Mississippian influence. The remaining groups who did not adopt new Mississippian lifeways likely moved into even more remote upland locations to avoid this cultural pressure. This emergence of Mississippian groups and lifeways marked the end of the Late Woodland period and the closing of its frontier.

While there are many examples of frontier studies in archaeological literature (e.g., Alexander 1977), Green's framework fits best for this research. Not only was it developed specifically for the region in which Carter Creek sits, it also draws from many earlier ideas to formulate a focused approach for this period. In developing these ideas, Green drew from both Lerner (1984) and Kopytoff (1987). In particular, Green emphasizes the unoccupied nature of the frontier in a similar manner as Lerner (1984:67), while also seeing the region as having internal frontiers comparable to those Kopytoff (1987:9) describes in his work in Africa. Extending these ideas, Green and Nolan (2000:348-350) developed the idea of frontier-boundaries as the part of internal frontiers where interaction and change occur. This idea is drawn partially from Lightfoot and Martinez (1995:474) and their discussion of frontiers as the edges of societies. One thing to keep in mind is that this model was developed with incomplete data and based some of its assumptions on one or a few sites (i.e., large upland villages based on Carter Creek). As we collect more data in this region this analytical framework will likely need to be revised and updated, such as expanding the time ranges of these stages to better reflect those more recently established by Fishel (2013d) for the early Late Woodland period in the La Moine River Valley.

Revising, updating, and expanding the use of this model is something archaeologists working in Illinois have taken up in the past couple of decades. A couple of examples particularly highlight how this model can be used outside of, but adjacent to, the original geographic area it was developed for. Koldehoff and Galloy (2006) provide one example of this, as they developed their own frontier model for the American Bottom region in Illinois. I have also previously examined Green's model using data from the Carlin site in the Lower Illinois River Valley, White Hall Phase (Sutherland 2018).

Koldehoff and Galloy (2006) use data from Patrick Phase (650-900 CE) settlements in the American Bottom region of Illinois to establish a better understanding of social dynamics in this region during the Late Woodland period. Using a variety of data, they argue that what were previously thought to be sedentary villages occupied during this phase instead represent semisedentary "focal points" for a forest-fallow swidden agriculture system. In doing this, they "rewrite" the frontier history of this region into three stages. It should be noted that the end of the Middle Woodland and start of the Late Woodland period in the American Bottom are evidenced by an abandonment of the Mississippi River floodplains, which were heavily inhabited previously (e.g., McElrath et al. 2000); this abandonment falls before Koldehoff and Galloy's first stage.

For Koldehoff and Galloy (2006:292-293) the first stage of the Late Woodland frontier in the American Bottom entailed a "resettlement" of the region by groups from nearby river valleys. The first stage in Green's framework was "skipped" because people abandoned the region instead of shifting within it. This resettlement was demarcated as the Rosewood, Mund, and Cunningham phases of the early Late Woodland period (400-650 CE). Koldehoff and Galloy argue that these populations were likely dispersed around the edges of this region in small settlements. Like Green's (1993:206-207) second stage, the main scale of decision making likely occurred in the household. This stage ended as population density in the region increased.

The second, “Filling-In” stage (650-900 CE) for Koldehoff and Galloy (2006:293) was similar to the first in subsistence strategies and mortuary practices (or the lack of definable ones), but also had many key differences including the introduction of the bow and arrow and large community buildings. The population in the region during this stage grew, likely from an influx of “immigrants” from the north, but this led to no clear signs of conflict. This stage tracks with Green’s (1993:207) third in many ways, including more easily identifiable “ethnicities” in the archaeological record. Originally, archaeologists argued that this stage represented the first sedentism in the American Bottom, but Koldehoff and Galloy (2006) offer plenty of evidence to suggest there was a more semi-sedentary occupation strategy. For them, the presence of sedentism marks the beginning of the third and final frontier stage for the Late Woodland period in this region.

The terminal, “intensification” stage of the Late Woodland frontier in the American Bottom (900-1050 CE) was marked by agricultural intensification, especially of maize, along with settlement reorganization into larger, organized communities out of the uplands and back into the Mississippi River Valley (Koldehoff and Galloy 2006:293-294). Unlike the fourth stage of Green’s model (1993:208), the populations in this region were becoming closely tied to the eventual fluorescence of Cahokia and larger Mississippian lifeways. The emergence of Cahokia as a dominant political and cultural center marks the end of this stage and the Late Woodland period as a whole in the American Bottom.

In my previous research from the Carlin site (Sutherland 2018) I tested whether Green’s framework could be directly applied in the Lower Illinois River Valley. I concluded that the best path forward would be to develop a frontier model that directly addresses the shared history within that region. The Carlin site seemed to represent a smaller settlement indicative of Green’s second stage, but also shared ceramic characteristics with sites in the surrounding region, which may represent the wider-shared ethnicity that Green argues develops during his third stage (1993:207). This may be due to the "conservative nature" of Lower Illinois Valley groups (Fortier 2013:277-279) and the unique population dynamics within that region during this period (e.g., the influx of people from the American Bottom early in the period, and the movement of these people back to that region later; McElrath et al. 2000).

In both cases described above, it is clear to see that a wide-ranging frontier model framework is not necessarily applicable, nor was that Green's goal in developing his model. Instead, we can view his framework as a foundation from which we can better understand the Late woodland period and its unique social dynamics. Each region has its own internal dynamics that must be considered (as well as considering the ways the regions interacted, as they were not isolated areas), but if we think of the larger Late Woodland period as one in which the frontier boundaries of groups (and regions) were constantly blurring and shifting, then we can start from a foundation of a dynamic cultural landscape. Within this dynamic landscape, we can then trace the unique assemblages that emerge and the ways in which these assemblages interacted and overlapped, allowing not only for the further development and refinement of regional frontier model frameworks during this period, but also for a deeper understanding of these dynamics at all scales. The Late Woodland period continues to be undertheorized and under-modeled, but if we draw from and add to the existing literature that we do have, we can only increase and deepen our understandings of this period.

World Renewal Rituals and Flooding

Before moving on to discuss the material traits that mark the regional chronology for this research, I want to briefly highlight a specific line of thinking that has been somewhat developed for the Middle Woodland period but has not been discussed for the early Late Woodland. This is the concept of the Earth Diver Myth or World Renewal Ritual and its potential connection to environmental changes towards the end of the Middle Woodland period. Hall (1997) argues for a connection between Native American groups across wide ranges of time and space. Using ethnographic and travel accounts from early European contact, along with archaeological evidence, he makes the larger point that there is a continuity between Native ceremonies and beliefs that can be traced back to at least the mounds built during the Middle Woodland period. In making these assessments, he argues that Middle Woodland mounds were tied to "world renewal." and when these practices were abandoned, they were replaced by other ceremonies (i.e., Sun Dance) which carried similar themes. Archaeologists working with Middle Woodland data have argued for similar connections between mound-building practices and world renewal.

For example, Sunderhaus and Blosser (2006), Van Nest (2006), and Byers (2015) argue that some Middle Woodland mound groups were built in specific ways and located in specific places to intentionally reenact this myth. Van Nest (2006) argues that the construction of mounds relied on the formation of "new earth" that was then used to build the mounds. This new earth represented world renewal and likely played out as a reenactment of the Earth-Diver myth, aiding in reinforcing the sacred nature of mounds (Van Nest 2006:407). In the mound groups she studied, she noted that all three were placed near "scour pools" that would have been created, and refilled, by megaflooding events (Van Nest 2006:412). She further notes that there are no "borrow pits" in this region, which may indicate that only newly deposited soils from floods were being used in mound construction (Van Nest 2006:407). Sunderhaus and Blosser (2006) similarly argue that mounds were constructed in a specific manner that represented the “renewal” of the world. As an example, recently deposited flood soils would be specifically chosen to construct mounds, with layers of clay placed on top of these soils to represent the rebuilding of the world on a turtle’s back. Byers (2015:379) argues that some mounds were placed in “at risk” locations, more prone to major flooding, in order to rebalance the sacred order of the world through world renewal as flooding events may have been increasing towards the end of the Middle Woodland period. When these events did not stop, groups moved to the uplands as a strategy to reinforce this sacred order, as mound building was not working. They did not necessarily shift their ideological stance, but rather employed it in a different manner.

Much of the evidence for flooding during the Middle to early Late Woodland transition comes from inferences made by archaeologists based on limited data. This “indirect” evidence comes mostly from the American Bottom and the Lower Illinois River Valley. At the same time, there is some stronger evidence of potential flooding during this period in the Mississippi River Valley and the American Bottom. It has been noted by archaeologists that there is a complete abandonment of the American Bottom region for 50-100 years at the end of the Middle Woodland period around 350 CE (McElrath et al. 2000; McElrath and Fortier 2000). This is then followed by a reoccupation of the area, likely from the north. Prior to this reoccupation habitation sites were almost exclusively in the floodplain, but when people return, they do not go back to the floodplain for almost 250 years, instead focusing their occupation on bluff top and upland locations (McElrath et al. 2000). These new groups use upland tree resources extensively, which may indicate that floodplain tree resources were greatly diminished during this period (Simon 2000). Taken together, this habitation pattern focused on the uplands and the use of upland tree resources points to the possibility that the floodplains were uninhabitable during this period, likely due to inundation.

Some of the strongest evidence of flooding in the region comes from geomorphological work at the Mund site (occupied after 550 CE), a bluff base site sitting on an alluvial fan. This work revealed a potential flooding event around 500-550 CE (Fortier et al. 1983; White 1982). In this case, the researchers noted a Middle Woodland occupation overlain by several meters of loess before a newer, Mund phase, occupation in the same area. It was noted that this deposition could have been caused by numerous factors, such as erosion, but it is also possible that heavy rainfall during this period contributed to this large deposition event. Other evidence of flooding in the Mississippi River Valley comes from geoarchaeological work done in in the Sny Bottom region (Van Nest 1997) and from the C. House Site (O'Gorman 2003). Similar to the Mund site, there seems to be evidence of potential major flooding events during this transitional period.

The most direct evidence we have for flooding comes from the American Bottom and a recent study of lake sediments by Munoz et al. (2015). In this study, Munoz and co-authors took a sediment core from an oxbow lake off of the Mississippi River to look for major depositional events. In studying this core for changes in soils, they were able to identify three potential floods during this period, dating to 280, 480, and 590 CE (Munoz et al. 2015:6320). However, it should be noted that the validity of this study has been put into question (Baires et al. 2015) based on the potential unreliability of Radiocarbon dates used to date the floods (among other factors).

In general, we have some evidence from the Mississippi Valley of flooding during this period, but taken together with the less direct evidence, there are still many questions. For example, the best evidence we have of flooding during this period comes from the Mund site and seems to date to around 500-550 CE. This would have been after Middle Woodland practices fully declined. The upland-focused reoccupation of the American Bottom at the beginning of the early Late Woodland period, and the use of upland tree resources, points to potential problems with the floodplains during this timeframe but does not provide direct evidence that flooding actually caused the initial abandonment of the region.

While much of this evidence is incomplete or questionable, I think tying the larger ideas of world renewal and flooding events together could be a fruitful avenue of research in certain ways. I think it is important to keep this possibility in mind while looking at the ways that early Late Woodland groups connected to their pasts. Was there a reiteration of potential world renewal symbology and practice? Or were these practices abandoned in favor of connecting to different parts of the cosmos? And did these practices shift over time? From a non-ideological perspective, if major flooding events were a contributor to this transition, how would this have impacted the relationships between Late Woodland groups and the landscape at-large (such as the resources they exploited)? These connections can be traced in the assemblages that emerged during this period, which would have had the ability to produce clearly affective ties to the past and to the wider Late Woodland cosmology. With all of this laid out, I now want to provide a more materially focused outline of this period to better place this research in its wider context.

The Middle to Late Woodland Transition: A Materially Focused Regional Chronology

A great amount of the archaeological literature on the Late Woodland period has been dedicated to identifying and defining various materials markers that can help to locate different cultural groups in the past. This is especially true for ceramic decorative practices and vessel construction, and the changes in this over time (e.g., Griffin 1952). Because of this, there has been a relatively well-established chronology developed throughout the Midwestern US during the Late Woodland, and the preceding Middle Woodland, periods. I will not attempt to rehash this entire chronology here, nor am I attempting to examine it to see in what ways in can be improved. Instead, the purpose of this section is to provide a bird's eye view of the regionally established chronologies that directly relate to archaeological data being used in this dissertation.

I will focus on the larger cultural developments and traits that have been identified over the Middle and early Late Woodland periods for the Illinois River Valley and surrounding uplands (both Central and Lower), the American Bottom, and southeastern Iowa, especially along the Mississippi River Valley. These regions are being discussed because site-level data is being drawn from them. In some instances, later in this dissertation, I will make connections between the data and other phases and regions, but I will save brief discussions of those for when it is necessary. I will begin with a discussion of the Illinois River Valley before moving on to discuss the American Bottom and then southeastern Iowa to conclude this chapter. It should be noted that it was originally argued that the Archaic to Late Woodland periods throughout this region had a singular cultural evolution as the same groups lived within this region and shifted lifeways together (e.g., Griffin 1960; McGregor 1958; Wray 1952). We now know that this is clearly not the case as the cultural history of each of these regions is unique and can vary greatly.

The Illinois River Valley and Surrounding Uplands

In looking at the cultural history of the Illinois River Valley (and the other regions that will be discussed below) I describe the trait lists and chronological designations that archaeologists have developed. I group both the Lower and Central Illinois River Valleys together where possible, but I discuss the unique histories of these regions when necessary. This discussion will be presented in a chronological fashion, starting with the beginning of the Middle Woodland period and working until the early Late Woodland period, with some discussion of the Early Woodland period when necessary (see Table 3.1).

Period	Dates	Ceramics (vessel shape, temper)	Ceramics (surface treatment, decorations)	Lithic Sources	Settlement Locations	Burial Tradition	Long-Distance Interaction?
Early Woodland	600-100 BCE	Flat-bottomed and conoidal jars, varying (grit/sand/grog) tempers	Cordmarked and plain, incising and some noding,	Local (Burlington) and regional sources (e.g., Cobden/Dongola)	Mostly in and around river valleys with some located in the uplands	Red Ochre culture, with some grave goods	Yes, regionally. Seen through non-local cherts
Middle Woodland	100 BCE-300 CE	Flat-bottomed and conoidal jars, mostly grit temper	Cordmarked and plain jars, elaborate decoration including dentate stamping, incising, etc.,	Local (Burlington), regional (e.g., St. Genevieve), and pan-regional sources (e.g., Flint Ridge and Knife River flints)	In and around mound centers located in major (Illinois and Mississippi) river valleys	Hopewell Tradition, with elaborate grave goods	Yes, Pan-regionally. Seen through items such as copper, mica, obsidian, etc.
Early Late Woodland (Weaver)	300 CE-1000 CE	Conoidal and sub-conoidal jars, mostly grit temper	Cordmarked and plain jars, almost no decoration with some nodding and stamping	Almost exclusively local sources (Burlington) except at earlier inhabited sites.	Located in both the uplands along secondary streams and backwater lakes and in river valleys	Some burial mounds with very limited or no grave goods	Limited regionally.

Table 3.1: Table showing the general traits associated with the Early, Middle, and early Late Woodland periods.

Much of the Illinois River Valley is considered to be part of the Black Sand tradition during the Early Woodland period (e.g., Munson 1986:297, Figure 14.5), but the development of Middle Woodland (and eventually Late Woodland) practices varies between regions. At the same time, the Middle Woodland period across the Illinois River Valley and surrounding uplands is rather similar when comparing material and behavioral characteristics. These similarities and differences have been noted in various ways, but they are most often traced through the slight differences seen in ceramic practices (e.g., Griffin 1952); the "movement" of these different ceramic types has also been traced during the Middle (and early Late) Woodland (e.g., Fie 2006, 2008; Fishel 2018; Martin 2013). In tracing these types and their relationships, archaeologists have developed three phases for the Middle Woodland period in the Illinois River Valley; these phases coincide with the early, middle, and terminal Middle Woodland.

In the Central Illinois River Valley, the Middle Woodland is broken into the Fulton (150 BCE-1CE, early), Ogden (1-200 CE, middle and the fluorescence of the Havana-Hopewell tradition), and Frazier (200-400 CE, terminal) phases (Munson 1986). In the Lower Illinois River Valley, the Frazier phase is replaced by the Pike phase (Farnsworth and Asch 1986) based on the presence of large amount of Pike/Baehr ceramics. In both cases, the terminal Middle Woodland period can be seen as the decline of Havana-Hopewell practices (e.g., Morgan 1985), although they clearly do not disappear until the early Late woodland period. The LaMoine River Valley (and the Spoon River Valley) both fit within the phases developed for the Central Illinois River Valley, although Middle Woodland occupation in both of these regions was relatively sparse (Conrad 1986:320). Fishel (2013d) notes that as of 2010 only 28 Middle Woodland sites had been identified in the LaMoine River Valley region.

Similar material manifestations are evidenced across this period and across both the Central and Lower Illinois Valleys. Havana type ceramics gain prominence in the Fulton phase including Havana Zoned, Havana Plain, Naples Dentate Stamped, among other types (see Griffin 1952 for the original definition of these types; see Martin 2013 for an extensive list of the numerous Middle Woodland ceramic classifications). These types mostly carry over into the Ogden phase, in which Hopewell types (e.g., cross-hatched rims, Figure 3.3) become widespread. It is during the Ogden phase that an obvious increase in exotic materials

Figure 3.3: A Hopewell cross-hatched rim (image from Martin 2013).

occurs (Munson 1986). During the Pike and Frazier phases, Havana and Hopewell type ceramics, along with exotic materials, began to decrease in popularity as other forms came in (e.g., Pike/Baehr or intermediate Weaver types; Farnsworth and Asch 1986). Pike/Baehr ceramics, or closely related types, are also found in eastern Iowa and the Spoon River Valley during this period (Benn and Green 2000; Munson 1986). Lithics throughout both of these regions are best represented by Snyder's and Steuben (in later assemblages) (Figure 3.4) cluster projectile points (Justice 1987), along with lamellar blades and the use of both exotic and local cherts to make formalized lithic tools; one example of an exotic lithic material is Knife River flint (e.g., Munson 1986).

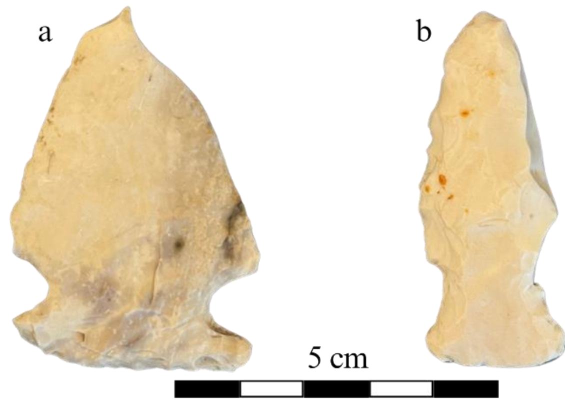

Figure 3.4: Two PPK from Mike Black's collection. (a) A Snyders PPK (MB54) made from burned or heat-treated BK chert with a broken off tip; (b) a Steuben PPK (MB58) made from heat-treated BK chert.

Settlement patterns across the Middle Woodland consist of smaller hamlets and villages that are often near high terraces at Illinois River Valley margins. It has been noted that these small hamlets were usually adjacent to mound groups and ceremonial centers (Munson 1986:294; Ruby et al. 2005). Ruby et al. (2005) note that the general settlement structure of the Havana-Hopewell region can be seen in three major settlement types, 1) small hamlets, 2) local mound groups usually at bluff top locations, and 3) regional mound groups into the floodplain. These mound groups are where local and regional interactions would take place. This settlement pattern was especially prevalent during the Ogden phase. Munson (1986) notes that similar patterns are evident in the Frazier phase, just with increased population densities. He also notes that there was limited evidence for any upland or interior creek valley habitations throughout the Middle Woodland period. Subsistence, similar to the Early Woodland, was widely based in locally available resources such as fish, deer, and seeds.

From the Middle Woodland period in the Illinois River Valley emerges the early Late Woodland period and the Weaver variant (e.g., Green and Nolan 2000). For the purposes of this section, I want to focus my discussion of this period on the La Moine River Valley and the recently established phases for that region (Fishel 2013d). I will also briefly explore the White Hall phase in the Lower Illinois River Valley. Before getting into these designations, I want to briefly explain why Weaver is being referred to as a variant rather than a phase or tradition.

Green and Nolan (2000:348) first argue that we must understand Weaver to be a variant rather than a phase or some other designation. Phases, in their opinion, are just “a group of artifact types” or “constellations of artifact forms limited in time and space” (Green and Nolan 2000). This is too narrow of an understanding for Weaver. At the same time, Weaver also cannot be considered a tradition, following Wiley and Phillips (1958) definition, because it is not expansive enough in space or time. To fill in this gap, between a phase and a tradition where they believe Weaver falls, they argue for the use of the term variant (e.g., Krause 1969). A variant is “a network of related though not necessarily precisely coeval phases” (Green and Nolan 2000:348), many of which can make up a larger tradition. A variant is made up of multiple phases that interact within and between regions. In doing this, they are highlighting the ways that Weaver or Weaver-like lifeways are found throughout western Illinois and the surrounding regions during the early Late Woodland period, but not all emerging or coexisting at the same time, nor sharing exactly similar material characteristics. For the purposes of this research, I will follow their designations.

Archaeologists have broken the Weaver variant in the LaMoine River Valley into two phases based on various material traits that they share. The Camp Creek phase (250-500 CE) (Fishel 2013d:323-324) is represented archaeologically by many sites, including Carter Creek. These sites all have some variation of Steuben, Snyders, Mankers, and Dickson/Waubesa projectile points. Steuben points are considered early Late Woodland points, while the other types are seen as later Middle Woodland types that are sometimes found in transitional assemblages. Camp Creek sites also have more non-local cherts, like Cobden/Dongola, Moline, and Wyandotte, than later Weaver sites but these cherts are still relatively sparse in the overall lithic assemblages (Figure 3.5). In general, lithic tool production is much more expedient when compared to the formalized tool industry of the Middle Woodland. In terms of ceramics, cordmarking or smoothed-over cordmarking with grit temper make up over 40% of the assemblages at all of these sites (Figure 3.6). Some net-impressed and fabric-impressed sherds are found, showing connections between this area and the Mississippi River Valley. Ceramics are considerably thinner during this period. There are also two circular villages found during this period with open central plazas (Carter Creek and White Bend West Block). This trait is not found at later Weaver sites in the region. These sites are generally contemporary with the Weaver Gast phase in

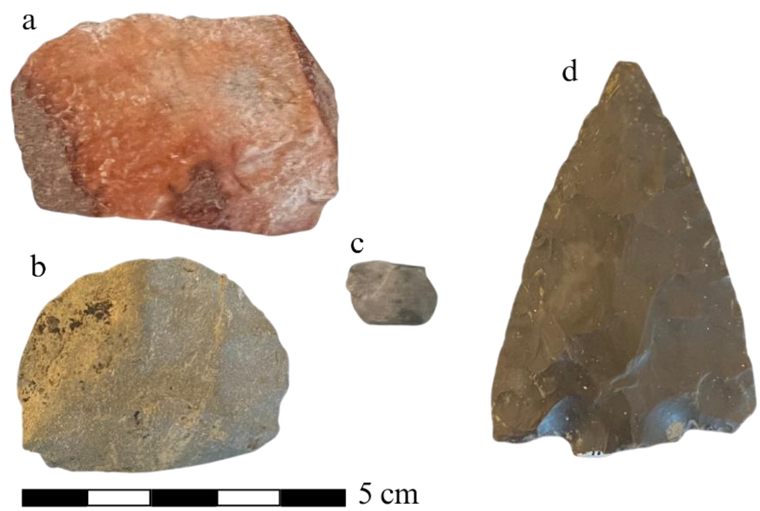

Figure 3.5: A selection of artifacts from Carter Creek made from nonlocal cherts. (a) A utilized flake from PM29 made from St. Genevieve chert; (b) a gouge from Mike Black's collection (MB7) made from Mill Creek chert; (c) a basal fragment of a PPK from the machine-scraped surface of Excavation Block (EB1) made from Cobden-Dongola chert; (d) a Snyders PPK from Mike Black's collection (MB64) made from Cobden-Dongola chert.

southeastern Iowa. More specifically, the Gast Farm and Oak Village sites in Iowa were occupied at the same time as Carter Creek.

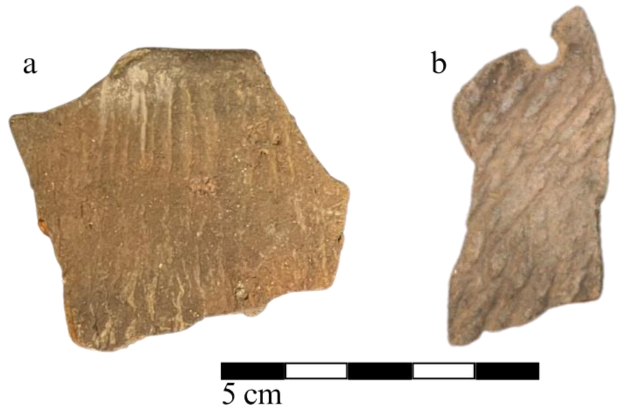

Figure 3.6: V45-1, an example of a grit-tempered rim with cordmarking.

The Crooked Creek phase (500-800 CE) (Fishel 2013d:324) is represented archaeologically by numerous sites. All of the sites possess, almost exclusively, Lowe cluster Steuben points made from locally available Burlington cherts. Ceramics are almost all plain Weaver jars with grit-grog or grit temper and some exterior tool impressions and embossed nodes. Only low numbers of non-Weaver ceramics are found at sites during this phase. There is no one representative site as special purpose sites, short-term encampments, and seasonal encampments are all found with thin or no midden usually representing dispersed household settlements.

Figure 3.7: (a) A Weaver rim (V46-1) from Carter Creek with vertical and parallel cordmarks; (b) a White Hall rim from the Carlin site with vertical and oblique cordmarks.

In the Lower Illinois River Valley, the White Hall Phase (400-750 CE) denotes the start of the early Late Woodland period. The date range for the White Hall phase is taken from Studenmund (2000) but is a rough estimate that could extend temporally in either direction based on future research (Fortier 2013). This phase was first identified and defined by Struever (1968a:169-70) based on the presence of “truncated coconut” ceramic vessels not recognized in other regions of Illinois at that time. As he pointed out then, and as has been seen through further research (Studenmund 2000), White Hall pottery tends to be sand tempered with overlapping cordmarking that largely extends to the lip of the vessel. In contrast, cordmarking in the central Illinois and LaMoine River Valleys tends to be evenly spaced and parallel (e.g., Green and Nolan 2000) (Figure 3.7). Decoration in Lower Illinois Valley sites includes notched lips, hemiconical punctates early in the phase, and two vessel forms: the truncated coconut and a sub-conoidal jar (Studenmund 2000). White Hall sites are most often associated with Steuben projectile points (e.g., Boesch 1994; Koski 1981). Subsistence is broad-based, with a focus on indigenous plants and various riverine and terrestrial animal species (Asch and Asch 1981, Styles 1981); usually the exploited resources come from local areas, often within a catchment no more than a few kilometers surrounding the site (Styles 1981). Sites are located in a variety of geographic settings, most often near the Illinois Valley or secondary stream valleys (Studenmund 2000). Features at sites were almost exclusively pits, often large bell-shaped pits considered to be used for storage or as earth ovens (e.g., Fortier 2013). Pits in this region were usually deeper and have more zones than typical Weaver variant pits in the Central Illinois River Valley.

It is important to note here that it has been argued that we see a clear transition from the Black Sand to the Havana traditions in the Central Illinois River Valley but not in the Lower Illinois River Valley (Farnsworth and Asch 1986; Fortier et al. 2006), although Munson (1986) does not believe this transition is clear in the Central Valley. There seems to be a clear transition in the Sny Bottom region of the Mississippi River Valley between these periods (represented by the Snycartee phase, Morgan and Stafford 1986). The transition between the Early and Middle Woodland periods in the American Bottom and southeastern Iowa will be discussed more in the next sections, but it is important to note that the cultural trajectory of each region is unique, so there is no clear way to discuss this transition (or that between the Middle and Late Woodland periods) in a way that follows the data for all regions. At the same time, as we continue to gather more data, our opinions on what happened may change, so we must be open to the possibility that our current understanding is incorrect.

The American Bottom

The American Bottom, throughout most of the Early and Middle Woodland periods, shares a lot of material characteristics with the Illinois River Valley, but the cultural dynamics are much different. It has been noted that the Early Woodland period in the American Bottom saw influences from all directions (Emerson and Fortier 1986), similar to the region's cultural dynamics throughout the Woodland period and into the Mississippian. The Ringering phase in the American Bottom is very similar to the Black Sand tradition of the Illinois River Valley, with both regions sharing some general characteristics. Generally speaking, the American Bottom is not thought to have been inhabited during the Early Woodland and instead was more utilized by small encampments (Fortier et al. 2006). In getting into the Middle Woodland, some general traits carry over but there is not a clear continuum between the Early and Middle Woodland periods in this region (Fortier et al. 2006).

The Middle Woodland period in the American Bottom is broken into three phases that generally track with those from the Illinois River Valley, the Cement Hollow (150-50 BCE), Holding (50 BCE-150 CE), and Hill Lake (150-300 CE) phases. The early Cement Hollow phase is represented by slight changes from the Early Woodland, especially the introduction of new ceramic decorations and techniques. The middle Holding phase is seen as the fluorescence of Havana-Hopewell traits including exotic artifacts, various decorative motifs, lamellar blades, non-local chert sources, and larger settlements (Fortier et al. 2006:189). The transition from the Cement Hollow to the Holding phase also sees an increase in the use of starchy seeds and more diverse plant usage in general. The last Middle Woodland phase, Hill Lake, is seen as a gradual loss of Havana-Hopewell traits and practices, similar to the terminal Middle Woodland phases in the Illinois River Valley.

As we move into the early Late Woodland (or Initial Late Woodland as it is called in the American Bottom), McElrath et al. (2000) propose a 50-100 year abandonment of the region starting around 300-350 CE, with an eventual reoccupation of the region around 400 CE by peoples from the north (e.g., Lower Illinois River Valley). This abandonment may have been caused by flooding in the major river valleys as was discussed earlier in this chapter. Because of this unique cultural trajectory, the early Late Woodland period in this region is very dynamic and the exact relationship between groups in this region is not fully known. Overall, this period is broken into three phases, the Rosewood (400-550 CE) and the contemporaneous Mund and Cunningham (550-650 CE) (Jackson et al. 2014).

Most habitation sites during all of these phases are small hamlets or pit clusters, except for the larger villages (Rosewood, Mund, and Cunningham) that give these phases their names. Rosewood sites are almost exclusively in the uplands surrounding the Mississippi River Valley, while settlements begin to shift back to the bluff base during the Mund and Cunningham phases. Interestingly, these groups almost never share the same landforms that were used by people during the Middle Woodland period (Jackson et al. 2014), as they very rarely used the floodplains. Throughout the early Late Woodland period, this region is thought to have a higher population than in prior periods, but it seems to be less densely populated.

We also see a shift in pit use and size across this period. Rosewood pits were generally smaller and shallower basin-shaped pits with multiple zones (Middle Woodland pits were similar in size, but almost always single-zoned). Mund and Cunningham pits shift to deeper cylindrical pits with straight sides or a belled bottom. Jackson et al. (2014:183) argue that this represents a shift from shallow hearths and direct heat cooking to earth ovens and indirect heat cooking. There were rectangular structures found at the Rosewood, Mund, and Cunningham sites from this period, which represent a new structural form not found during the Middle Woodland.

Chert use is almost exclusively local, with much more expediently crafted tools and less heat treatment than the previous period. There is some evidence of scavenging and curation of tools from previous periods that have been reused (Jackson et al. 2014). Steuben and Mund cluster (Justice 1987) points are found at most sites. Ceramics lose the decorative diversity that was prominent during the Middle Woodland, with only cord-wrapped stick lip impressions and nodes carrying over. Just as with the Illinois River Valley, ceramics are considerably thinner-walled and mostly grit tempered (with some grog being used later in this period). Overall, ceramics in the American Bottom are very similar to those from other Weaver variant sites.

When examining these phases and the relationships between them, archaeologists have come up with two possible scenarios as to how the phases relate to one another. First, the Rosewood phase may have grown into the Cunningham phase, based on similarities in the ceramic assemblages, with the Mund phase representing immigration into the region from elsewhere. Second, the Mund and Cunningham phases may be "microphases" that grew out of localized diversity with the region during its repopulation (Jackson et al. 2014:162). In either case, the cultural developments in this region during the early Late Woodland period (and in comparison to the Middle Woodland) show that a straightforward approach to understanding its history is not appropriate. While many of the general characteristics between the American Bottom and Illinois River Valley are similar across the Middle and early Late Woodland periods, it is only by tracing the relationships within and between these regions that we can begin to approach the nuanced culturally histories of western Illinois.

Southeastern Iowa

The Woodland period throughout Iowa offers a cultural history that mostly mirrors that from west-central Illinois, this is especially true in Southeastern Iowa. At the same time, the differences between this region and the Illinois River Valley are noticeable, especially when it comes to ceramic decoration and surface treatment and population movements during the Middle to Late Woodland transition. In southeastern Iowa, the Middle Woodland is broken into the same phases as the Central Illinois River Valley: Fulton (early), Ogden (middle), and Frazier (terminal). These phases all show similar material characteristics with the Ogden phase representing a clear increase in Havana-Hopewell artifacts and practices including non-local lithics, a wide array of ceramic decorations, and exotic items being exchanged over long distances (e.g., Benn et al. 1988). One difference between the regions is in settlement types. Many of the Middle Woodland sites in this region were bluff base, permanent or semi-permanent villages used for a multitude of activities. Gast Farm, which will be discussed in much more detail later in this dissertation, had a large Middle Woodland habitation at it that was seemingly a semi-circular village immediately next to a small mound group (e.g., Green et al. n.d.). Many of these permanent settlements were, similar to the Illinois River Valley, adjacent to burial mounds. Interestingly southeastern Iowa sees Havana-Hopewell pottery types before regions to the north, indicating this kind of ceramic production made its way to the region from the south (Benn and Green 2000).

Benn and Green (2000) argue that the early Late Woodland in southeastern Iowa represent a clear development from the Middle Woodland period. This is similar to what is likely seen in the Illinois River Valley, but vastly different from the abandonment of the American Bottom. The Late Woodland, in this region, is broken into two subperiods and three horizons; the horizons all have multiple phases differentiated by unique material characteristics. The subperiods are the early (250-650 CE) and late (650-1100) Late Woodland. The horizons are the Weaver (250-400 CE), Cordage (650-800 CE), and High Rim (950-1100 CE). For the purposes of this section and this dissertation, the Weaver horizon is the most important and will be discussed further.

The material changes seen between the Middle Woodland and the Weaver horizon in this region generally match those from the surrounding region. We see ceramics with "thinner walls, slightly curving rims, constricted orifices (necks), low, flaring shoulders, full bodies, and sharply rounded (conoidal) bases" (Benn and Green 2000:434). There is generally only cordmarking or plain vessels with some tool impressions or punctates near the lip and rim of vessels. Ceramics are almost all grit tempered. Steuben expanding stem points represent the most prevalent lithic technology, along with expediently produced tools. Local, usually Burlington, cherts are almost exclusively used and there is little heat treatment. These traits relate to the Weaver horizon as a whole throughout much of Iowa, but southeastern Iowa is considered to be a part of the Gast Phase (250-400 CE).

The Gast Phase includes the Gast Farm site, which was both a semi-circular Middle Woodland habitation, as well as an early Late Woodland nucleated village (e.g., Green et al. n.d.). General settlement types from this phase are nucleated villages like that at Gast Farm and other smaller seasonal occupations, usually at elevated settings along the Mississippi River

Valley. Interestingly, and unlike much of what we see in the Central Illinois River Valley and American Bottom, many of the smaller (and some of the larger) habitations are located directly on or adjacent to Middle Woodland sites (Benn and Green 2000:438). Overall, as with the early Late Woodland period throughout the wider region, there is a wide subsistence base with more intensive food production and procurement activities. At Gast Phase sites, most Weaver ware is plain with very small amounts having cordmarking (this is the opposite of Camp Creek phase sites in the La Moine River Valley). There are also some exotic or nonlocal items found in earlier assemblages from this phase, but they quickly disappear from the archaeological record. The Allamakee Phase runs concurrently with the Gast Phase to its immediate north and shares many of these traits, although some ceramics are marked as Linn Ware (or having Levsen stamped decoration) (Benn and Green 2000). Although this phase is dated to 250-400 CE, the next horizon/phase doesn't start until around 650 CE. Benn and Green (2000) argue that the initial Gast (or other phases like the Allamakee) represent the development of Weaver traits in this region, while the 400-650 CE time period is more of a diversification of Weaver traits. This timing fits somewhat with Green's (e.g., 1993) stage one and two of the Frontier Model and roughly follows the Camp Creek and Crooked Creek date ranges.

Summary: From Regional Models and Chronologies to Assemblages

In general, the Middle Woodland period (150 BCE- 300ish CE), in contrast to both the Early and Late Woodland periods, can be seen as an explosion of interaction and mound building throughout western Illinois, especially centered in the Illinois River Valley. This period was epitomized by monumental earthen constructions and shared burial practices that spread throughout the Eastern Woodlands from the Great Lakes to the Gulf of Mexico known more generally as the Hopewell Culture or Hopewell Interaction Sphere (Caldwell 1964; Seeman

1979; Struever and Houart 1972). This is referred to as the Havana or Havana-Hopewell culture in the Illinois River Valley. Included in this tradition was the procurement of exotic artifacts made from materials such as obsidian from Yellowstone (Hughes 2006), copper from the Great Lakes region (Rapp et al. 1990), and silver from Canada (Spence 1982).

Ceramics during the Middle Woodland period were more finely decorated, with decorations ranging from simple incising to elaborate zone-decorated vessels, but they still exhibited some basic traits like cordmarking and, most often, grit temper (Griffin 1952). Many of the more finely decorated ceramics are thought to be ceremonial vessels, while plain or cordmarked vessels are thought to have been for more utilitarian uses (e.g., Martin 2013). Fitting with the widespread nature of interaction during this period, archaeologists have found cherts from as far away as Ohio and North Dakota (e.g., Lepper 2006). Archaeology from this period has focused on the large mound centers, but it is known that most settlements occurred adjacent to these centers (e.g., Farnsworth and Atwell 2015) and only consisted of a few households. Subsistence practices were similar to the preceding period with a focus on river valley aquatic resources and local cultigens like maygrass and erect knotweed (Asch et al. 1979). Towards the end of this period the interaction networks dissolve and the mortuary tradition ceased by around 250-300 CE (Asch 1990), leading into the early Late Woodland period.

In comparison, the early Late Woodland period (250-800 CE, depending on the region) is often distinguished by the things it is lacking, such as long-distance interaction and widespread mound building, but it can also be defined based on the emergence of new lifeways. Ceramics became thinner-walled, with almost no decoration except lip and rim notching, and rim noding (e.g., Green and Nolan 2000). The vessels were usually either cordmarked on the exterior or plain, with the cordmarking patterns being distinguishable between regions in some cases (e.g., in the Lower Illinois River Valley, cordmarking is most often overlapping instead of parallel, Studenmund 2000). Chert in the early Late Woodland period was procured from almost exclusively local sources, although early sites, such as Carter Creek may have some tools made from non-local cherts (Esarey et al. 1984).

One of the biggest changes between this and the preceding period was the movement of large populations into the uplands, along secondary streams and backwater lakes, although people were still living in formerly inhabited locations near the major river valleys in some cases (e.g., Green and Nolan 2000:353). The ring-midden or circular village appeared during this period (e.g., Esarey et al. 1984), but was not exclusive to Weaver people, as this form of settlement also appeared in Kentucky, Indiana, southern Illinois and Ohio (Green et al. n.d.). Subsistence was generally considered to be a more intensified horticulture during this period with a continued reliance on local resources, from both the uplands and river valleys, with a particular focus on aquatic resources (Styles 1981). It should be noted that maize did not appear in Illinois until the terminal Late Woodland period around 900-1000 CE (e.g., Simon 2000). Although rare, burial mounds were still found at some Weaver sites (Wray and Macneish 1961), but the log-chambered tomb that was so popular during the Middle Woodland period disappeared.

These drastic changes, and the general drabness of early Late Woodland archaeological assemblages, can help to explain why the Late Woodland period has been so understudied and undertheorized in comparison to the Middle Woodland. At the same time, an increase in cultural resource management projects over the past few decades has created room for archaeologists to begin to view early Late Woodland assemblages from a more nuanced perspective. Previous suggestions such as World Systems theory mixed with a multiscalar approach (McElrath et al.

2000) have not necessarily been taken up, but they did provide a path that has led to my research. As I outlined in the previous chapter, I will build a multi-scale picture of the early Late Woodland period in the La Moine River Valley from the perspective of the Carter Creek site by viewing the past as emerging from assemblages of people, places, and things that interact and interconnect. To do this, I use data from my own and prior excavations at sites in Illinois and the surrounding region. In doing this, it is required that I follow a strict, detailed, methodology that provides the necessary data to trace these assemblages. These methods, and a brief exploration of Carter Creek and other applicable site's histories, will be detailed in the following chapter.

CHAPTER 4: METHODOLOGIES AND SITE COMPARISONS

Appropriate field and lab analysis methods are vital for the collection, understanding, and comparison of archaeological materials. Because I am taking a multiscalar approach in this dissertation, I use all applicable evidence gathered from each site considered for this project. Without these detailed layers of evidence, I would not be able to answer the questions central to this research. This evidence allows for the comparison of sites and materials needed to analyze the emergence of social identity assemblages at multiple scales during the Late Woodland period. In this chapter, I discuss the specific methods I used for excavation and analysis of materials from the Carter Creek site, upon which I base my comparisons and interpretation. I also provide a history of investigation for each site considered in this dissertation, which will give the context for excavations and analysis. The other sites considered in this dissertation for comparative purposes include the White Bend (11HA938), Buffalo Chip (11MG162), Rosewood, Sartorius (11HA360), Sartorial Splendor (11HA949) and Gast Farm (13LA12) sites (Figure 4.1). Detailed information on the methods employed can be found in each site's technical report. In the chapters following this I explore data from excavations at Carter Creek and other early Late Woodland sites, first examining ceramics, then moving on to look at the other materials collected. I then interpret these data to discuss Late Woodland household, community, and style assemblages.

Carter Creek (11MD817): History of Investigations, Field Methods, and Lab Methods

Field and lab methods for this site follow, as closely as possible, those developed and used for excavations at other early Late Woodland sites in Illinois (e.g., Fishel 2013f), most of which were performed by the Illinois State Archaeological Survey (ISAS; formerly known as the Illinois Transportation Archaeology Research Program (ITARP)). More specifically, ISAS field

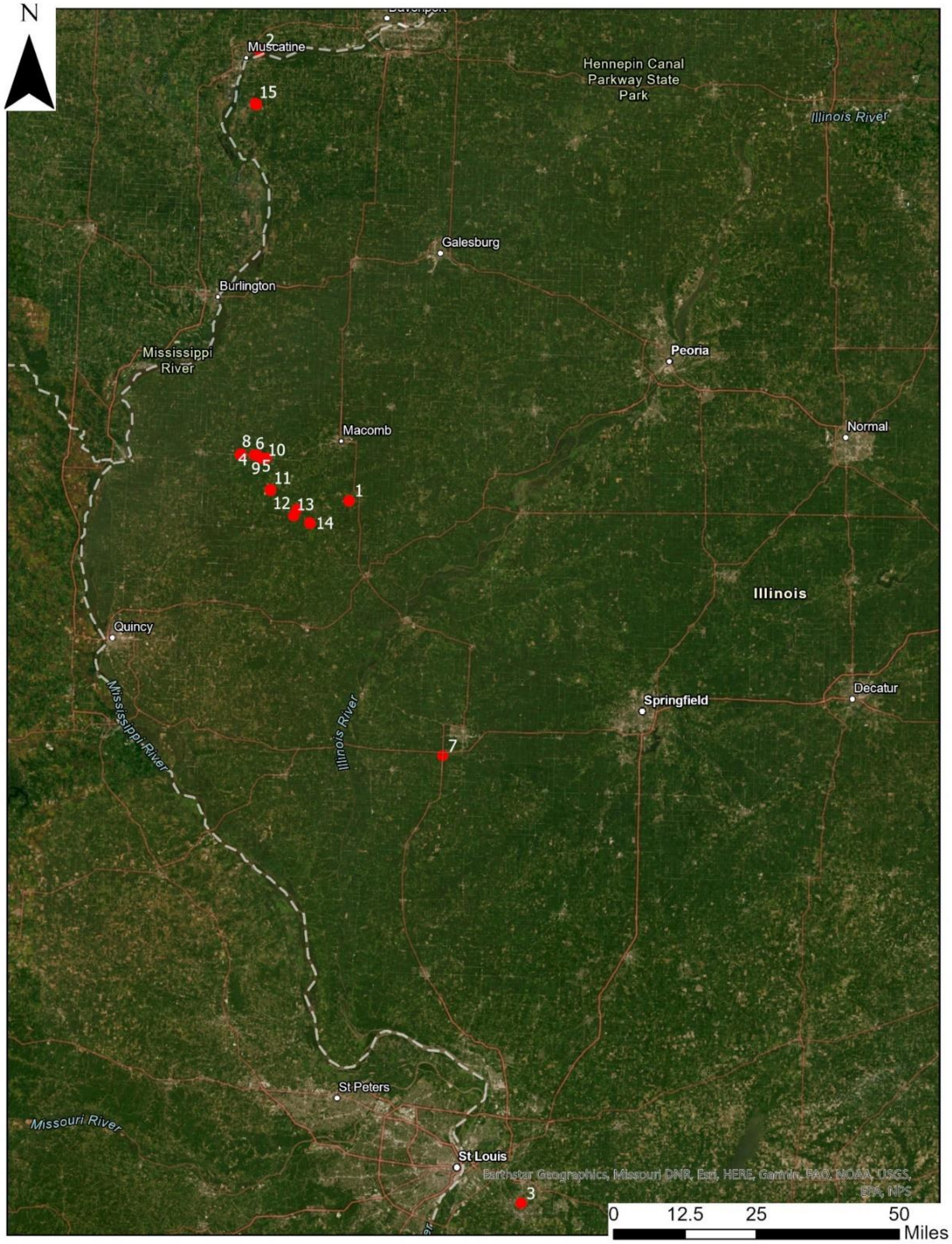

Figure 4.1: a Map of all sites mentioned in this dissertation. 1) Carter Creek, 2) Gast farm, 3) Rosewood, 4) White Bend, 5) Sartorius, 6) Sartorial Splendor, 7) Buffalo Chip, 8) Marlin Miller #2, 9) Kost #3, 10) Cooper #3, 11) Bell's Terrace, 12) Friendly Neighbor, 13) Dobey, 14) Tortured Oak, 15) Marseton #2.

(ITARP 2006) and lab (ITARP 1998) procedures were followed as closely as possible for the purpose of keeping the data recorded from these sites as comparable as possible, both for this project and for future research. The bulk of data on the early Late Woodland period in Illinois has followed these, or very similar, methods, which will aid in future efforts to better understand this period.

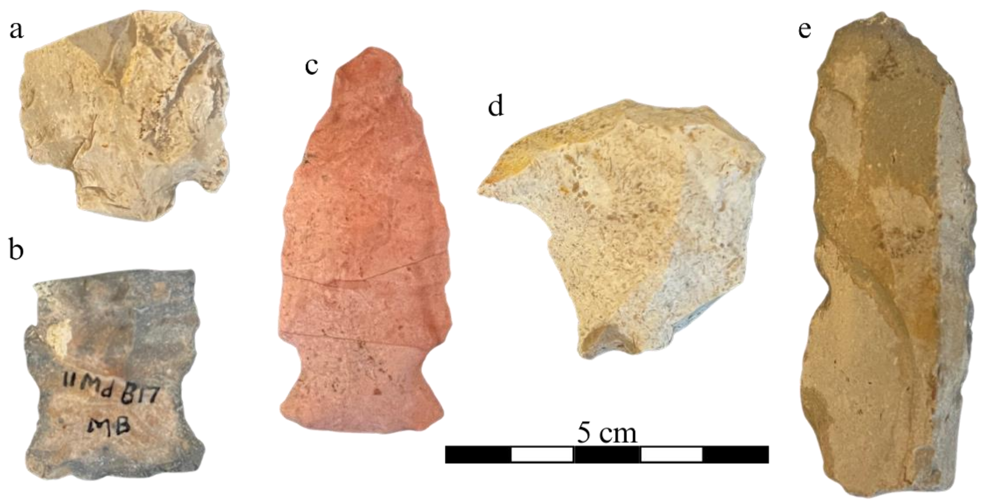

Figure 4.2: A selection of artifacts from Mike Black's collection. (a) MB29, a Snyders PPK made from BK chert; (b) MB46, a Steuben PPK made from heat treated or burned Fern Glen chert; (c) MB32, a Middle to Late Woodland transition PPK made from heat treated BK chert; (d) MB83 a utilized flake made from low quality BK chert; (e) MB 73, a utilized blade made from St. Louis chert.

Almost all of the data from this site used for this dissertation were gathered during my 2020 excavations or taken from Fishel (2013d), as the bulk of artifacts and data from the original survey and excavation in 1983-1984 cannot be located. Unfortunately, this includes many of the lithic artifacts and detailed feature profile photos and drawings. Esarey et al. (1984) and Holt (2005) provide an overview on these earlier investigations and information from these articles is used for this research. The data from Holt (2005), which details the faunal remains from the earlier excavation, are used in this dissertation as well. Holt (2005) also outlines the findings on botanical data from Schroeder (1985), but this Master’s thesis has not been located, so details on botanical remains are only briefly discussed for the purposes of this research. Additionally, a small box of artifacts, mostly projectile points, collected at Carter Creek was given to me for this research by a local farmer, Mike Black (Figure 4.2). The exact provenience of these items is not known, but they are included in the study.

History of Investigations

The Carter Creek site (11MD817) is located upon an upland bluff in McDonough County, Illinois, about 200 meters (m) north of Carter Creek (its namesake), on forest soils close to the forest-prairie edge from this time period. This site sits approximately 14 km east of the La Moine River valley and 30 km west of the Illinois River valley (Esarey et al. 1984:133). Although numerous other Weaver variant sites are found in the La Moine River valley and its drainage, Carter Creek sits much farther into the uplands than the rest, with the closest Camp Creek phase site being Friendly Neighbor, 15 km to the southwest (Fishel 2013d:317).

The site was originally recorded by Duane Esarey in 1983 after a local farmer came to him to inform Duane Esarey of artifacts the farmer found in his field. Pedestrian survey was completed twice at the site: once by Duane Esarey, Mike Black, and Al Mustain in 1983 and then by a Western Illinois University field school later in 1983 (Esarey et al. 1984). Both surveys recovered a great deal of

Figure 4.3: Aerial Photograph of Carter Creek taken by Duane Esarey in May 1983 showing the circular midden stain with light spots likely being houses or structures. The top of the photo is north.

artifacts, with the first recovering more than 1,300 sherds and the second 63 full cardboard boxes just from the north half of the site (Esarey et al. 1984:131-133). Further excavation of one-half of a structure and associated pits features was completed in 1984.

Analysis from the surveys and excavation has been completed on much of the assemblage, but only some of this information has been published. Detailed analysis of the botanical and faunal remains from the excavations has been completed, although the detailed botanical information from the site cannot be located (Holt 2005; Schroeder 1985). A cursory look at the ceramic and lithic assemblages is presented in the report on the White Bend site (Fishel 2013d:318-319), which draws from and adds to Kelvin Sampson's analysis of ceramics from surface collections (Sampson 1983). More specifically, the data from Fishel (2013d) re-examined all rim sherds, chert tools, and selected igneous tools from Sampson (1983) and 1984 excavations. A total of 1,717 undecorated body sherds were not re-examined, but an additional 747 body sherds were analyzed and added to Sampson's totals.


Figure 4.4: Photograph of magnetometry survey at Carter Creek with Andrew Mallo and Sarah Scattergood, taken on March 27, 2020.

These surveys, along with aerial photographs, showed the presence of a circular "ring-midden" with clear, light-colored, depressions where structures used to lie (Figure 4.3); about 25-35 structures were shown in the aerial photographs. The midden measured 100 m north-south and 88 m east-west, with an open central plaza measuring about 20 m in diameter (Esarey et al. 1984:135). It has been estimated that approximately 175 people may have inhabited the village at one time (Holt 2005:40).

Of the 5,000 sherds recovered from earlier survey and excavation at the site, 228 rims and 1,700 body sherds have been analyzed with all showing expected Weaver surface treatments and decorations (Esarey etal.1984; Fishel 2013d:318). The projectile points analyzed also fall within the expected style of a Weaver site based on type, although some fit more into traditional Middle Woodland styles (Fishel 2013d:319). Botanical (Schroeder 1985) and faunal (Holt 2005) analyses show expected patterns of subsistence at the site. Overall, the material assemblage from earlier survey and excavation at the site falls within the expected norms for Weaver variant settlements.

Field Methods in 2020 Investigations

From March to May of 2020, I along with volunteers from ISAS completed a geophysical survey (magnetometry) and excavations at Carter Creek (Figure 4.4). This work was completed before the planting of soybeans at the request of the landowner. No major pedestrian survey was completed at the site before excavations due to time constraints. However, earlier pedestrian surveys in 1983, along with the presence of a midden, clearly outlined the boundary of the site. Some surface artifacts including tools or diagnostic items were collected, assigned piece-plot numbers, and the geographic coordinates of their locations were mapped in with a total station. I also dug five test pits across the site to track the depth of the midden and the plow zone prior to excavations (see Figure 4.5 for profiles of these test pits). All of the test pits were dug as 50 x 50 centimeter (cm) squares until I was at least 10 cm into the subsoil; the depths ranged from approximately 30-40 cm.

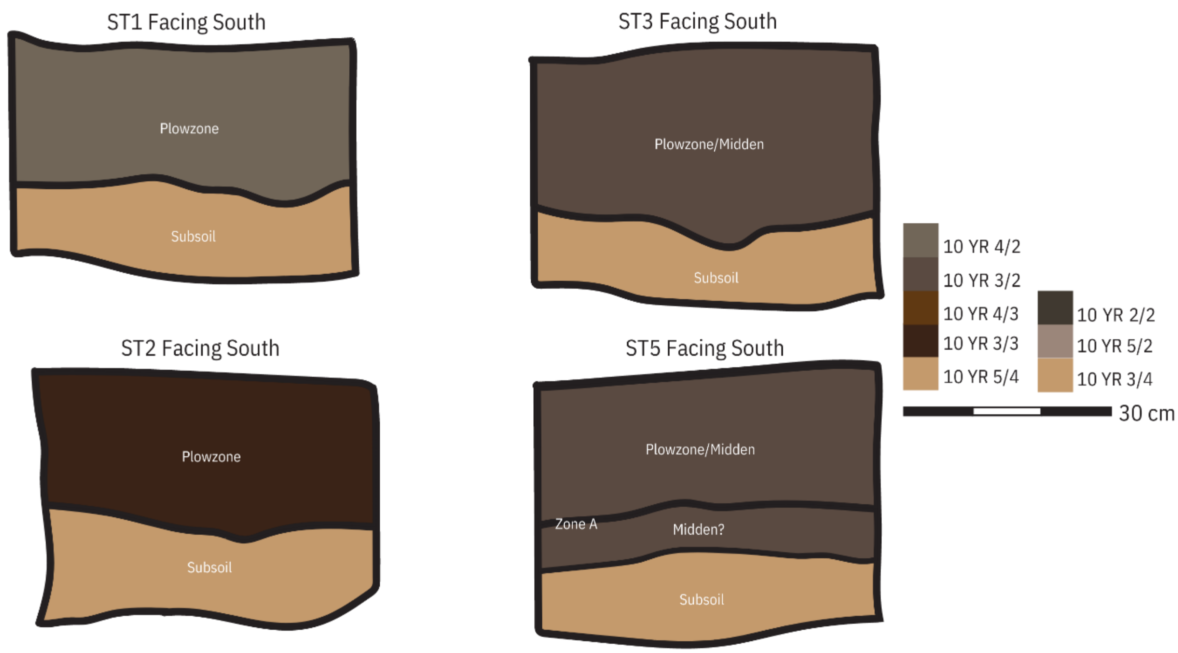

Figure 4.5: Shovel test pit profiles from Carter Creek. The profile for Shovel Test 4 (ST4) has been lost.

Magnetometry survey is extremely beneficial as it allows for high-resolution mapping of subsurface features over a large area without using invasive methods (e.g., Hargrave 2010; Kvamme 2003). Magnetometry measures the variance of magnetic fields in soils, which can be impacted by human occupation. More specifically, a magnetometer can pick up on areas of burning and organic rich materials, which are differentiated from the undisturbed soils surrounding them (e.g., Kvamme 2006). For the purposes of this research, the magnetometry survey was used to locate an appropriate area for excavation, by identifying potential structures based on the magnetic signatures of associated pit features (see Figure 4.6). Lastly, this survey was used to locate the 1984 excavations at the site, so they could be properly mapped in with my 2020 excavations.

Initial investigation began by establishing a grid from which all surveys and excavations were mapped. This grid was established by John Lambert, B. Jacon Skousen, and Andrew Mallo. The grid for the geophysical survey was established using the ArcGIS program before it was laid out in the field. To begin, the "Imagery" basemap was loaded into the program and was zoomed into the Carter Creek site locality. A polygon shapefile was then created that consisted of a series of north-south oriented 20 x 20-meter grids. Additional grids were added/removed in order to conform to the landform, resulting in 32 grids. From this image, the corner of the grid was measured off of a fixed point on the aerial photograph, in this case the northeast corner of the grid was 186 m south of N 225th Rd., along the field road. Once in the field, an arbitrary grid was established using a Trimble S3 Series Robotic Total Station equipped with a Trimble TSC2 Data Recorder. First, two resection points were placed on the ground. The first was given an arbitrary value of 1000N 1000E 100Elev. The second was placed 10 m north, using a measuring tape and compass, and given the value of 1010 N 1000E. Shooting these two points with the total station established the grid for the site.

After additional resections were laid out near the fence line and telephone poles, the grid corner location was approximated by measuring 186 m down the field road from the pavement, using a wheel. The stadia rod was brought to this location and moved around until the values in the arbitrary grid were whole numbers (1035N 995E). Using this value as a starting point, the locations of the grid corners were entered into the data recorder by adding/subtracting 20 m north and south, depending on the direction from the northeast corner (e.g, the southeast corner of the grid would be at 1015N 995E and the northwest corner was at 1035N 975E). Once all of the grid corner locations were entered into the data recorder, the “stakeout” function was used to direct the stadia rod operator to the precise spot where the grid stake should be planted. A 2 x 2-inch wooden stake was used for each corner and pounded in using a sledgehammer.

Following the grid being established, a magnetometry survey of the center of ring-midden and surrounding areas by Dr. Robert McCullough, Andrew Mallo, Dr. B. Jacob Skousen, Sarah Scattergood, and me on March 13 and May 1, 2020. This survey was graciously provided by ISAS. The equipment used for the magnetometry survey was a Bartington Grad 601-2 gradiometer. The survey consisted of transects spaced 50 cm apart with the samples collected every 12.5 cm. The starting point for the survey was the southwest corner of each previously established 20 x 20 m square, with the data collection occurring in a zig-zag pattern, going to the north on the first pass in each square. The results of this survey are discussed in more detail in Chapter 6.

I supervised excavations at Carter Creek, which began in March 2020 and ran until May 2020. These excavations included me and numerous volunteers from ISAS, including Dave Nolan, Andrew Mallo, Richard L. Fishel, Aimee N. Roberts, Jim M. Pissel, Rob Hickson, Tinothy Boyd, and Alec Scobbie. The location of my excavation block (EB1) was determined using the results of the geophysical survey. A second excavation block (EB2) was opened to locate the 1984 excavations based on a large magnetic anomaly identified in the geophysical survey data (Figure 4.6). The plow zone in both EBs was removed via a backhoe operated by Scott Collins over the course of one day. After the plow zone was removed, me, Dave Nolan, and Andrew Mallo shovel-scraped the machine-scraped surface to define all subsurface features. In EB2 shovel-scraping was used to locate previously excavated features, but also located some unexcavated features (Figures 4.7-4.9). The limits of both EBs and the corners of test pits were mapped using the total station. EB1 was approximately 12 meters north to south by 10 meters (m) east to west; EB2 was 10 meters north to south by 5 meters east to west. All artifacts found during machine scraping were collected and analyzed. Some back dirt from the plow zone in both EBs was screened through ¼”-inch metal mesh and artifacts recovered were collected and analyzed.

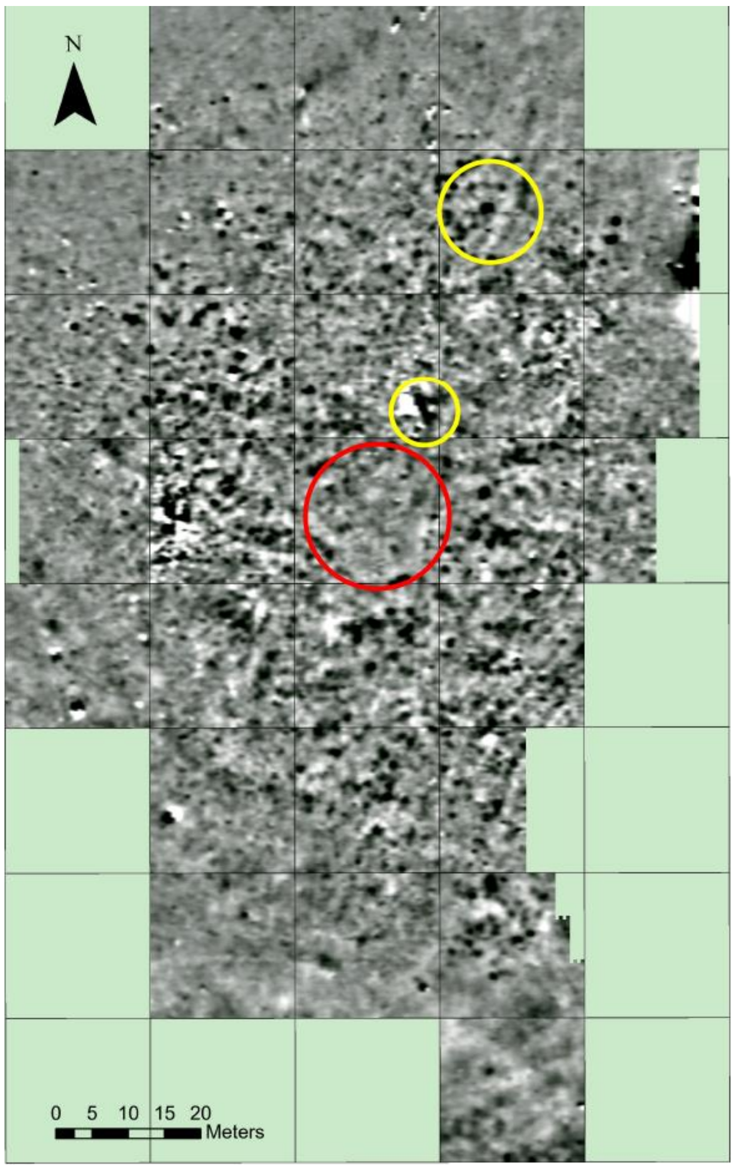

Figure 4.6: Magnetometry survey data from Carter Creek. The red circle is the central plaza at the site. The northernmost yellow circle is the anomaly that represented Structure 1 and the southernmost yellow circle is the anomaly that was left from 1984 excavations, allowing for the reopening of this excavation block so it can be mapped in with 2020 spatial data.

The plan view of all defined features was mapped at a 1:20 scale. To do this, four feature nails (labeled A, B, C, and D) were placed around each feature, with the intent of bisecting the feature to collect a sample in the excavations (see Figure 4.10). Each of the feature nails was mapped using the total station. In some cases, multiple features used the same feature nails. In those instances, more than four feature nails were used. For example, features 47, 48, and 49 were clustered together and required nails A-H for mapping and excavation purposes. Samples from

Figure 4.7: Photograph of plow zone stripping at Carter Creek with Andrew Mallo and Dave Nolan, taken on April 3, 2020.

Figure 4.8: Photograph of excavations at Carter Creek with Andrew Mallo, Dave Nolan, and Aimee Roberts, taken on April 5, 2020.

pits and postmolds were excavated in either quarters or halves using shovels and trowels based on the location of feature nails. All pits were completely excavated, while postmolds were only half excavated for the purposes of defining them in profile view. Some potential postmolds were left unexcavated due to weather related issues towards the end of the project, leaving EB1 partially covered in water.

Figure 4.9: Photograph of Excavation Block 1 (EB1) at Carter Creek, flooded due to rain, taken on April 26, 2020.

The first half or quarter of a feature was removed as one layer unless the excavator noticed an obvious change in soil color or texture; in this case, the excavation was completed up to this noted change and afterwards marked as upper, middle, or lower. The second half of features was excavated according to the defined cultural strata/zones down to sterile soils. A flotation sample was collected from each defined zone of a pit or postmold. All pits and postmold profiles were mapped at a 1:10 scale with feature nails located on the drawings (see Figure 4.11). All soils not collected for flotation samples were screened through ¼-inch metal mesh based on zone and quarter/half.

All layers identified in each feature during profile scrapping and mapping were examined for soil texture and color. Soil color was determined by the excavator of each feature using

Munsell Soil Color Charts. A small sample of soil from each layer was matched to the corresponding color chart and recorded on the feature profile map. The soil texture was determined by the excavator of each feature based on the feel of the layer in question using their bare hands. Soil texture designations included the following descriptors: loam, clay, silt, and ash. These descriptors were combined when necessary to describe soils that had characteristics of multiple textures (e.g., loamy clay). When necessary, an excavator would ask the opinion of other archaeologists at the site to ensure the proper soil colors and textures were being recorded.

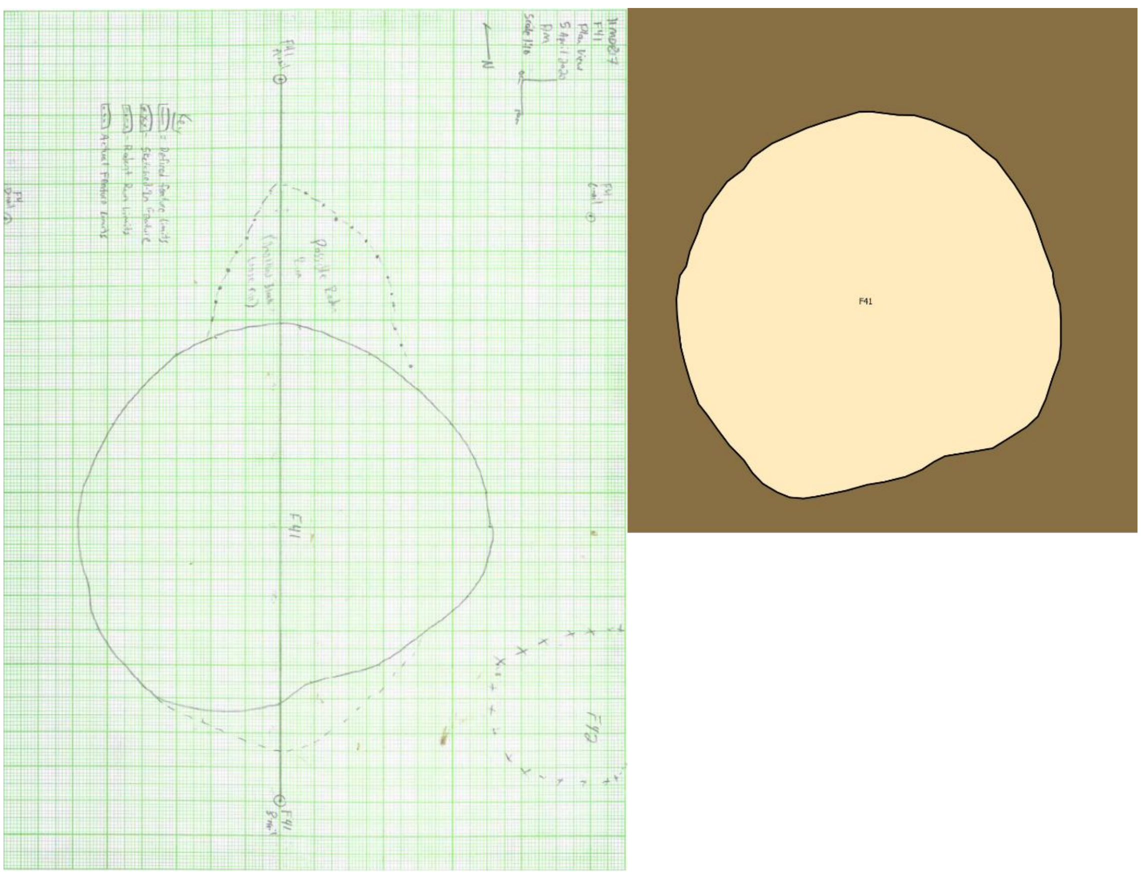

Figure 4.10: An example of a plan map for F41 drawn in the field and then digitized.

Ash was identified by both color and texture as these layers would exhibit a darker, burned, coloration along with a smooth or silky feeling. Ashy layers were often also somewhat greasy due to the layers having cooked or burned animal bones present in them. The greasy feeling would have come from fats on the animal liquifying during the cooking process. Silt was identified by texture with a smooth feeling, not accompanied by greasiness, darkened soils, or burned bones. Clay was present in most layers that were not ash and was identified by rubbing the soils between fingers. If the soil formed into a solid ball or ribbon longer than one inch in length, it was noted as clay. Loam was identified by texture as feeling gritty or coarse in comparison to the other soils identified.

Figure 4.11: An example of a profile photograph and a digitized profile drawing for F22.

Lab Methods in 2020 Investigations

I completed all of the feature, ceramic, and lithic processing and analysis for the data gathered from my 2020 excavations at the Carter Creek site. These analyses began after fieldwork had been completed. All artifacts were washed and bagged according to broad categories: Lithic-Rough Rock, Lithic-Chert, Ceramics, and Bone/Charcoal. The faunal remains from the site were not analyzed due to time and resource constraints. The flotation samples that were collected from each pit were processed by ISAS but are not included in this analysis due to time and resource constraints. Upon removal from features, artifacts and other materials were stored at the University of Illinois, Urbana-Champaign. Washing, bagging, and analysis of the artifacts occurred at my home due to COVID restrictions. All artifacts from 2020 excavations are being curated with the ISAS. All site mapping and spatial analyses were completed using the ArcGIS Pro computer program.

Ceramics

Ceramic analyses followed closely the methods used for other La Moine River Valley Weaver variant sites (e.g., Fishel 2013c) to allow for easier comparison. Typologies for ceramics used those previously established by McConaughy (1993a) and regularly used on La Moine Weaver sites (Fishel 2005, 2007, 2009, 2012f, 2012g, 2013f, 2013h, 2015; Fishel and Nolan 2007). After washing and separating ceramic sherds from other materials excavated at the site, the sherds were identified and sorted into the following categories: body sherds, rim sherds, decorated sherds, burned clay, potter's clay, sherdlettes, and other objects (e.g., daub, ceramic object). Clay objects that were classified as sherds, sherdlettes, burned clay, or potter's clay include clay effigies and artifacts generally classified as ceramic objects (with no clear purpose or use).

All body sherds were counted, weighed and analyzed according to temper and surface treatment. Any body sherds that showed decoration were further separated and counted. Body sherds that were found to be undecorated and smaller than the size of a dime were counted and weighed without noting surface treatment or temper (similar to Fortier 2013:125); these kinds of sherds are hereafter referred to as "sherd fragments" and are not used in the analysis except for artifact density measurements. The kinds of temper used included grit, grit-grog, grog, and sand. Surface treatments consisted of plain, cordmarked, smoothed-over cordmarked, brushed, net-impressed, and fabric-impressed. Body sherds that could be clearly refit or associated with a specific vessel were recorded along with that vessel, rather than the larger body sherd inventory.

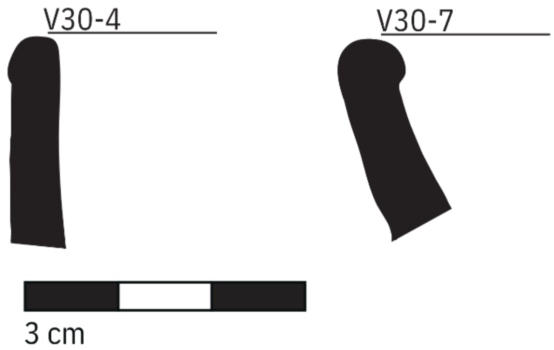

Figure 4.12: Examples of digitized rim profiles from Carter Creek vessels. All rim profiles can be found in Appendix D.

Rim sherds were analyzed for type, vessel form, weight, temper, paste color, orifice diameter and percentage, rim shape, lip thickness, rim thickness, maximum thickness, lip modification type, location, orientation, and spacing, surface treatment, and use-wear. If applicable, other traits were also measured or noted including cordmarking twist, width, and orientation, decoration, decoration spacing, presence of nodes, node diameter, and node distance below the rim of the vessel. To obtain an accurate measurement of orifice diameter, enough of the rim must be present. In cases where less than 5% of the orifice was present, an orifice diameter was not measured. All rim profiles were digitized for illustrative purposes using the Adobe Illustrator computer program (see Figure 4.12). Vessel counts are based on rims and their attributes. If rims can be clearly refit, they are counted as one vessel. If multiple rims from one feature could not be refit, but showed similar attributes, they were considered as belonging to the same vessel for the purposes of vessel count. Vessels were then typed according to their attributes into various types including Weaver, Weaver?, Middle to Late Woodland transition, Lima Lake, Sny Bottom, Levsen, miniature vessel/pinch pot, or Indeterminate.

For the purposes of understanding the Middle to early Late Woodland transition, some attributes are more notable than others. Vessel walls become thinner over this transition, nodes are typically placed closer to the lip of the vessel, and cordmarking becomes less popular from the Camp Creek to the Crooked Creek phase (Fishel 2013d). These noted changes were discussed in more detail in Chapters 3 and 5.

Lithics

Lithic analysis of chert and chipped stone largely followed that outlined in McElrath and Fortier (1983), by identifying lithic debitage, and tools along a four (or five) stage production sequence. Modifications to this classification were made by Nolan (2013a, 2013b) and were used when applicable. The focus of the lithic analysis was not on the sequences of production, but these categories can be useful for comparison between sites and to understand general activity and activity patterns at a site. The main purpose of my lithic analysis was the identification of formal and informal tools, especially those that are diagnostic. A further focus was on the types of chert being used.

All lithic materials were originally sorted into rough rock and chert/chipped stone categories. The materials were then counted, weighed, and analyzed according to material and artifact type. For rough rock, this included the identification of groundstone tools, which were separated from all other rough rock. All tools, both formal and informal, were counted and weighed separately according to their tool type, with additional metric data measured for each artifact.

Rough rock that was not identified as a tool was separated and weighed according to the following categories: igneous, sandstone, limestone, burned limestone, fire-cracked rock, igneous cobble, igneous pebble, and chert cobble. Due to the large amount of burning evident in most of the pits, including from the presence of ashy fills in (n=20) pits, it is unsurprising that most of the non-tool rough rock was burned/heated in some fashion. For the purposes of this research, FCR was classified as rough rock showing signs of contact with heat, including heat-induced fracturing. Burned limestone, burned igneous, and burned sandstone were separated from general FCR, as much of the limestone was heavily burned, likely intentionally in the process of cooking.

Chert Category	
Block Fracture	Blocky, irregular pieces from the initial trimming of parent material
Core/Core Fragment	Purposefully trimmed blocks of chert with clear flaking scars from the removal of flakes of the core
Primary Decortication Flake	A flake with 75-100% of the dorsal surface covered in cortex
Secondary Decortication Flake	A flake with some cortex but, less than 75%, on the dorsal surface
Reduction Flake	A flake lacking cortex with a recognizable bulb, distal hinge, and platform
Thinning Flake	A small or irregular version of a reduction flake, missing one or more attributes of a reduction flake
Shatter Flake	Small or irregular flakes, lacking bulbs and/or platform hinges and under the size of a dime
Unifacial Flake	A flat thinning flake with reduction on one surface (often the dorsal surface)
Bifacial Flake	A flat thinning flake with reduction on both surfaces, with a small, flat, profile
Burin Spall	A, roughly, blade-shaped chunk of chert with a chisel-like edge, often used for engraving bone or wood
Polished Flake Fragment	Flake or broken flake showing "polish" on one surface, likely from tool use
Fire-cracked Chert	Chert blocks (similar to block fractures) with clear evidence of heavy burning, usually the chert has been charred to a black or dark red color
Bifacial Fragment	Fragment of a bifacially shaped tool with dull edges, showing no signs of use-wear

Table 4.1: Chert Analysis Categories and Definitions. Mostly borrowed from McElrath and Fortier (1983) and Fortier (2013).

To offer a breakdown of the different categories I used for classifying chert/chipped stone, I provide a brief summary of the four stages McElrath and Fortier (1983) identify for bifacial tool production; they also suggest that finished bifacial tools could be considered stage five in the production sequence (McElrath and Fortier 1983:93-94). Definitions of the different categories used for this project can be found on Table 4.1 (definitions mostly taken from Fortier 2013). The first stage they propose focuses on initial breakdown of a raw material after it has been procured; it is seen archaeologically through block fractures, primary decortification flakes and secondary decortification flakes (McElrath and Fortier 1983:91). The goal of this stage is to prepare the raw material for further formation into an eventual tool. The second stage is the production of cores (McElrath and Fortier 1983:92) and is represented archaeologically through cores or core fragments. As they point out, finding a core in the archaeological record means it was discarded for some reason; the good cores that were eventually worked into tools often cannot be found. The third stage is defined by blades and reduction flakes and focuses on further breaking down cores and other lithic materials into useable or almost useable tools. The fourth stage is the maintenance and final formation of formal, bifacial tools; we can see this archaeologically through thinning flakes and bifacial thinning flakes.

The categories used for the purposes of analyzing lithics for this project follow the categories from these four stages, but with some refinements articulated in later studies (e.g., Fortier 2013). The categories to sort chert used are block fracture, core/core fragment, primary decortification flake, secondary decortification flake, reduction flake, thinning flake, shatter flake, unifacial flake, bifacial flake, burin spall, polished flake, fire cracked chert, and bifacial fragment. The variety of chert and non-chert tools analyzed in the assemblage are projectile point/knife (PPK), biface fragment, scraper, utilized blade, utilized flake, drill, and gouge. Non-chert tools were classified as hammerstone, nutting stone, adze, mano, and abrader. Abraders with U-shaped slots are typically associated with bone and wood tools, whereas V-shaped slots are from the shaping and sharpening of lithic tools (see Figure 4.13 for an abrader from Carter Creek with U-shaped slots).

Figure 4.13: An Abrader with U-shaped slots from F24.

Evidence of the heat-treatment of chert was recorded and differs from that of burned/fire-cracked chert. Heat-treatment can be observed as a change in the overall color or luster of chert, reflective of purposeful manipulation of the stone's natural properties in order to enhance the ability to flint knap the stone or produce a wanted color change to the stone (e.g., Nolan 2013a:116; also see Figure

4.14)). Burned/Fire cracked chert was observed as burning or heating of chert as shown by smoky areas or patches of burning, that was unrelated to stone tool manufacture.

Chert/chipped stone at Carter Creek comes from both locally and regionally available sources. The La Moine River Valley has not been as systematically tested in raw material sourcing studies as have other regions in Illinois and Iowa (e.g., Koldehoff 1985, Morrow 1984, 1994; Odell 1984). However, it can be assumed based on other studies (starting from Esarey 1983) that most of the chert found at Carter Creek would have been locally or regionally available. There is a good deal of information on the availability and distribution of cherts in western Illinois (e.g., Ferguson and Warren 1992; Fishel 1992; Hansen and Nolan 1998), but this project does not focus on directly sourcing the cherts found at Carter Creek. Instead, the focus was on categorizing the chipped stone into general or specific (when applicable) chert types to obtain a general sense of the places people at the site were gathering chert. This includes Burlington/Keokuk (BK), Mill Creek, Fern Glen, high quality BK labeled as "Crescent Hills?", Cobden-Dongola, St. Genevieve, St. Louis, Quartzite, and Glacial. The chipped stone assemblage at Carter Creek, consisting of mostly locally available and/or Burlington/Keokuk cherts, generally falls into that expected at other Camp Creek phase sites (Fishel 2013d).

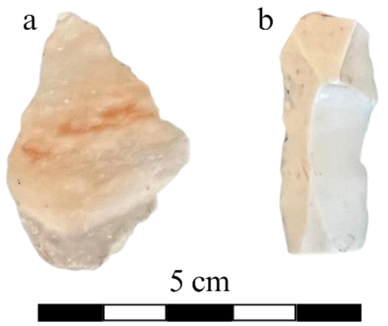

Figure 4.14: Two examples of heat-treated artifacts from Carter Creek both found in the back dirt of EB1. (a) A utilized flake made from "Crescent Hills?" chert; (b) a utilized blade made from BK chert. Note that "b" does not show a strong pink or red color but was identified as heat-treated due to it having luster.

Burlington/Keokuk cherts are identified as such for the purposes of this research because of the difficulty in differentiating between Keokuk formation and Burlington formation cherts macroscopically (similar to Nolan 2015). Esarey (1983) identifies all cherts from the central La

Moine River Valley outcrops as falling into the range of variability of the Keokuk formation. Burlington outcrops have not been found in this same part of the La Moine River Valley (Nolan 2013a:113).

Other noted lithic items include a stone pipe fragment and a possible groundstone pendant. I have been unable to identify the exact source of the rock used to make the pipe (Figure 4.15). The pendant or gorget fragment was found on the surface (PP4002) and is made from igneous rock. It appears to have been broken down the middle and may have been in the shape of an oval or ellipse when whole. No other defining features of this gorget fragment were identified during analysis.

Figure 4.15: A pipe lip fragment of unknown source from F28.

Botanical and Faunal

Botanical and faunal analysis require specialized knowledge and therefore could not be completed by me. White flotation samples were processed, this was done without the time or resources for further evaluation of botanical remains from the flots. Faunal analysis was not completed on faunal remains from my excavations due to time and resource constraints. This only included the faunal remains found during 2020 excavations. Holt (2005) and Schroeder (1985) previously completed faunal and botanical analyses of the materials from the 1984 excavations, which are considered as part of this research.

Features

Metrics were recorded for each feature including length, width, and depth along with other descriptive data that was kept in each excavator's field notes. The volume of pits was measured according to previously established methods (ITARP 1998) based on the pit's profile shape. All plan and profile maps were checked, approved, and finalized by me. The size and shape of the structure excavated in EB1 was determined based on the identification and testing of postmolds. All postmolds that were considered "real" (see Figure 4.16) were then mapped to see if the expected oval-shaped pattern emerged. Upon establishing this pattern, the shape and size of the structure was inferred. I measured the diameter of the structure from the midpoint of the northern, eastern, western, and southernmost postmolds to then calculate the estimated area/size of the structure. There was no structure basin or floor identified during excavations, so the exact size of the structure cannot be calculated.

All features were digitized into ArcGIS Pro for map production and spatial analyses. This digitization was based on the arbitrary grid established at Carter Creek and therefore can only offer relative comparisons to other households and sites. All profile maps were digitized for illustrative purposes using Adobe Illustrator. It should be noted that the locations of features in Excavation Block 2 (EB2) were difficult to perfectly align to 1984 plan maps. This was likely due to the remnants of features that were relocated during 2020 fieldwork being larger than the actual sizes of the pits due to the need to find the edges and bottom of pits during excavation. Because of this, some pit and feature locations for EB2 may be slightly off, but the general position of these features holds.

Radiocarbon dating was conducted on three samples from the 1984 excavations. The dates of these samples and the implications are discussed later in this dissertation and also in Fishel (2013d). Further radiocarbon samples are present from flotation samples but were not processed due to time and resource constraints. The dates of occupation at Carter Creek are well established based on both the previously tested radiocarbon samples and the typing of materials from the site.

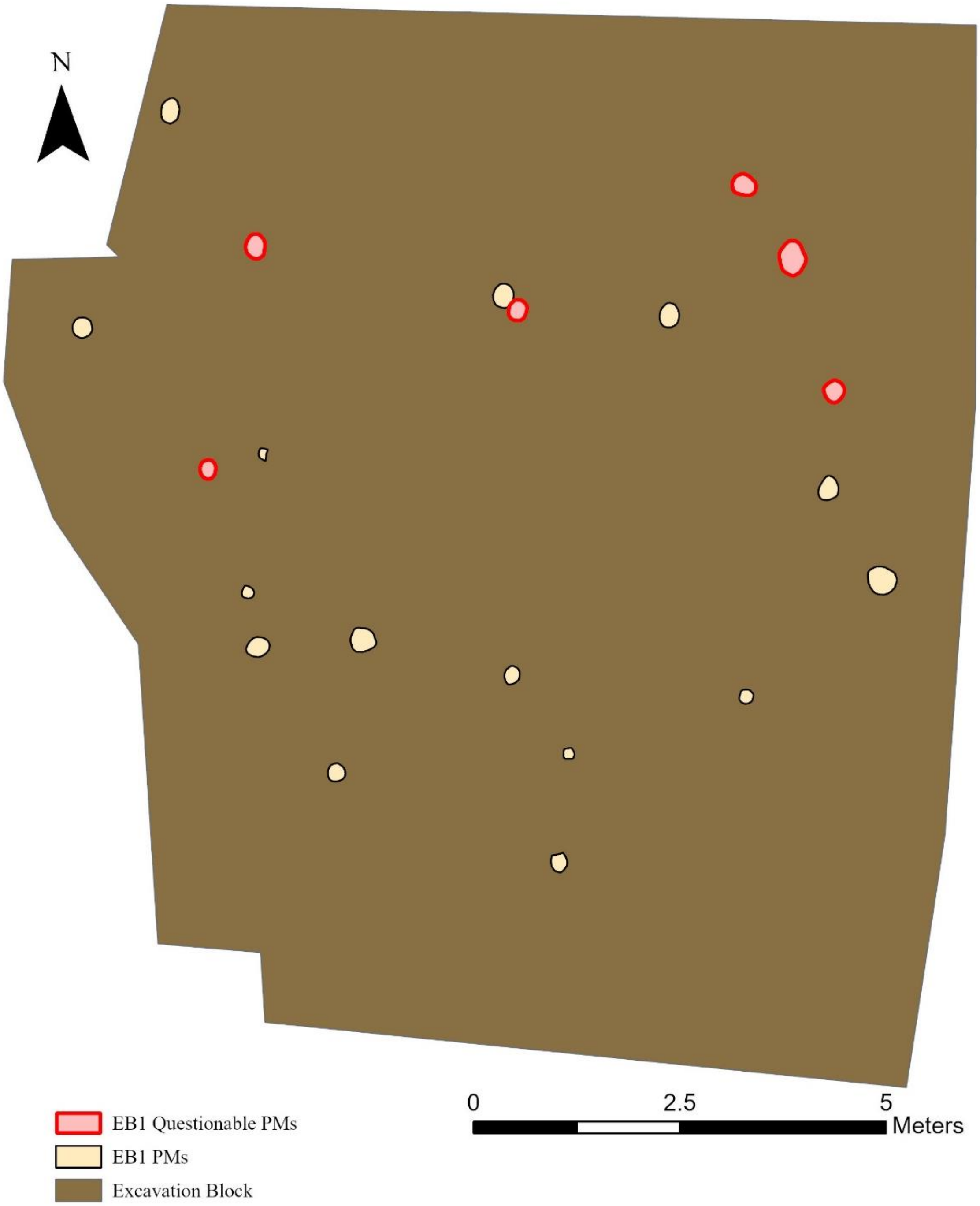

Figure 4.16: Map of postmolds (PMs) identified in Excavation Block 1 (EB1). The PMS that were considered questionable are highlighted.

Field and Lab Investigation in 2020, COVID-19 Protocols

The timing of my research starting at the beginning of the COVID-19 pandemic and continuing throughout required the development of protocols to ensure the safety of myself and all volunteers associated with this project. These protocols followed guidelines set out by the University of Illinois, Urbana-Champaign and were approved by the acting Anthropology Department Head, Dr. Brenda M. Farnell.

These protocols included the following measures: 1) no more than 5 people (including myself) were allowed to work at the excavation site at the same time, 2) all people who came to the excavation site drove in separate vehicles in order to maintain proper social distancing, 3) while working at the site, all people were required to keep at least 6 feet apart, although keeping farther apart was done whenever possible, 4) all equipment was consistently disinfected before, during, and after each day in the field, 5) I checked on everyone's health (including my own) before they come to work at the site and required that they stay home if they were not feeling well. All archaeologists who worked at the site were volunteers and were not coerced or paid to help with these investigations.

Comparative Sites: History of Investigations

A detailed analysis of methods and findings for all sites in Illinois can be found in their respective site/technical reports; details on the Gast Farm site can be found in a number of dissertations and articles (see Green (2022) for an up-to-date list of sources). In lieu of rewriting those details here, I provide a brief history of investigations at each site to establish contexts for comparisons in later chapters. Detailed information on applicable materials from each site will be provided in later chapters when relevant.

Buffalo Chip (11MG162)

The Buffalo Chip site (11MG162) is located approximately 15 km east of the Illinois River on an upland ridge adjacent to Sandy Creek; the site sits at the northeastern edge of lower Illinois River Valley region (Emerson and Nolan 2013). It is considered a Middle and early Late Woodland occupation consisting of one Middle Woodland household pit cluster and ten Late Woodland pit clusters that are assumed to be household units. The Middle Woodland habitation of the site is likely a seasonal homestead, while the Late Woodland habitation at the site appears to be a year-round occupation of a “dispersed community” (Fishel 2013e). The settlement pattern at this site is similar to that at the Sartorius and Sartorial Splendor sites to be discussed below (Fishel 2012f). Although Buffalo Chip sits within the expected geographic range of the White Hall Phase is the lower Illinois River Valley (e.g., Studenmund 2000), it shares similarities with other Weaver variant sites. The Late Woodland occupation at this site is much later than Carter Creek (approximately the 600s CE).

The Buffalo Chip site was first recorded in 1995, but it was not until 2002 that it was recommended for more extensive investigation due to highway construction. After this recommendation, both Phase II and Phase III investigations occurred, finding what we know about the site today. It is likely that some of the site eroded from the upland ridge upon which it sits (Emerson and Nolan 2013), but this does not affect the ability to compare it to Carter Creek due to the large amount of data collected at the site.

Although Buffalo Chip does not sit within the La Moine River Valley drainage and is occupied much more recently in time, it shares many similarities with Carter Creek that will allow for comparison. This includes its location deep in the uplands of the lower Illinois River

Valley, roughly similar to Carter Creek's location well in the uplands of west-central Illinois (although these two upland occupations represent different stages in Green's (1993) frontier model). The Buffalo Chip site also has distinct household clusters that will allow for a comparison with the postmold structures and associated pits at Carter Creek. It is these household clusters and their spatial organization that will be the main point of comparison in Chapter 6.

Gast Farm (13LA12)

The Gast Farm site (13LA12) is located in southeastern Iowa, approximately 18 km southwest of the city of Muscatine on an alluvial fan that sits at the base of a bluff line at the western edge of the Mississippi River Valley. The region in which Gast Farm sits was heavily occupied throughout the past as there have been hundreds of recorded habitation sites and mounds within only 20 km of the site (e.g., Green et al. 2021). Two unique occupations have been identified through various projects at Gast Farm: a Middle Woodland circular/semi-circular habitation towards the eastern portion of the site, with several mounds likely associated with this occupation; and an early Late Woodland occupation identified by a circular/semi-circular ring-midden, representing a village towards the western edge of the site (Green et al. n.d.). The Middle Woodland portion of the site is thought to represent periodic regional ceremonial gatherings and has been dated to 50 BCE-250 CE. The early Late Woodland occupation appears to represent an early circular village, dated to 350-450 CE, similar to that found at Carter Creek (Green 2018). This early Late Woodland occupation dates to, and exhibits material culture from, the Gast phase, which is considered part of the wider spread of Weaver variants (Benn and Green 2000).

The Gast Farm site was first identified in 1924 and has been heavily collected by local farmers and residents, including the destruction of mounds at the site in the 1950s and the subsequent collection of artifacts from the scattered mound fill (Green et al. n.d.). It was not until 1990 and 1991 that systematic investigations occurred in the form of a controlled surface collection. Excavations were carried out at the site from 1991-1994 on both occupations and numerous studies have assessed the various archaeological materials uncovered from these excavations (e.g., Dunne 2002; Johnson 2002; Neverett 2001). In more recent years, extensive geophysical survey has been conducted at the site, helping to better identify the spatial layout of both occupations, while also locating the leveled mounds and a possible geometric earthwork (Green 2018; Green et al. 2021; Wiewel and De Vore 2021).

Relative to other sites from this time period including Carter Creek, Gast Farm has been extensively studied. The large amount of data published from the site on its own allows for a proper comparison to Carter Creek. On top of this, Gast Farm is occupied at roughly the same time as Carter Creek and has a similar circular layout; no households have been identified at Gast Farm. Gast Farm differs from Carter Creek in that it sits immediately next to an extensive Middle Woodland occupation (this may have been common for the first circular villages during this period (Green et al. n.d.)). These similarities and differences allow for an interesting comparison between the two sites. These comparisons will be discussed further in Chapters 5, 6, and 7.

Rosewood

The Rosewood site (Jackson and Fortier 2014) is located in the uplands north of the city of Belleville in southwestern Illinois, St. Clair County and is the type site for the Rosewood

Phase. The Rosewood Phase is the initial early Late Woodland phase in the American Bottom region of Illinois. All of the features found during excavations at the site are part of a single early Late Woodland, occupation. The occupation represents a relatively extensive small village settlement that is more permanent than most other sites known from this region during this period. This includes 124 pit features, four post structures, one structural compound, a midden, and other posts or post-related features (Fortier 2014c:19). Based on the limits of the excavations, it is suggested that this site may have been laid out with two "sides" and a central shared area, although this formulation is based on the limited spatial data that is available. Some other Early Woodland and Archaic artifacts were found, but do not represent a significant portion of the site collection. Based on radiocarbon dates from the site, it appears that it was occupied between 400-550 CE, although it is not known if this represents multiple occupations or just a single larger one (Jackson et al. 2014:150).

The site was excavated in 1978 and 1979 as part of a salvage operation prior to the site being destroyed by the development of a housing subdivision after being located by a local resident. These salvage excavations were completed after the plowzone had already been removed so no extensive surface survey could be completed and some pits were likely destroyed or altered from the stripping of the plowzone. Some general analysis of the data from these excavations was completed, but it was not until the site collections were donated to ISAS in 2006 that a complete analysis was done. Unfortunately, the aforementioned housing division was completed, so the only data from the site comes from these salvage excavations and the remainder of the site has likely been destroyed.

Although the authors of the report on the Rosewood site do not define any "households" and caution against defining clear relationships between pit features and the structures they identify (this is due to the structures being identified during analysis and not in the field, Fortier 2014c), this site will still be useful for comparing the spatial layout of the household at Carter Creek to other roughly contemporaneous structures. The potential for a shared central portion of this site also allows for a larger comparison with the spatial layout at Carter Creek. As one of the first early Late Woodland villages in the American Bottom, and due to its location in the uplands, the Rosewood site offers an interesting point of comparison for Carter Creek to see how groups in different regions were first regrouping into new settlements during this period. This comparison will be discussed further in Chapters 5, 6, and 7.

Sartorius (11HA360) and Sartorial Splendor (11HA949)

The Sartorius (11HA360) and Sartorial Splendor (11HA949) sites sit immediately adjacent to one another (only 25 meters apart) and are discussed together in Fishel (2012a). Therefore, for the purposes of site background and comparison in this dissertation, they will be discussed together. Both sites are located in Hancock County, Illinois on a high upland ridge overlooking the LaMoine River Valley (Fishel 2012a). A combined total of 11 households were identified during excavations at these sites, which represent an occupation during the Crooked Creek phase in the LaMoine River Valley. It is assumed that the households at these sites were occupied contemporaneously over a period not longer than 10 years and represent a small habitation by dispersed households around 600 CE (Fishel 2012e).

Sartorius was initially discovered in the 1970s as part of a larger Phase I survey (Conrad 1981), but it was not until 2006-2007 that more extensive investigations were undertaken at the site. Sartorial Splendor was first discovered in 2006 with extensive, systematic, investigations taking place from 2006-2008. Portions of Sartorius were destroyed due to sand and gravel pit operations, so there may be some missing data there. Both sites are considered to have been completely excavated, so all available data has likely been gathered from both sites (Fishel 2012f).

Similar to Buffalo Chip, Sartorius and Sartorial Splendor will offer a good point of comparison to Carter Creek due to the presence of household pit clusters. At the same time, the occupation at these sites is much later then Carter Creek and falls within Stage II of Green's (1993) frontier model. Therefore, the main point of comparison between Carter Creek and these two sites will be on the spatial layout of the household and the activities taking place at it. A more detailed comparison of these sites will take place in Chapter 6.

White Bend (West Block) (11HA938)

The White Bend (West Block) site (11HA938), herein after referred to as just White Bend, is located in the east bank of the West Fork LaMoine River Valley (formerly known as Crooked Creek) in Hancock, County, Illinois. The LaMoine River Valley bluffs are located only 50 meters north of the sites. The site as a whole is multicomponent, including both Archaic and Woodland period occupations. There is a Woodland period midden at the site (located mainly in the West Block), but all Woodland occupations appear to have contributed to it. For the purposes of this brief background, I only discuss the Woodland occupations.

In total, four different Woodland components, representing five different occupations, were observed at the site, including late Middle Woodland, Weaver variant, Adams variant, and indeterminant late Late Woodland. These excavations were conducted in two blocks: an East Block and a West Block. Both blocks contain Weaver variant materials, but the East Block was occupied much later (dated to 660-850 CE) than the West Block (dated to 410-540 CE). Late

Middle Woodland occupation in the West Block dates to approximately 260-420 CE. The East Block Weaver occupation was likely a short-term or seasonal encampment. Therefore, only the West Block is being considered for comparison in this dissertation (Fishel 2013f).

The Middle Woodland occupation was likely year-round, but no clear household clusters could be identified. Interestingly, the ceramics from this occupation appear to be transitional between expected Middle Woodland and Weaver types. The West Block Weaver occupation was also likely year-round and there is some ceramic similarity between this and the Middle Woodland occupation, possibly indicating some kind of ancestral relationship between these two groups. The Weaver occupation has a semi-circular spatial organization around an open central plaza (Fishel 2013b). White Bend was first recorded in 2006, with more intensive investigations occurring shortly thereafter and completing within the same year. Information on the Archaic occupations at the site can be found in Fishel (2013g); information on the Woodland occupations of the site is found in Fishel (2013f).

The many similarities between White Bend and Carter Creek allow for comparison of these two sites at multiple levels. Both sites are located in the LaMoine River Valley, although Carter Creek is well into the uplands compared to the waterside location of White Bend. Both sites are occupied during the Camp Creek phase and share a general spatial layout with a circular or semi-circular occupation around an open central plaza. The late Middle Woodland occupation at White Bend will also be considered because it was occupied around the same time as Carter Creek and has somewhat transitional ceramics that may shine some light on changing ceramic decoration and construction during this period. The comparisons between these sites will be considered in Chapter 5, 6, and 7.

Conclusion

The methods described in this chapter are not just good for collecting general quantitative and qualitative data about a site and the materials excavated from it. These methods also provide archaeologists with a way to compare multiple levels of data. Detailed analysis allows for "following the material" (Weismantel and Meskell 2014), and therefore, an understanding of the dynamics of identity, community, household, and style during the early Late Woodland period. The sites compared in the upcoming chapters share many similarities when viewed from a macro-scale, but when I dive into the details from each site, a variety of styles and identities emerge. This emergence of style and identity comes from the stylistic choices made by individual potters, the lithic materials chosen for toolmaking, the depositional practices of these people, the ways in which they chose to organize and use their space, and the ways in which all of these factors related. Quotidian cultural practices during this period can be described and analyzed using the methods presented above. Description is not the end goal though. Instead, it is with these descriptions and an analysis of the relationships between the various data we collect that I, and other archaeologists, can interpret a broader understanding of the past.

CHAPTER 5: ARTIFACTS

This chapter examines the artifact data from Carter Creek, along with that from other comparable early Late Woodland sites in the region. Artifacts are themselves assemblages formed from the active relationships between people, places, and things. As assemblages, artifacts can reveal aspects of identity formation across multiple scales. At the same time, detailed analytical measurements of artifacts are instances from which archaeologists can begin to trace the numerous threads that form an assemblage. This chapter focuses on analytical details of artifacts, while the relationships between and within them will be discussed further in Chapter and 7.

Diagnostic artifacts, such as rims, will be discussed in detail in this chapter. Most of this data is examined at the site level and considered within the larger context of early Late Woodland regional traditions. Fully detailed ceramic and lithic data are presented in in Appendices A and B. All non-Carter Creek site data in this chapter is presented in chronological order, from the earliest inhabited site to the latest inhabited site (see Figure 5.1 for a map of all sites discussed in this chapter). This data is summarized, and a fuller discussion is presented of diagnostic artifacts are used for further comparisons in later chapters. Artifact collections from each site generally represent different kinds of domestic occupations. Yet, as will be discussed further in Chapter 7, by viewing these habitation sites from the lens of assemblage theory we can open up a deeper and more vibrant understanding of them.

Carter Creek (2020 and 1984 Excavations)

The ceramic and lithic (both chert and rough rock) artifact assemblages from 2020 excavations at Carter Creek include 10,241 artifacts weighing 186,162.82 grams (g) (Table 5.1).

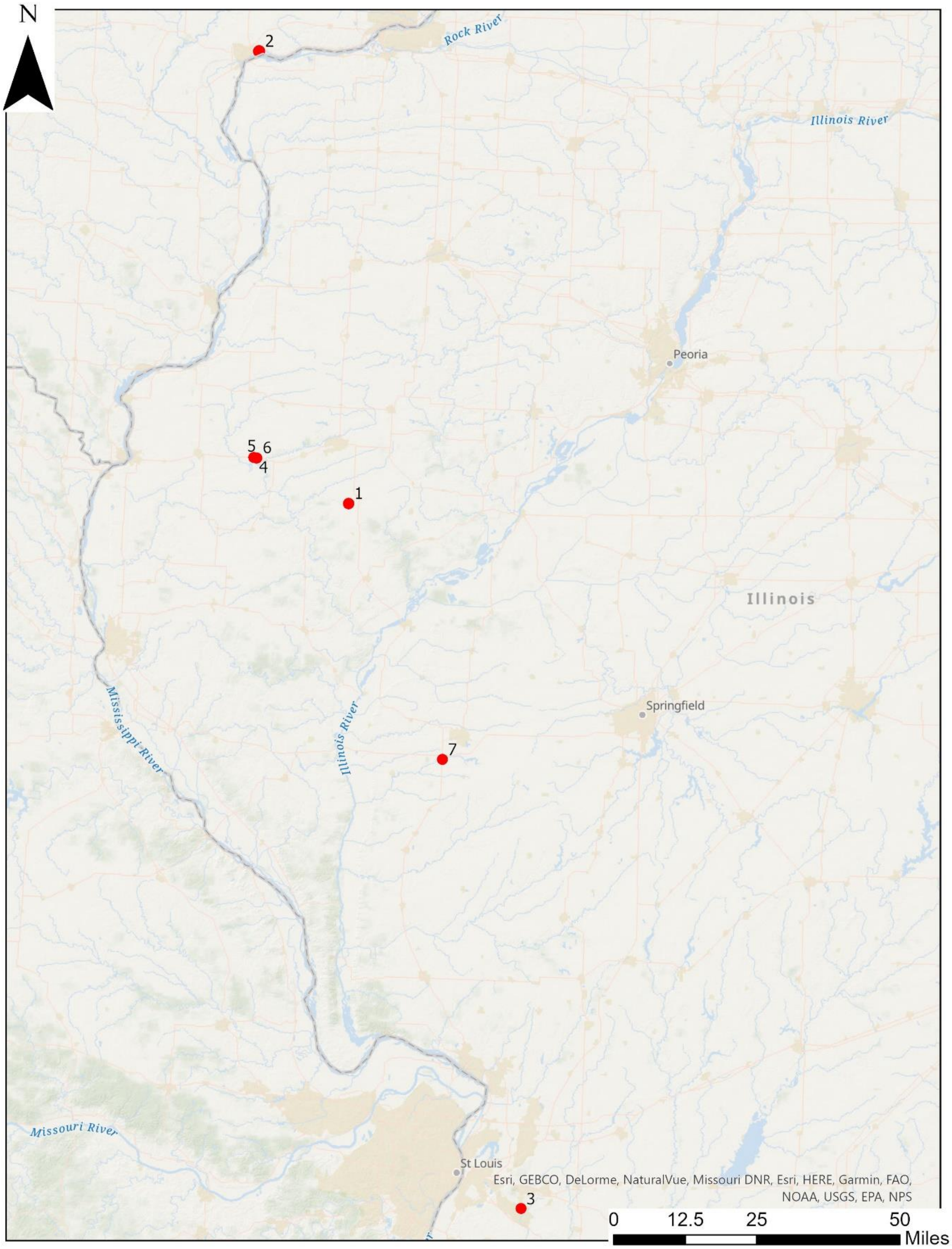

Figure 5.1: A map of all sites used for comparative purposes in this dissertation. 1) Carter creek, 2) Gast Farm, 3) Rosewood, 4) White Bend, 5) Sartorius, 6) Sartorial Splendor, 7) Buffalo Chip.

There was an additional total weight of 2,628.32 g of artifact debris, bringing the overall total weight of artifacts from 2020 excavations at Carter Creek to 188,791.14 g. Ceramics make up 59.68% of the total artifact assemblage by count; all lithic artifacts make up 91.79% of the total artifact assemblage by weight. Rough rock makes up a vast majority of the artifacts by weight, at 88.59%. A breakdown of the artifact assemblage by excavation block can be found on Table 5.2. A comparison of artifacts by excavation block (EB) is discussed further in Chapters 6 and 7.

Category	Count	Weight (g)	Count %	Weight %
Ceramic Body Sherds/Clay Objects	5,966	13,788.90	58.26%	7.30%
Ceramic Rims	146	1,354.08	1.43%	0.72%
Lithics (Chert)	788	5,957.78	7.69%	3.16%
Lithics (Rough Rock)	3,337	164,921.92	32.58%	87.36%
Other Artifacts	4	140.14	<0.01%	<0.01%
Debris	-	2,628.32	-	1.40%
Totals	10,241	188,791.14		

Table 5.1: Carter Creek Total Artifact Assemblage by category.

The analysis of artifacts from the 1984 excavations at Carter Creek, completed in 2010 (and published in Fishel 2013d:318-319), included 2,464 ceramic body sherds, 289 ceramic vessels, 45 lithic projectile points/knives, a few groundstone tools, and 1 lamellar blade. No weight totals are given but the data from this analysis, especially the ceramic vessel data, is discussed more below and considered when making larger interpretations in Chapter 7. Esarey et al. (1984) noted over 5,000 total sherds recovered during

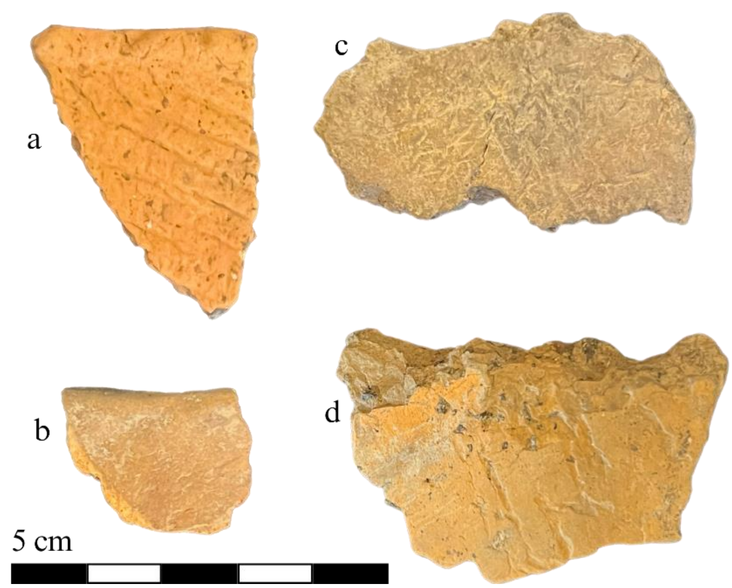

Figure 5.2: Fabric and Net impressed sherds from Carter Creek. (a) V27-3 with net-impressions; (b) V32-2 with fabric impressions; (c) a net impressed sherd from F55; (d) a net impressed basal sherd from F41.

1983-1984 surface collections at Carter Creek, including 228 rims. Analysis of the sherds seems to have been done, but there are only general statistics of the artifacts from Esarey et al.'s 1984 article that can be used for further discussion in this dissertation. The most unique artifacts in the entire site assemblage include both net-impressed and fabric-impressed ceramic body sherds (Figure 5.2), the lip of a stone pipe of unknown source, a chunk of Maynes Creek chert (Iowa; Morrow 1984, 1994) found at the surface, two potential ceramic effigies, and two groundstone pipe fragments provided by local farmer Mike Black.

Category	EB1	Count	Weight (g)	EB2	Count	Weight (g)
Ceramic Body Sherds/Clay Objects		4,958	9,496.35		1,010	4,340.65
Ceramic Rims		103	873.42		43	432.56
Lithics (Chert)		608	4,306.88		79	914.66
Lithics (Rough Rock)		2,992	138,268.99		345	29,241.94
Other Artifacts		2	40.49		0	0
Totals		10,241	188,791.14			

Table 5.2: Carter Creek Total Artifact Assemblage by Excavation Block (EB). This table excludes artifacts from Mike Black's collection that were used in the overall counts and weights in Table 5.1.

Ceramics

The ceramic assemblage at Carter Creek is typical for a Camp Creek Phase site in the LaMoine River Valley drainage. In total, there are 6,112 ceramic artifacts weighing 15,142.98 g (Table 5.3). By count, a majority of the total is made up of burned clay and sherd fragments (64.74%); by weight, a majority of the total is made up of grit-tempered, cordmarked, body sherds (53.89%). Much of the ceramic assemblage from the 2020 excavations was fragmentary, with many sherds (including rims) being small. The large amount of burned clay by count (34.36%) is likely due to the large amount of fire events that seemingly took place at the site (this will be discussed further in the "Lithics" section below and in the following chapter on excavated features).

Category	Temper	Count	Weight (g)	% Weight	% Count
Burned Clay	-	2,100	1,045.59	6.90%	34.36%
Sherdlettes	-	1,857	11,58.34	7.65%	30.38%
Potter's Clay	-	237	789.09	5.21%	3.88%
Daub	-	15	2.38	0.02%	0.25%
Coil	-	1	1.61	0.01%	0.02%
Plain	Grit	330	1,505.01	9.94%	5.40%
	Grit-Grog	5	67.11	0.44%	0.08%
Plain, Basal	Grit	8	139.63	0.92%	0.13%
Smoothed-over cordmarking	Grit	33	188.34	1.24%	0.54%
	Grit-Grog	5	40.65	0.27%	0.08%
Cordmarking (CM)	Grit	1,327	8,160.73	53.89%	21.71%
	Grit-Grog	28	457.24	3.02%	0.46%
	Grog	2	12.7	0.08%	0.03%
	Sand	8	18.37	0.12%	0.13%
CM, Basal	Grit	6	175.04	1.16%	0.10%
Net-Impressed	Grit	2	34.36	0.23%	0.03%
Fabric-Impressed	Grit	1	14.79	0.10%	0.02%
Brushed	Grit	2	17.83	0.12%	0.03%
Cord-wrapped stick	Grit	1	8.19	0.05%	0.02%
Rim Sherds	Misc.	144	1,305.98	8.62%	2.36%
Totals		6,112	15,142.98		

Table 5.3: Carter Creek Ceramic Assemblage Totals.

Burned Clay and Clay Objects

Burned clay and clay objects were broken into the categories of burned clay, daub, clay object and clay effigy. There was a total of 2,100 pieces of burned clay recovered during excavations, weighing 1,045.59 g, along with 15 pieces of daub weighing 2.38 g, 4 clay objects weighing 33.91 g, and 2 clay effigies weighing 13.51 g.

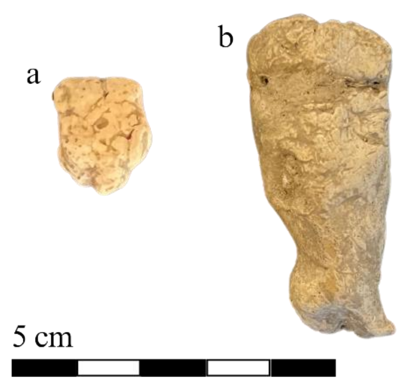

Figure 5.3: Clay effigy fragments from (a) F19 and (b) F62).

One clay effigy, which resembles a hand or foot was uncovered in Feature 19. The other effigy, resembling an appendage, was found in Feature 62 (Figure 5.3). Three clay object fragments, all likely from the same larger object based on paste color, were uncovered in Feature 48. One other clay object with some grit tempering, was revealed in the plow zone of excavation block 1 (EB1). It should be noted that burned clay is much more prevalent by weight in the ceramic assemblage of EB1 (8.97%) than in the ceramic assemblage of excavation block 2 (EB2) (2.42%), possibly indicating a difference in the use of the two structures identified at Carter Creek.

Body Sherds

In total, the ceramic body sherd assemblage consists of 1,758 body sherds weighing 10,839.99 g, along with 1,857 sherd fragments weighing 1,158.34 g (see Table 5.4). Sherd fragments, defined as body sherds that are undecorated and smaller than the size of a dine (see also, Chapter 4), were only counted and weighed, and the temper and surface treatment was not recorded. Of the body sherd assemblage, more than seventy-five percent by count (75.48%) and weight (75.28%) was made up of grit-tempered cordmarked sherds; smoothed-over cordmarked sherds with grit temper make up 1.74% of the assemblage by weight and 1.88% by count. The next highest total by both count and weight was grit-tempered plain-surfaced sherds (13.88% and 18.77% respectively). No other temper and surface treatment combination makes up more than two percent of the assemblage by count. Grit-grog-tempered cordmarked sherds make up 4.22% of the body sherd assemblage by weight, but this is mostly based on a few large sherds that skew the weight total (only 1.59% by count). Grit-tempered sherds dominate the assemblage, making up 94.5% of the assemblage by weight. Other temper types include grit-grog (5.21% by weight) and sand (0.17% by weight). Sand-tempered ceramics are much more common in the Lower Illinois Valley during this time period (e.g., Studenmund 2000), but are not exclusive to that region and are also found in the Mississippi Valley (e.g., Meinkoth 2000).

These overall totals roughly follow those from both Esarey et al. (1984) and Fishel (2013d) which found that 54% (from surface collections) and 61.8% (from 2010 analysis) of the body sherds examined were cordmarked or smoothed-over cordmarked. Cordmarking during the

Camp Creek and Crooked Creek Phases in the LaMoine Valley seems to lose popularity over time (Fishel 2013d:321), so the higher prevalence of this surface treatment at Carter Creek is not surprising. Esarey et al. (1984) note that all of the body sherds examined were grit-tempered, while Fishel (2013d:319, Table 12.3) found that 98% of the sherds examined were grit-tempered (with the remaining 2% being sand-tempered). With 94.5% of the body sherd assemblage by weight being grit-tempered from the 2020 excavations at Carter Creek, the site generally follows along with other LaMoine Valley Weaver sites that have mostly grit tempered ceramics, outside of a few exceptions (e.g., Fishel 2012f).

Surface Treatment	**Temper**	**Count**	**Weight (g)**	**% Weight**	**% Count**
Plain	Grit	330	1,505.01	13.88%	18.77%
	Grit-Grog	5	67.11	0.62%	0.28%
Plain, Basal	Grit	8	139.63	1.29%	0.46%
SCM	Grit	33	188.34	1.74%	1.88%
	Grit-Grog	5	40.65	0.38%	0.28%
CM	Grit	1,327	8,160.73	75.28%	75.48%
	Grit-Grog	28	457.24	4.22%	1.59%
	Grog	2	12.7	0.12%	0.11%
	Sand	8	18.37	0.17%	0.46%
CM, Basal	Grit	6	175.04	1.61%	0.34%
Net-Impressed	Grit	2	34.36	0.32%	0.11%
Fabric-Impressed	Grit	1	14.79	0.14%	0.06%
Brushed	Grit	2	17.83	0.16%	0.11%
CWS	Grit	1	8.19	0.08%	0.06%
Totals		1,758	10,839.99		

Table 5.4: Carter Creek Ceramic Body Sherd Assemblage Totals.

There are only eight total decorated body sherds, which mostly exhibit similar decorations to other vessels at Carter Creek from 1984 excavations, including nodes and fingernail impressions (e.g., Esarey et al. 1984). One decorated body sherd, found in Feature 65, exhibits two parallel rows of circular punctates (Figure 5.4) with cordmarking. This decoration is often associated with the Adams Variant of the Late Woodland period, which postdates the Weaver Variant in the LaMoine Valley (e.g., Green and Nolan 2000). However, circular punctates have been found at other LaMoine Valley Weaver sites, including Marlin Miller (Nolan 1991), Sartorius (Fishel 2012f), Bell's Terrace (Fishel 2013h), and the 1984 excavations at Carter Creek (Fishel 2013d). There have also been circular punctated sherds and vessels found at other Weaver Variant sites in the region including the Rench Site in the Central Illinois Valley (McConaughy 1993a:208), White Hall Phase sites in the Lower Illinois Valley (Studenmund 2000:317), and in eastern Iowa on Levsen Punctated ceramics (Benn 2012; Logan 1976). The circular punctated sherds found in Eastern Iowa are also found at some northern Illinois Weaver sites (e.g., Fishel 2015a:102). Interestingly, Fishel (2018:272) notes that circular punctated vessels at the Levsen Rockshelter, which dates to the Allamakee Phase, in northeastern Iowa have circular punctates over cordmarking. Because there is no other evidence to support a later occupation of Carter Creek, it seems likely that this decorated sherd comes from either an anomalous vessel or a trade vessel from the north during the Camp Creek Phase occupation at the site. Most likely, this sherd comes from connections with groups in northeastern Iowa based on the cordmarking under the punctates (Fishel 2018).

Figure 5.4: A Levsen style (Linn Ware) sherd from Carter Creek.

A few sherds have surface treatments that likely signify interaction with other regions or time periods in west-central Illinois. These include two net-impressed sherds with grit temper, one fabric-impressed sherd with grit temper, two brushed sherds with grit temper, and one single-cord impressed sherd with grit temper (Figure 5.5). Net-impressed sherds are associated with the South Branch Phase (300-600 CE) in the Mississippi Valley (Green and Nolan 2000:356-360) and were found at two other LaMoine Valley Weaver sites, Marlin Miller (Fishel 2015b) and Bell's Terrace (Fishel 2013h). These vessels represent interaction with this region in some way, although what kind of interaction is still up for question. Fabric-impressed sherds are associated with the La Crosse Phase (350-750 CE) in the Mississippi Valley and were found at both the Marlin Miller (Fishel 2015a:100-101) and White Bend (Fishel 2013c:99) sites in the LaMoine Valley. The single cord-impressed stick sherd, along with the circular punctated sherd discussed above, may represent connections to more northern Weaver groups (Fishel 2015a). Fishel (2018) argues that non-Weaver sherds at the Marseton #2 site, a Weaver ring midden village in the Mississippi Valley occupied later than Carter Creek, may come from female potters living at the site who immigrated from outside regions. Brushed sherds are likely representative of late Middle Woodland vessels (Fishel 2015a:100) and could be heirloom vessels or perhaps a carryover of ceramic production practices based on the early occupation of Carter Creek.

Figure 5.5: (a) V64-2, a single-cord impressed vessel; (b) V27-4, a vessel with brushing on the surface.

Rim Sherds and Vessels

In total, 144 rim and associated body sherds were examined, weighing 1,305.98 g. When possible, these sherds were refit or counted as one vessel when there were clear similarities of temper, paste color, decoration, lip treatment, and surface treatment. In total, these sherds were found to come from at least 98 different vessels, including 5 miniature vessels and 1 pinch pot (See Appendix A). There were 289 vessels, including 23 miniature vessels, analyzed in 2010 by the Illinois State Archaeological Survey (ISAS), which included sherds from the 1984 excavations and from 1983 surface surveys. In total, there have been portions of 387 ceramic vessels recovered from Carter Creek.

Of the 98 vessels identified from the 2020 excavations, 68 (69.39%) were determined to be jars, 6 (6.12%) were determined to likely be bowls, and 24 were indeterminate based on the fragmentary nature of many rim sherds. It is possible that fragmentary sherds showing an outcurved rim may be misidentified as bowls, so the six vessels labeled as bowls are done so with caution. In total, 34 vessels were able to be measured for orifice diameter and averaged 7.12% of the orifice at 20.18 centimeters (cm) diameter (this excludes vessels identified as miniature vessels or pinch pots). The remaining 60 vessels did not have at least 5% of the orifice, therefore the orifice diameter could not be measured with any certainty. Based on orifice diameter, following Weitzel and Green (1994), I classified all vessels with a diameter from 9.0-20.9 cm as medium-sized and 21.0+ cm as large-sized jars. In total, there are exactly 17 of each type of jar. Medium-sized jars may be cooking vessels, while large-sized jars may be storage vessels (McConaughy 1993a:219). Charring or food residue may indicate the use of a vessel, with medium-sized jars expected to show more evidence for cooking. In vessels from the 2020 excavations, 4 large jars and 7 medium jars had interior or exterior soot/burned material present.

A total of 57 vessels are cordmarked or smoothed-over cordmarked (58.16%), along with 25 plain vessels (25.51%). Other surface treatments include single cord-impressed (n=3), brushed (n=1), net-impressed (n=1), and fabric-impressed (n=1). Another 10 vessels had indeterminate surface treatment based on the fragmentary nature of many of the rim sherds. As is expected at a LaMoine Valley Weaver site, a majority of the cordmarked or smooth-over cordmarked vessels are vertically oriented (n=48). Of the vessels where the twist of the cord could be determined, 22 are S-twist and 5 are Z-twist. Following the body sherd assemblage, a majority of the vessels are grit-tempered (n=79, 80.61%), with the remainder of the vessels containing grit-grog (n=4), sand (n=8), or indeterminate (n=7) temper.

The vessel assemblage was mostly comprised of flat-shaped rims (n=60, 61.22%). Additional lip shapes included round (n=30), interior beveled (n=2), exterior beveled (n=2), flat/interior beveled (n=2), flat/exterior beveled (n=1), and indeterminate (n=1). The upper body shape of vessels from the 2020 excavations at Carter Creek were identified as 29.59% incurved, 18.37% vertical/straight, 12.24% inslanted, and 11.22% outcurved. The remainder of the vessel rims were too fragmentary to make a clear determination.

A slight majority of the vessels do not have any lip modification (n=50, 51.02%), while the remainder of the vessels almost exclusively have exterior tool impressions (n=47, 47.96%) with one vessel having impressions that were on an indeterminate surface due to the eroded nature of the rim sherd. Of these exterior tool modifications, 27 are stick/dowel impressions and another 10 are cord-wrapped stick impressions. Other exterior tool impressions include cordmarking, channeling, notching, and one vessel with oval impressions/dentates (Figure 5.6). The exterior tool impressions are most often oriented vertically (n=21) or left obliquely (n=10).

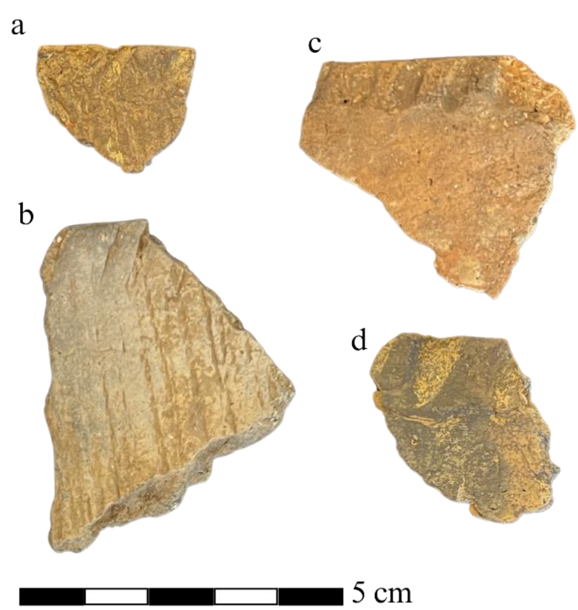

Figure 5.6: Selected vessels from Carter Creek showing lip impressions. (a) V900-2 with left oblique stick impressions; (b) V44-1 with left oblique dowel impressions; (c) V44-2 with left obliques stick notches; (d) VPM40-1 with right oblique dowel impressions.

In total, 21 vessels/body sherds exhibit decoration outside of exterior tool impressions. This includes 10 with nodes, along with 4 with incisions/notches, 3 with circular punctates, 2 with oval dentates/impressions, 1 with fingernail impressions, and 1 with stick impressions. Of those with nodes, four were able to be measured for distance from the lip, averaging 15.22 millimeters (mm) below the lip. One vessel (V33-1) has nodes located 28.17 mm from the lip. Two others are much closer to the lip at 8.22 (V49-3) and 9.28 (V64-2) mm, while the fourth falls right at the average, 15.23 mm from the lip (V14-2) (see Figure 5.7 for all noded vessels). The average wall thickness of the vessels is 6.44 mm, while the average lip thickness is 5.17 mm.

Figure 5.7: (a) V64-2 and (b) V33-1 showing examples of nodes on vessels from Carter Creek. V33-1 is a picture of the interior of the vessel.

While the assemblage from Carter Creek has always been thought to represent a single component Weaver occupation, not all vessels were able to be typed as definitively Weaver. In total, 60 vessels were determined to be Weaver, 13 were Weaver-like (labeled as “Weaver?” on tables), 6 were identified as Middle to Late Woodland transition vessels, and 10 were indeterminate based on the fragmentary nature of rim sherds. One Lima Lake (net-impressed) vessel and one Sny Bottom (fabric-impressed) vessel were also identified.

The Weaver-like vessels had expected Weaver ceramic traits, such as vertical cordmarking, but could not definitively be determined as Weaver due to the often-fragmentary nature of rim sherds. The Middle to Late Woodland transition vessels possessed traits from both Weaver and late Middle Woodland vessels.

The vessels analyzed by ISAS in 2010 (Fishel 2013d:319, Table 12.3) were 59% cordmarked or smoothed-over cordmarked and 35% plain. These vessels were 98% grit and 2% sand-tempered. A majority of these vessels had round rims (59%), along with an additional 40% having flat rims. A total of 53% of the vessels have tool impressions, with 51% of these vessels having exterior impressions and the remaining having interior. A variety of decorations were found on vessels from this analysis including finger impressions/punctates, hemiconical punctates, and round punctates; one vessel is also noted as having incised lines running vertically from the lip downward. Only 6% of the vessels analyzed had nodes (compared to 10.20% from the 2020 excavations, with an additional four decorated body sherds exhibiting nodes) and these nodes were an average of 25.98 mm from the lip. Sherds from this analysis averaged 6.31 mm thickness on the body of a vessel and 5.45 mm thickness at the lip of the vessels.

<u>Summary</u>

Overall, the ceramic assemblage at Carter Creek is indicative of a usual Camp Creek Phase site with mostly grit-tempered, cordmarked vessels with exterior tool impressions on the lip. The vessel wall thickness and distance of nodes from the lips of vessels follows the general trends of the early Late Woodland period in the LaMoine Valley. It should be noted however, while the average distance of nodes to the lip from 2010 analysis was farther than other LaMoine Valley sites, the vessels analyzed from 2020 excavations were closer to the 12-13 mm distance that most other LaMoine Valley sites fall within (Fishel 2013d:322). One vessel from 2020 excavations (V33-1) has nodes over 25 mm from the lip, while two others are less than 10 mm from the lip (V49-3 and V64-2). This indicates that there was not a clearly defined norm at Carter Creek for the spacing of nodes from the lips of vessels. This lack of a "normal" practice of ceramic production is also indicated by Middle to Late Woodland transition vessels. There are also some other small distinctions that make Carter Creek unique and interesting. Fishel (2013d:321) notes that bowls are thought to disappear from the Weaver ceramic assemblage, so the presence of possible bowls at Carter Creek may represent some carry over of ceramic production techniques from the preceding Middle Woodland period, which is also evidenced by one brushed vessel and other brushed sherds found at the site (possible bowls were also identified in the Marlin Miller #2 assemblage; Fishel 2015a). Circular punctated, single cord-impressed, net-impressed, and fabric-impressed vessels found during 2020 excavations show regional interactions that were occurring at Carter Creek, as discussed above. These wide-ranging geographic and temporal connections and relationships found in the ceramic assemblage at Carter Creek are just small windows into the wider ranging deterritorializations and reterritorializations that were occurring during this transitional period.

Lithics

The complete lithic assemblage at Carter Creek is typical of a Camp Creek Phase long-term occupation. This includes 788 chipped stone artifacts weighing 5,956.76 g, 3,337 rough rock artifacts weighing 164,921.92 g, three stone pipe fragments weighing 49.54 g, and 1 pendant/gorget fragment weighing 90.6 g (Table 5.5). The assemblage includes 49 chipped stone tools weighing 444.04 g and 19 rough rock tools (both cobble tools and ground stone tools) weighing 4,568.42 g (Table 5.6). There are an additional 85 chipped stone tools weighing 838.76

g which were analyzed with the 2020 excavation assemblage; these additional tools were collected by local farmer Mike Black. Similar to the ceramic assemblage from Carter Creek, the lithic assemblage opens a window into the myriad relationships, both temporal and geographic, that were taking place at Carter Creek.

Category	-	**Count**	**Weight (g)**	**%/Weight**
Block Fracture	Total	183	2,516.21	42.24%
	HT*	56	983.48	
Primary Decort	Total	35	212.94	3.57%
	HT	5	57.91	
Secondary Decort	Total	30	152.69	2.56%
	HT	9	61.94	
Core/Core Frag	Total	14	507.36	8.52%
	HT	3	50.76	
Reduction Flake	Total	40	114.23	1.92%
	HT	11	20.43	
Blade	Total	2	18.75	0.31%
	HT	1	1.09	
Thinning Flake	Total	75	29.4	0.49%
	HT	29	15.06	
Shatter Flake	Total	72	11.93	0.20%
	HT	20	2.5	
Unifacial Flake	Total	76	27.14	0.46%
	HT	24	11.29	
Bifacial Flake	Total	5	2.08	0.03%
	HT	3	1.84	
Burned Chert	Total	120	732.87	12.30%
Chert Cobble Frag	Total	1	341.76	5.74%
Chert Pebble Frag	HT	1	6.6	0.11%
PPK	Total	77	637.2	10.70%
	HT	36	299.36	
Biface Frag	Total	8	80.71	1.35%
	HT	4	12.41	
Scraper	Total	18	236.52	3.97%
	HT	4	30.88	
Utilized Blade	Total	7	53.58	0.90%
	HT	2	12.42	
Utilized Flake	Total	18	156.74	2.63%
	HT	6	37.62	
Drill	Total	3	29.01	0.49%
	HT	1	3.25	
Gouge	Total	3	89.04	1.49%
Pipe Frag	Total	3	49.54	0.83%
Bone Needle	Total	1	1.02	0.02%
Pendant/Gorget	Total	1	90.6	1.52%
Totals	Total	788	5,956.76	
	HT	215	1,608.84	

Table 5.5: Carter Creek Lithic Assemblage by Category. *HT=heat treated.

Chert/Chipped Stone

The chert/chipped stone assemblage from 2020 excavations at Carter Creek includes 788 artifacts representative of all five stages in chert tool production outlined by McElrath and Fortier (1983). There are 248 Stage 1 artifacts weighing 2,881.84 g, including block fractures, primary decortification, and secondary decortification. Stage 2 artifacts, consisting of cores and core fragments, total 14 artifacts weighing 507.36 g. Stage 3 artifacts total 42, weighing 132.98 g and include reduction flakes and blades. Stage 4 artifacts total 228, weighing 70.55 g and include thinning flakes, shatter flakes, unifacial flakes, and bifacial flakes. Finally, Stage 5 artifacts, meaning finished tools, total 49 artifacts weighing 444.04 g (Table 5.7). An additional 85 chipped stone tools weighing 838.76 g were given to me by local farmer Mike Black and are included in my analysis. Additionally, there were 120 pieces of burned chert counted, weighing 732.87 g and 2 chert cobble/pebble fragments weighing a combined 348.36 g (hereafter referred to as "miscellaneous chert"). Of the total chipped stone assemblage, excluding burned chert, 27.28% (n=215) was heat treated, weighing 1,608.84 g.

By percentage of the total weight of chipped stone, the stages of production were as follows: Stage 1- 48.38%, Stage 2- 8.52%, Stage 3- 2.23%, Stage 4- 1.18%, Stage 5- 21.54%, and miscellaneous chert- 18.15%. By percentage of the total count Stage 1 made up 31.47%, Stage 2 made up 1.78%, Stage 3 made up 5.33%, Stage 4 made up 28.93%, Stage 5 made up 17.01%, and miscellaneous chert made up 15.48%. These numbers suggest that all stages of production were happening at Carter Creek, but the overall lack of chipped stone (only 3.2% of the artifacts by weight) suggests tool production was not especially prevalent overall, at least not in this portion of the village.

Tool Type	Chert/Rock Type	Count	Weight (g)
PPK	BK	8	68.64
	Cobden	1	1.22
	BK, HT	8	40.63
Biface Frag	BK	2	10.46
	BK,HT	2	3.54
Scraper	BK	6	114.63
	BK, HT	1	2.57
Utilized Blade	BK	2	8.3
	BK, HT	2	12.42
Utilized Flake	BK	6	50.36
	Mill Creek	1	1.65
	CH?	1	14.42
	St. Gen	1	26.01
	BK, HT	6	37.62
Drill	BK	1	18.93
Gouge	Mill Creek	1	32.64
Pipe Frag	Unknown	1	1.01
Hammerstone	Rough Rock	9	2,453.64
Nutting Stone	Rouch Rock	1	398.33
Adze	Groundstone	2	569.13
Mano	Rough Rock	3	917.99
Abrader	Sandstone	3	190.05
Totals		68	5,012.46

Table 5.6: Carter Creek Lithic Tools by Type.

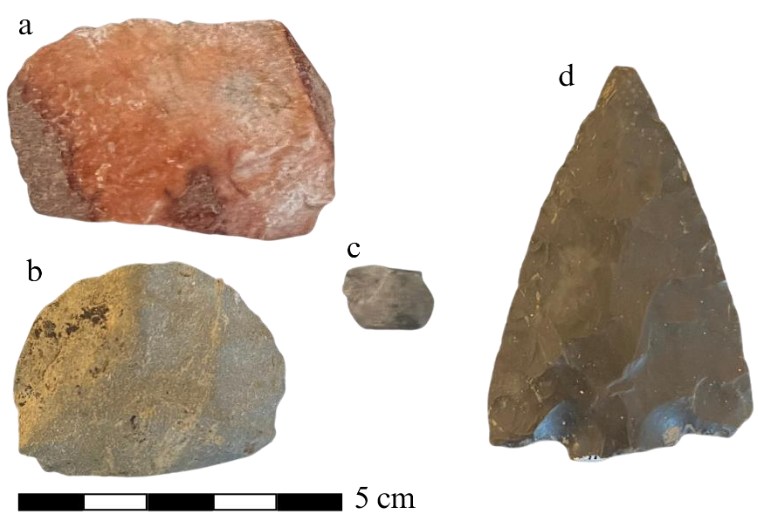

Figure 5.8: A selection of artifacts from Carter Creek made from nonlocal cherts. (a) A utilized flake made from St. Genevieve chert; (b) a gouge from made from Mill Creek chert; (c) a basal fragment of a PPK made from Cobden-Dongola chert; (d) a Snyders PPK from made from Cobden-Dongola chert.

As expected, relatively low-quality Burlington-Keokuk (BK) cherts make up a majority of the chipped stone assemblage by both count (80.46%) and weight (71.21%, see Table 5.8). When higher quality Burlington-like cherts are added in (labeled as “Crescent Hills?”), those totals reach 83.38% by count and 76.10% by weight. A variety of exotic and regionally available cherts were also found in small quantities during 2020 excavations or in the collection provided by Mike Black. These include Mill Creek, Fern Glen, Cobden, St.

Genevieve, Salem, and St. Louis cherts, which in total make up 14% of the chipped stone assemblage by weight (see Figure 5.8 for a selection of non-local chert tools from Carter Creek).

Stage of Production	**Count**	**Weight (g)**	**Count%**	**Weight%**
Stage 1	248	2,881.84	31.47%	48.38%
Stage 2	14	507.36	1.78%	8.52%
Stage 3	42	132.98	5.33%	2.23%
Stage 4	228	70.55	28.93%	1.18%
*Stage 5**	134	1,282.8	17.01%	21.54%
Miscellaneous+	122	1,081.23	15.48%	18.15%
Other Lithics	5	141.16	0.63%	2.37%
Totals	788		5,956.76	

Table 5.7: Carter Creek Lithic Assemblage by Stage (McElrath and Fortier 1983). *Stage 5 includes tools from both 2020 excavations and Mike Black's collection. +Miscellaneous includes burned chert and chert cobbles.

Chert Type	**Count**	**Count%**	**Weight (g)**	**Weight%**
BK	634	80.46%	4,241.57	71.21%
Mill Creek	46	5.84%	254.19	4.27%
Fern Glen	39	4.95%	260.76	4.38%
Cobden	8	1.02%	42.6	0.72%
Crescent Hills?	23	2.92%	291.66	4.90%
St. Genevieve	7	0.89%	209.05	3.51%
Salem	6	0.76%	23.34	0.39%
St. Louis	1	0.13%	44.21	0.74%
Quartzite	11	1.40%	199.21	3.34%
Glacial	13	1.65%	390.17	6.55%
Totals	788		5,956.76	

Table 5.8: Carter Creek Lithic Assemblage by Chert Type.

Following classifications at other LaMoine Valley Weaver sites (e.g., Nolan 2013a), cherts identified during analysis can be considered local if the chert was likely found within 15 kilometers (km) of Carter Creek. If the chert is found 15-30 km from the site, it is considered regional, and if the chert is found more than 30 km from the site, it is considered exotic. All chert labeled as BK is considered local, as Esarey (1983) noted that chert outcrops in the LaMoine Valley fall within the expected range of variability for Keokuk formation stone. These cherts are generally of lower to medium-quality, coarse, and of a white to grayish color with some inclusions. Eleven pieces of chert were identified as quartzite and 13 pieces of chert were labeled as glacial due to their indeterminate characteristics. Both of these categories are thought to come from local contexts. All other cherts are considered either regional or exotic. The Warsaw chert identified by Esarey et al. (1984) and Fishel (2013d) is likely to be regional, coming from either southeastern Iowa or western Illinois (Frankie and Jacobson 1998; Morrow 1984, 1994). The same is true of high-quality Burlington cherts, as they would likely be found regionally, although some could come from more than 30 km away or even from locally available glacial cobbles (e.g., Hansen and Nolan 1998). In this case, all chert labeled as "Crescent Hills?", is considered to be regionally available, but this cannot be definitively determined macroscopically. Only 23 pieces of chert were labeled in this way.

All other cherts are considered exotic, including Cobden-Dongola, Mill Creek, Fern Glen, St. Genevieve, Salem, and St. Louis cherts identified from 2020 excavations, and Wyandotte cherts identified by Esarey et al. (1984). It has been noted that Cobden-Dongola and Wyandotte cherts can be hard to distinguish (e.g., Bassett and Powell 1984). Cobden-Dongola cherts come from southern and western Illinois (Esarey 1983) in Union County, while Wyandotte cherts come from southern Indiana (e.g., Guernsey 1937) and both have a gray to gray-green color and are high-quality. St. Genevieve chert is from outcrops in Monroe and Randolph County in Illinois, in the American Bottom region, and was identified in this assemblage by its light brown to reddish color and high quality (Koldehoff 1985). Mill Creek chert comes from Union and Alexander counties in southern Illinois and was identified by its brown to gray color and overall grainy texture (Koldehoff 1985). Fern Glen chert is found in Monroe County, Illinois, near the American Bottom region, and in adjacent counties across the Mississippi River in Missouri. It was identified by its greenish color (Koldehoff 1985). Salem chert was identified by its gray to brown color and grainy texture, and comes from Monroe County, Illinois as well (Koldehoff 1990). St. Louis chert comes from areas near present day St. Louis and was identified on one utilized blade based on its gray color and texture (Koldehoff

1985). Of all exotic cherts identified, only Mill Creek (n=46) and Fern Glen (n=39) make up double-digit counts.

Chipped stone tools from 2020 excavations total 49 artifacts weighing 444.04 g. A wide variety of such tools were identified, including Projectile points/knives (PPK, n=17), biface fragments (n=4), scrapers (n=7), utilized blades (n=4), utilized flakes (n=15), 1 drill, and 1 gouge. All but five of these tools were made from BK chert, along with one additional tool made of high-quality Burlington chert (Table 5.9). Twelve of these tools were heat treated, including 6 of the 12 utilized flakes. Only BK cherts were heat treated among the tool assemblage. Many of the PPK were fragmentary or broken, so only 6 of the 17 were able to be definitively typed (Table 5.10). Of those that were assigned a type, 4 are Steuben, 1 is Snyders, and 1 is Contracting Stem; the remaining 11 were considered indeterminate.

Chert Type	Count	Count%	Weight	Weight%
BK	44	89.80%	368.1	82.90%
Mill Creek	2	4.08%	34.29	7.72%
Cobden	1	2.04%	1.22	0.27%
Crescent Hills?	1	2.04%	14.42	3.25%
St. Genevieve	1	2.04%	26.01	5.86%
Totals	49		444.04	

Table 5.9: Carter Creek, 2020 Excavations, Lithic Tool Assemblage by Chert Type.

PPK Type	2020 Excavations	Mike Black's Collection
Steuben	4	16
Snyders	1	11
Ansell-Mund	0	4
Indeterminate	11	23
Contracting Stem	1	3
LW Type Ind	0	1
MW-LW Trans	0	1
Stemless Ind	0	1
Woodland Type Indeterminate	0	2
Totals	17	62

Table 5.10: Carter Creek PPK Assemblage by Type.

The collection of lithic tools from Mike Black totaled 85 artifacts weighing 838.76 g. This collection was dominated by PPK (n=60) but also included biface fragments, scrapers, utilized blades, utilized flakes, drills, and gouges (Table 5.11). Although there were more exotic cherts identified in this collection, including Mill Creek, Fern Glen, Cobden, St. Genevieve, and St. Louis cherts, a majority of the tools were made from low quality BK chert (n=67). The PPK from this collection, while still somewhat fragmentary/broken were better able to be typed and included mostly Steuben (n=16) and Snyders (n=11) points, along with Ansell-Mund, Contracting Stem, and an indeterminate Middle to Late Woodland transition point. There was a total of 24 indeterminate points, with 1 being stemless. Further, two Late Woodland type arrowpoints were identified in this collection, likely representative of later people passing through the site or misidentification of the place at which these points were found. When considering all PPK from both 2020 excavations and Mike Black's collection, only 12 were made from non-low-quality BK chert, with 1 of the 12 non-BK points being one of the arrowpoints, made from St. Genevieve chert. The remaining 11 non-BK points were typed as Steuben (n=3), Snyders (n=4), and indeterminate (n=5). Some PPK, and other tools from both 2020 excavations and Mike Black's collection, were repurposed or used for multiple activities, including seven non-PPK tools and eight repurposed PPK (Figure 5.9). Most tools identified as having multiple uses or being repurposed came from Mike Black's collection (n=11).

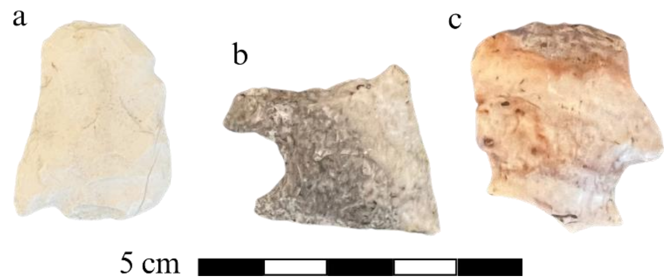

Figure 5.9: A selection of repurposed Snyders PPK from Carter Creek. Both a and b show reuse as cutting tools, while c shows reuse as a scraper. (a) MB78, (b) F27, (c) MB81.

The chert types and tools identified from 2020 excavations are similar to those identified by Esarey et al. (1984) and Fishel (2013d). Esarey et al. (1984:135-139) notes 64 total points from surface collections, with 70% being Steuben, 11% Contracting Stem, 16% Manker-Snyders, and 3% Ansell-Mund. He points out that most of the points are made from BK chert, but there are some Manker-Snyders points made from Cobden-Dongola and high-quality Burlington cherts; there were also six Steuben points made from Cobden-Dongola chert. ISAS's 2010 reexamination of the Carter Creek collection notes the same types of points and cherts, along with seven Wyandotte and one Warsaw chert point identified. Other chipped stone tools noted by Esarey et al. (1984) and Fishel (2013d) include a perforator, scrapers, utilized flakes, and bifaces/point tips. Esarey et al. (1984:135) also noted two lamellar blade flakes identified at Carter Creek, made from non-local chert, while Fishel (2013d:318) only found one of the lamellar blade flakes upon reexamination of the collection. Lamellar blades come from a particular Middle Woodland lithic technology and are sometimes associated with ceremonial practices (e.g., Struever 1968b).

Tool Type	**Chert Type**	**Count**	**Weight**
PPK	BK	27	225.29
	Fern Glen	2	12.85
	Cobden	1	18.85
	CH?	1	7.91
	St. Gen	1	3.08
	BK, HT*	22	211.06
	Mill Creek, HT	1	13.37
	Fern Glen, HT	3	14.49
	CH?, HT	2	19.81
Biface Frag	BK	2	57.84
	BK, HT	2	8.87
Scraper	BK	5	46.8
	Cobden	2	20.46
	CH?	1	23.75
	BK, HT	3	28.31
Utilized Blade	BK	1	6.21
	Fern Glen	1	3.31
	St. Louis	1	23.34
Utilized Flake	BK	2	18.66
	Mill Creek	1	8.02
Drill	BK	1	6.83
	BK, HT	1	3.25
Gouge	BK	1	37.24
	Fern Glen	1	19.16
Pipe Base	Groundstone	1	31.4
Pipe Base, polished	Groundstone	1	17.13
Pendant/Gorget	Groundstone	1	90.6
Bone Needle	Bone	1	1.02
Totals		85	838.76

Table 5.11: Carter Creek Tools from Mike Black's Collection by Type. *HT=heat treated.

Rough Rock and Groundstone

The rough rock and groundstone assemblage from 2020 excavations at Carter Creek includes 3,337 artifacts weighing 164,921.92 g. Artifacts in this broad grouping included unaltered igneous, unaltered sandstone, unaltered limestone, burned limestone, fire-cracked rock (FCR), unaltered quartzite, igneous cobble, igneous pebble, unaltered chert cobble, and a variety of tools, which will be discussed more below. FCR was identified as igneous stone that showed clear breakage or signs of burning due to direct contact with fire or heat. Of the total rough rock assemblage, a vast majority is either burned limestone or FCR by both count and weight (Table 5.12). Burned limestone makes up 23.16% of the rough rock assemblage by weight and 30.63% of the assemblage by count; FCR makes up 60.15% by weight and 57.54% by count.

Rough Rock Category	Count	Count%	Weight (g)	Weight% (excluding Debris)
Debris	-	-	2,628.32	-
Igneous	13	0.39%	235.71	0.14%
Sandstone	113	3.39%	1,788.16	1.08%
Limestone	229	6.86%	17,373.83	10.53%
Burned Limestone	1,022	30.63%	38,189.41	23.16%
Fire-cracked Rock (FCR)	1,920	57.54%	99,196.88	60.15%
Quartzite	2	0.06%	111.81	0.07%
Igneous Cobble	10	0.30%	2,873.76	1.74%
Chert Cobble	3	0.09%	533.68	0.32%
Igneous pebble	6	0.18%	50.23	0.03%
Hammerstone	9	0.27%	2,453.64	1.49%
Nutting Stone	1	0.03%	398.33	0.24%
Celt	2	0.06%	569.13	0.35%
Mano	3	0.09%	917.99	0.56%
Abrader	3	0.09%	190.05	0.12%
Groundstone Object	1	0.03%	39.48	0.02%
Totals	3,337		167,550.41	

Table 5.12: Carter Creek Rough Rock Assemblage Totals.

The only other category to make up more than five percent by either count or weight is unaltered limestone, which makes up 10.53% by weight and 6.86% by count. Although exact counts and weights are unknown, Esarey et al. (1984:133) note that initial surface collections at Carter Creek were so great (63 full boxes from just the north half of the site) that rough rock was not collected from the south half of the site to save time and space. Further discussions with archaeologists who work in the area suggest that a large number of boxes from initial investigations at Carter Creek were filled with rough rock (Dave Nolan, personal communication 2019), so it seems likely that much of the site would have similar amounts of rough rock to the 2020 assemblage.

Of the total rough rock assemblage, 19 tools/objects were identified weighing 4,568.42 g. Tools identified include hammerstones (n=9), pitted stones (n=1), manos (n=3), celts (n=2), abraders (n=3), and one half-circle groundstone object (see Table 5.6). One hammerstone, found in Feature 24 in EB1, also exhibited pitting on one surface. Of the 19 total tools/objects, a majority (n=15) come from feature contexts; the remainder were found either on the surface or in back dirt; no rough rock tools come from Mike Black's collection. Of the abraders identified in the assemblage, all three have U-shaped slots, with one also having a V-shaped slot. Abraders with U-shaped slots are typically associated with bone and wood tools, whereas V-shaped slots are from the shaping and sharpening of lithic tools. The single groundstone object was found on the surface at Carter Creek and may be a broken gorget (Figure 5.10). Esarey et al. (1984) and Fishel (2013d) identified similar tools to those found during 2020 excavations. Esarey et al. (1984) noted a small celt, small pebble axe, and many sandstone abraders, while Fishel (2013d) reported some abraders in the collection ISAS analyzed. In general, the tools identified in the rough rock assemblage are typical of a Weaver site in the LaMoine Valley.

Figure 5.10: PP4002, a groundstone object, possibly a gorget fragment, found on the surface at Carter Creek.

Other Lithic (and Non-Lithic) Artifacts

Outside of the standard chipped stone and rough rock artifacts discussed above, other lithic items were identified during analysis of the Carter Creek assemblage. These artifacts include pipe fragments and a broken pendant or gorget (Table 5.13). Only one of these items, a lip fragment of a groundstone pipe, was found in a feature context (Feature 22 of 2020 excavations), while the other items were from Mike Black's collection or found on the surface of the site. The lip fragment from Feature 22 is made from an unknown source of black, soapstone-like, stone with white speckles and only weighs 1.01 g. The other items, two pipe fragments and a broken pendant or gorget, were all made from ground limestone (Figure 5.11). The pipe fragments are both from the base of platform pipes, with one fragment (labeled MB Pipe 1) exhibiting a hole drilled through the base for smoking. It is unknown if these two fragments may have come from the same pipe. Additionally, although not lithic, there was one bone awl identified in Mike Black's collection.

Figure 5.11: (a) A pipe fragment from Mike Black's collection with a hold drilled through it; (b) a pipe base fragment from Mike Black's collection; (c) a gorget or pendant fragment from Mike Black's collection.

Esarey et al. (1984) identified other lithic and non-lithic tools/items from initial investigations at Carter Creek. These include a limestone platform pipe base, and unfinished gorget, the corner of a finished gorget, a bone awl, two deer toe tinklers, a bone bracelet fragment, a scraped turtle carapace fragment, and a socketed antler handle. Of note is the small and fragmentary nature of most bone found during 2020 excavations, where no bone tools or items were identified during cleaning and sorting processes of non-flotation artifacts.

Artifact	Count	Weight (g)
Groundstone Object	1	39.48
Pipe Lip Fragment (2020 Excavations)	1	1.01
Pipe Fragments (Mike Black's Collection)	2	48.53
Pendant/Gorget (Mike Black's Collection)	1	90.60
Bone Needle Tip (Mike Black's Collection)	1	1.02
Totals	6	180.64

Table 5.13: Non-Ceramic, Non-Lithic Tool Artifacts from Carter Creek.

Summary

The lithic assemblage at Carter Creek is not unusual for a LaMoine Valley Weaver site. In terms of the production of tools at the site, Stage 1 represents the highest count and weight by percentage, indicating that large chunks of unaltered chert were being brought to the site and broken down into tools. The high prevalence of Stage 4 flakes by count (28.93%) shows that a good amount of shaping and resharpening of tools was taking place. This information, combined with the number of broken PPK that were repurposed, and other tools used for multiple purposes, along with the lack of cores found, suggests that cherts were used to their fullest extent whenever possible. This may even be expected for a site in such a remote location, as chert resources, especially higher quality stone, may have not been available in close proximity (e.g., Esarey 1983). The chipped stone assemblage being dominated by BK chert is also not unusual, as this is the expectation for all Weaver sites in the LaMoine Valley and the surrounding region generally. Further, the general tool assemblage, both chipped stone and rough rock, follows what should be expected at a long-term occupation site with a variety of activities taking place. When you look at the lithic collection a little more closely, a few things highlight the wide-ranging relationships, both geographic and temporal, occurring at Carter Creek that would have contributed to the dynamic assemblages being formed and reformed during the early Late Woodland period.

At a broader perspective, the most obvious widespread geographic connections at Carter Creek come from the regionally available and exotic cherts found in the site assemblage. Cherts were coming to Carter Creek from areas both south and west of the LaMoine Valley, suggesting some forms of contact between people living in these different regions. The relatively large amount of burned chert, large quantities of burned limestone and FCR, and the number of features exhibiting burned or ashy fills (n=42), indicate that the structure excavated during 2020 likely had lots of direct burning taking place within it or large amounts of burned refuse deposited within it. This shows a clear connection to activities like cooking that present spaces for assemblages, and the relationships that form them, to coalesce. Pipes and other items, such as gorgets, suggest some amount of ceremonialism, possibly carried over from the previous period. The same can be said for lamellar blades, which were found in many ceremonial contexts during the Middle Woodland period (e.g., Struever 1968b). Other insights from the lithic assemblage, such as the focus on expedient tool production, show other connections that will be explored further in the following chapters. As with the ceramic assemblage, these connections are just some of the many nodes that formed assemblages during this period, coming together in different places, at different times, during particular activities and events.

Faunal and Botanical Remains

Faunal and botanical remains from 2020 excavations were not examined for this dissertation due to a lack of resources and expertise to do so. However, the faunal and botanical assemblages from 1984 excavations have been analyzed by Schroeder (1985) and Holt (2005). I was unable to find a copy of Schroeder (1985), but Holt (2005) summarizes the findings from that 1985 report, noting that it did not show any unexpected botanical remains. Further, Schroeder (1985) highlighted that the botanical assemblage was dominated by local cultigens as is expected at Weaver sites. Holt's (2005) faunal analysis also showed that Carter Creek falls within the usual Early Late Woodland pattern of localized subsistence practices (e.g., Styles 1981), but the assemblage does show a lower proportion of fish when compared to other Weaver and White Hall sites (Holt 2005:52; see Figure 9). This could be partially explained by recovery methods used at the site or by its location far into the uplands, away from the major river valleys that were heavily fished in the Middle Woodland period. Overall, the analysis of botanical and faunal remains from 1984 excavations shows a localized subsistence base that does not show wide-ranging connections like the ceramic and lithic assemblages from the site. However, the 1984 excavation remains provide evidence of choices made by people inhabiting Carter Creek in creating, maintaining, and emphasizing certain "local" relationships that are just as affective a part of an assemblage as a chert from an exotic source or a ceramic vessel from the Mississippi Valley.

Gast Farm

Ceramics have been the most extensively analyzed assemblage from the Gast Farm site, producing numerous articles, theses, and papers (e.g., Weitzel 1992; Weitzel and Green 1994). At the same time, to my knowledge, there are no published analyses of the lithic assemblage from the Weaver occupation at Gast Farm. A PhD Dissertation has been completed on both the faunal (Neverett 2001) and botanical (Dunne 2002) remains from excavations at Gast Farm, providing an extensive look into the dietary patterns and resource exploitation of individuals living at the site. At the same time, the lack of faunal and botanical analysis on 2020 excavations at Carter Creek does not allow for a detailed comparison between the two site's faunal and botanical assemblages. Because of these limitations in data, and the focus on style in this dissertation, especially through ceramic production and decoration, the main point of comparison between Gast Farm and Carter Creek will be ceramics.

Ceramics

Ceramic assemblage data from Gast Farm has been presented in both Weitzel (1992) and Weitzel and Green (1994), with Fishel (2013d:319, Table 12.3) reproducing this data on a table comparing various early Late Woodland sites. In total, 215 vessels from Gast Farm were analyzed, with 170 of these vessels being identified as Weaver; the remaining 45 were identified as Early Woodland Liverpool vessels. There were also two miniature vessels and one clay pipe bowl fragment (with grit and sand temper) in the ceramic assemblage that were not considered in the larger analysis.

Weitzel and Green (1994) observe that 38% of the vessels are considered jars, 14% are considered cups, and the remaining are indeterminate. Importantly, and I follow this designation above, vessels with an orifice diameter of 5.0-8.9 cm are considered cups (n=4), 9.0-20.9 cm are considered medium-sized jars (n=45), and 21.0-29.0 cm (n=13) are considered large-sized jars. Of these vessels, 88% are plain, while 11% are cordmarked or smoothed-over cordmarked on the exterior. These cordmarks are typically vertically oriented. In total, 68% of the vessels contain grit temper, 16% have grit and sand temper, and the remaining 15% have only sand temper. A majority of the vessels from Gast Farm have flat rims (65%), with an additional 33% having rounded rims. The upper body shape of vessels at Gast Farm (called “rim form” by Weitzel and Green 1994:132, Table 3) varies. A total of 32.4% of the vessels are vertical, 31.2% are inslanted, 14.7% are incurved, and 11.2% are outcurved. The remaining 10.6% of vessels have an indeterminate upper body shape. The average thickness of lips, rims, or the maximum thickness on these vessels is not noted.

When examining decoration on these vessels, Weitzel and Green (1994:134, Table 5) found that 48% had some form of exterior tool impression, with another 20% having interior tool impressions (this number differs from that of Fishel 2013d:319, Table 12.3, but is taken directly from Weitzel and Green 1994:134, Table 5). These exterior impressions come from various tools, including notches, cord-wrapped sticks (11%), stamping, incisions, punctates, and fingernail impressions. Weitzel and Green (1994) also notes that 12 total vessels have nodes (7.05%), but these vessels are not mentioned on Fishel's (2013d:319, Table 12.3) table; there is no noted distance of the nodes distance below the rim. The exterior tools impressions are mostly oriented in a right oblique manner (n=35), with some vessels having vertical (n=16) or left oblique (n=7) orientations. Interestingly, and this will be discussed further in Chapter 7, Weitzel (1992:67) argues that the ceramic production practices from Carter Creek and Gast Farm represent a "micro-style" with long-distance interaction between the sites due to the similar amounts and kinds of decorations on ceramic vessels at each site.

Lithics

Benn and Green (2000:438-439) observe that the most prevalent lithic artifacts from Gast Phase (250-650 CE) sites, which includes Gast Farm as the type site, are Steuben expanding-stem points and retouched flakes. They also note that some flake blades, drills, and unhafted bifaces have been identified. As with LaMoine Valley Weaver sites, expedient tools production is extensive. Further, Gast Phase sites have mostly local Burlington cherts with very little heat-treatment of lithic artifacts. Benn and Green (2000) also observe the occasional presence of galena, mica, and green-gray pipestone in the earliest Gast Farm deposits, but these items may represent heirlooms from prior Havana (Middle Woodland) occupations at the site, as these kinds of exotic items are very rarely identified in post 300 CE contexts. Due to the lack of lithic assemblage data from Gast Farm, and from the region around it, lithic artifacts will not be used for comparison with Carter Creek, except on a very general level.

Faunal and Botanical Remains

In exploring faunal remains from both the Havana (Middle Woodland) and Weaver occupations at Gast Farm, Neverett (2001) observes that there is a general continuity in the resources and habitats that are exploited. At the same time, there is a clear increase in the exploitation and consumption of fish during the Weaver occupation, something also seen at many Weaver sites in other regions (e.g., Styles 1981). Further, Neverett (2001:295-296) notes that there is less diversity of resources during the Weaver occupation, with certain species of fish, and other locally available resources, being heavily relied upon. These changes, Neverett (2001:303) argues, come from a change in organization between these periods, as the Weaver occupation would have been more permanent with a higher population, therefore requiring more regular, reliable, resources. Benn and Green (2000:439), on a more general level, note the presence of many bone tools during the Gast Phase in eastern Iowa, including bone awls, pins, and turtle carapace bowls.

Examining botanical remains from Gast Farm, Dunne (2002) argues a similar point. He argues that there is a similar resource base between the Havana and Weaver occupations, but Weaver people seem to exploit a wider variety of resources, especially adding in more locally available wild resources like acorns and berries. There is an overall intensification in food production (seen throughout the region during this period, e.g., Green and Nolan 2000), with an increased reliance on native cultigens harvested in the Spring, whereas Fall-harvested cultigens are less exploited due to the greater reliability of wild resources in the Fall and Summer. This intensification would have been necessary for the year-round, more dense settlements during this period (Dunne 2002:216). In both the faunal and botanical remains, the general trends of the early Late Woodland period are seen (e.g., Styles 2000).

Rosewood

The Rosewood site has been extensively studied, with ISAS producing a report (Jackson and Fortier 2014) that provides a detailed examination of the assemblage recovered from the site. This report further explores the relationship between the Rosewood assemblage and other sites in western Illinois, especially those in the surrounding American Bottom region. Due to the availability of detailed data from Rosewood, along with it being the largest early occupation in the American Bottom during the early Late Woodland period, it represents a good point of comparison to Carter Creek for all scales of analysis and interpretation.

Ceramics

The total ceramic assemblage from Rosewood included 4,338 sherds and ceramic objects weighing 23,042 g. Of this total, 4,249 come from feature contexts and a midden, with the remainder coming from the plowzone or surface. This total includes 1,368 pieces of burned clay weighing 2,972.9 g, along with 4 pipe fragments and one ceramic disk made from a repurposed body sherd. Excavations also identified 4 Mud Dauber’s nests in features at the site, which indicate that there were closed structures at Rosewood due to the wasps that create these nests being adapted to dry environments, like those from a thatch-covered structure (Zelin and Jackson

2014:59). Mud Dauber's nests have been found at other Late Woodland sites in the American Bottom (e.g., Jackson 2003:90).

There were 2,739 total body sherds in this assemblage, weighing 14,526 g. Of these sherds, by weight, 83.5% contained grit temper, 5.9% had grog temper, and 5.6% used grit-grog temper. The remainder of the body sherds had either sand, limestone, indeterminate, or some mixture of tempers, although these make up a very small amount of the total sherds. The body sherd assemblage showed the expected surface treatments with 64.2% cordmarked, 24% smoothed-over cordmarked, 1.2% plain/cordmarked, and 4% indeterminate by weight (Zelin and Jackson 2014:61-62, Table 5.1). A good portion of the body sherds identified as Plain/CM (23.5% by weight) came from pinch pots. In total, 2.2% of the ceramic assemblage by weight came from pinch pots. The authors also note seven decorated sherds, with five having nodes and 3 having zoned decoration. The nodes on these body sherds averaged 0.75 cm in diameter (Zelin and Jackson 2014).

The ceramic assemblage included 247 rim sherds, which were determined to make up 177 vessels. Of these vessels, 135 were considered to be jars and 42 were considered to be pinch pots. The remainder of the data on vessels is specifically about the jars. This is due to the lack of data on pinch pots at Carter Creek not allowing for a true comparison (Fishel 2013d calls pinch pots mini vessels and notes 23 of them that were excluded from his discussion of the Carter Creek assemblage). It is also important to note that no bowls were identified in the Rosewood assemblage. Of the jars, only 34 at the Rosewood site were able to have the orifice diameter measured due to the fragmentary nature of many of the rim sherds. The orifice diameter of the measured vessels averaged 15.9 cm and ranged from 5.0-28.0 cm, with 10 total vessels having an orifice diameter of less than 10 cm. The authors of this report chose to call these small jars, as opposed to cups.

Of the jar assemblage, 76% had grit-temper by count, along with 11.1% with grog temper, 6.7% with grit-grog temper, with the remaining jars having either sand, limestone, or indeterminate temper. A total of 58.5% of the jars were cordmarked, 23.7% were plain/cordmarked, 12.6% were smoothed over cordmarked, and 5.2% had indeterminate surface treatment. It should be noted that not all plain/cordmarked vessels showed cordmarking below a plain upper body, but instead this was assumed by the authors due to there being no vessels identified with a plain upper body that did not have cordmarking starting around the shoulder of the vessel downward. Of the cordmarked vessels where it could be determined, 64 had an S-twist and 2 had a Z-twist. The higher prevalence of S-twist cords is expected in the American Bottom (Kelly et al. 1984). The cordmarkings were mostly vertically oriented (74%), with some vessels being right-oriented (13.5%), left-oriented (4.2%), or having a crisscross of cordmarks (6.2%) (Zelin and Jackson 2014:63, Table 5.2). Of the jars, 57% had a round lip shape and 41.5% had flat lips, with the remainder being indeterminate. The rim thickness averaged 5.10 mm, the lip thickness averaged 4.00 mm, and the maximum thickness averaged 5.70 mm. In terms of the upper body shape (called rim form by Weitzel and Green 1994) of the vessels where enough of the rim was present to identify the shape, 51.4% are incurved, 29.7% are outcurved, and 18.9% are inslanted.

In total, 86 jars had some form of decoration, with 84 having lip decoration, 12 having both lip and upper body decoration, and just 2 having only upper body decoration. Of the lip decorations or impressions, 66.7% come from cord-wrapped stick, 26.7% come from plain sticks, and 4.8% are slashes (Zelin and Jackson 2014:74, Table 5.3). The lip impressions are found mostly on the exterior of vessels (71.4%), but some are also found on the interior (9.5%) and superior (19.0%) surfaces of lips. It should be noted that the decoration locations are not mutually exclusive, as some vessels show tool impressions on multiple parts of the lip. The authors also note 14 vessels with nodes (10.4% of the total vessels), which average 6.98 mm in diameter, 17.10 mm below the lip, and 19.70 mm of spacing between nodes. Interestingly, the distance of the nodes from lips of vessels has a wide range (8.0-33.90 mm). There is also one rim that shows clear zoned decoration, which is distinct from the three body sherds showing zoned decoration, and one rim sherd with three parallel rows of plain stick impressions.

Lithics

The complete lithic assemblage at Rosewood consists of 7,794 artifacts weighing 125,224.7 g, with 83% being rough rock and 17% being chert by weight. The chert/chipped stone assemblage consists of 1,357 artifacts weighing 3,410.4 g. A majority of this assemblage is made from utilized flakes (n=306), heat altered utilized flakes (n=353), block shatter (n=90), and heat altered block shatter (n=298). The authors also note 47 pieces of burned block shatter (Daniels 2014:101, Table 6.1). A majority of the chert assemblage comes from local Burlington sources (60% by weight), but a wide variety of other cherts were identified in the assemblage, including St. Genevieve (18%), Cobden-Dongola (3%), Salem (4%), Mill Creek (1%), Glacial Till (5%), Indeterminate (7%), and Other (2%) (Daniels 2014:102, Table 6.2 and Figure 6.1).

The chert tool assemblage at Rosewood consists mostly of informal, expediently made, tools, including 66 utilized flakes used for various purposes. Of these flakes, 11 were used for both cutting and scraping. These flakes are mostly made from local Burlington chert, although a few were made from higher quality Crescent Hills chert. There is also an informal wedge made from Burlington chert and a perforator/graver made from Cobden-Dongola chert. When it comes to more formally produced tools, 23 total PPK were identified with 11 being typed to the early Late Woodland occupation. Of these PPK, five are of the Mund type, five are Steuben, and one is a Lowe Cluster flare-based point. These PPK are made from Burlington, St. Genevieve, Salem, and Blair cherts (Daniels 2014: 104-105, Table 6.4). Other artifacts included in the tool assemblage are 35 biface fragments, 2 unifacial tools, 1 chert hammerstone, and 2 Mill Creek chert hoes (one with polish from use).

The rough rock assemblage at Rosewood consists of 6,474 artifacts weighing 122,276.3 g. This includes limestone, sandstone, igneous/metamorphic, pebbles, and other minerals (Daniels 2014:109, Table 6.6). Limestone makes up a majority of this assemblage with 68% by count and 57% by weight. In total, 90 informal non-chert tools were identified from this assemblage (Daniels 2014:110, Table 6.7) weighing 20,220.7 g. This includes 25 hammerstones, 19 manos, 23 combination tools, as well as abraders, nutting stones, and other tools. There were also two groundstone celts identified in the assemblage (Daniels 2014: 110, Table 6.8).

Faunal and Botanical Remains

The faunal and botanical assemblages show expected subsistence patterns for the wider region during this period (Jackson et al. 2014:194). Faunal remains show a multipurpose, year-round occupation with a wide range of both cultivated and wild resources; what the authors term a “horticultural hamlet” (Keuhn 2014:130). It is also noted that there were possible forest-fallow system reoccupations at Rosewood (see also Koldehoff and Galloy 2006 for a further discussion of the evidence for a forest-fallow system during the Late Woodland period in the American Bottom). Botanical remains show a reliance on white-tailed deer and local fish with the inhabitants mostly exploiting local habitats. There is also a high amount of turtle found in the assemblage, suggesting that turtle carapaces were likely used for scoops, rattles, and bowls.

White Bend

White Bend has been extensively excavated (Fishel 2013f), revealing a multicomponent site consisting of occupations from the late Middle Woodland to the late Late Woodland, although these occupations were not necessarily continuous and site use changed over time. As noted in Chapter 4, it is the West Block of excavations at White Bend that is being used for comparison to Carter Creek. The West Block has extensive late Middle Woodland and Weaver occupations, along with a smaller late Late Woodland occupation. The late Middle Woodland occupation at White Bend will be used for comparison to Carter Creek because the two occupations overlap in time. The Weaver occupation at White Bend shows a similar semi-circular site-level pattern around a central plaza, making it an especially fruitful point of comparison. The availability of detailed data from the late Middle and early Late Woodland occupations at White Bend allows for these comparisons to be made.

Ceramics

The total ceramic assemblage produced from both the East and West Block at White Bend consists of 63,585 artifacts weighing 173.1 kilograms (kg), with 2.041 rim sherds weighing 15.4 kg and 61,544 body sherds weighing 157.7 kg. On top of this, daub, burned clay, and other ceramic items were also identified. Due to the multicomponent occupation at the site, body sherds were quantified, but could not be easily assigned to a temporal period in a vast majority of cases. Many of the vessels at White Bend were unable to be confidently assigned to a specific occupation due to similarities in ceramic production. These vessels have been labeled as “?”, “Middle Woodland?”, and “Weaver?”. Vessels identified as “?” are likely Middle Woodland, although this cannot be definitively determined. Because of this, the focus of ceramic analysis at White Bend for the purposes of this dissertation will be on rims/vessels labeled as Middle Woodland, Weaver, “?”, “Middle Woodland?”, and “Weaver?”. All other vessels, including the 39 miniature vessels from the West Block are not considered. To better differentiate between the time periods, I will lay out the data with all Middle Woodland vessels together, all vessels with “?” together, and all Weaver or early Late Woodland vessels together. There is no orifice diameter data available.

In total, 81 Middle Woodland vessels were confidently identified. Of these vessels, 28.39% were identified as bowls (or “bowl?”), with the remainder being jars (n=58). Of all the vessels, 40 are plain, 13 are cordmarked, and 21 are smoothed over cordmarked; 19 of the bowls are plain. A majority of the vessels identified as Middle Woodland are grit-tempered (n=73), with the remainder being limestone (n=5), sand (n=2), and grit-grog (n=1). Of the five limestone vessels, four are bowls. The lip shape on vessels is round, flat, or beveled, with a majority of the vessels having round shaped lips (n=46), followed by flat shaped lips (n=32). Of the bowls, 18 had round lips and 5 had flat lips. The upper body shape of vessels is predominantly straight (n=46), but there are also outcurved (n=23), incurved (n=8), and indeterminate (n=4). Of the bowls, 17 have straight upper body shapes and 6 are incurved.

Decorations on Middle Woodland vessels from White Bend include incisions, hemiconical punctates, and nodes. Four vessels have crosshatching on them, which is typical of Hopewell Middle Woodland vessels (e.g., Griffin 1952). Nodes are especially prominent, being found on 25 vessels, averaging 21.2 mm below the lip and 19.66 mm spacing between nodes. There were also a good number of vessels (n=39) with tool impressions on the lip. This includes

24 vessels with exterior tool impressions and 15 vessels with interior tool impressions; 4 total vessels have cord-wrapped stick impressions on the lip, 2 on both the interior and exterior. Interestingly, there is no evidence of both interior and exterior tool impressions on the same vessel. Of all the tool impressions on the exterior, 17 are oriented vertically, with 7 oriented right diagonally. Of all the tool impressions on the interior, 10 are oriented vertically and 5 are oriented right diagonally. The average lip thickness for these vessels is 6.31 mm, while the average max thickness (body) is 7.16 mm.

When examining the vessels that can definitively be labeled as either Weaver or early Late Woodland, 61 total vessels were identified, all being jars. Of these vessels, 42 had a plain surface, while 10 are cordmarked, 7 are smoothed-over cordmarked, and 2 are indeterminate. As is expected at an early Weaver site in the LaMoine Valley, most of these vessels have grit temper (n=46). The remaining 15 all contained grit-grog temper. In terms of lip shape, 37 vessels have round lips, 23 have flat lips, and 1 is indeterminate. Upper body shape of the vessels is predominantly straight (n=41), with the other vessels being outcurved (n=9), incurved (n=2), and indeterminate (n=9).

No formal decorations were found on Weaver/early Late Woodland vessels except for nodes, which were found on 34 of the vessels. These nodes were an average of 11.53 mm below the lip and 18.06 mm apart. Almost all of the vessels had some form of tool impression on the lip, with 52 having exterior impressions and 2 having interior impressions. Of these, five exterior tool impressions were made from cord-wrapped stick, the remainder are from plain stick impressions. Of all the tool impressions on the exterior, 48 are oriented vertically, with 4 oriented right diagonally. All of the tool impressions on the interior are oriented vertically. The average lip thickness on these vessels is 5.02 mm and the average max thickness is 5.54 mm.

The last set of vessels identified in the West Block at White Bend that will be considered for this dissertation are those labeled as either “?”, “Middle Woodland?”, or “Weaver?”. In total, there were 143 vessels identified in this group, with 141 being jars and two being “bowls?”. A total of 63 vessels has plain surfaces, 33 were cordmarked, 40 had smoothed over cordmarking, and 7 were indeterminate. A vast majority of these vessels have grit temper (n=131), with the remainder being either grit-grog (n=10) or sand (n=2). Most of the lips in this group of vessels are round (n=101), with other lips being flat (n=40) or beveled (n=2). The upper body shape of these vessels was straight (n=76), outcurved (n=51), incurved (n=2), or indeterminate (n=14).

A number of these vessels exhibited some form of decoration, including incising (n=3), circular punctates (n=5), hemiconical punctates (n=11), and nodes (n=28). Of the vessels with nodes, the average distance of nodes below the lip of the vessel is 16.77 mm and the average distance between nodes is 19.6 mm. Over half of the vessels in this group had some form of tool impression, with 68 vessels having exterior impressions and 11 having interior impressions. Only one vessel had both exterior and interior tool impressions. A total of 12 vessels had impressions made from cord-wrapped stick, with 10 of these being on the exterior of the lip and 2 being on the interior. Of all the tool impressions on the exterior, 42 are oriented vertically, 4 are oriented right diagonally, 1 is oriented left diagonally, and 1 is oriented both right and left diagonally. Of all of the tool impressions on the interior, nine are oriented vertically and two are oriented right diagonally. The average lip thickness on these vessels is 5.67 mm and the average max thickness is 6.11 mm.

Beyond the vessels identified in the West Block at White Bend, it is noted that Middle Woodland features from across the site contained 634 pieces of daub weighing 1,566 g, while Weaver features in the West Block held 1,049 pieces of daub weighing 2,036 g. Middle

Woodland features also yielded 691 pieces of baked clay weighing 532 g, while West Block Weaver features contained 1,232 pieces of baked clay weighing 678 g. Other objects that come from definitively Weaver features or likely date to the Weaver occupation, include a ceramic pipe bowl fragment and two ceramic stilts. Four figurine appendages were also found but cannot be definitively typed to the Middle Woodland or Weaver occupation at the site. Also of note are three vessels identified from body and rim sherds showing fabric-impressions. The body sherds came from Weaver features, while the rim sherds came from excavation units with no obvious cultural affiliation. These sherds could be Middle Woodland Crab Orchard ceramics from southern Illinois, but the sherds found at White Bend are relatively thin and likely represent some kind of connection with the Sny Bottom region in the Mississippi Valley (e.g., Morgan 1985, 1986).

Lithics

Similar to the ceramic data given above, this section will only focus on the West Block Weaver occupation at White Bend and what lithics could be definitively assigned to that occupation, usually based on the feature context in which they were found. Middle Woodland lithics from White Bend are not being considered because they are not a specialized focus of this dissertation. Due to the extensive excavations at White Bend and the numerous occupations at the site, I will present lithic data from that site as it is found in Tables 7.17-7.19 (Nolan 2013a:213-216), which breaks down lithic artifacts by stage of production and tools (chipped stone and non-chert). A majority of the chipped stone artifacts from White Bend come from local BK cherts, although other regional and exotic sources were identified, including LaMoine, Regional Illinois Agate, Warsaw, Cobden-Dongola, Kaolin, and Kinkaid.

In total, non-chert lithic artifacts from Weaver features in the West Block at White Bend (excluding tools) include 33,097 artifacts weighing 400,138.6 g. Limestone (60.83% by count, 38.62% by weight) and FCR (21.45% by count, 49.78% by weight) make up large majority of this assemblage. Other artifacts identified during analysis include stone cobbles, sandstone, granitic flakes, and hematite/ochre (Nolan 2013a).

In total, early-stage lithic production at White Bend (which would include Stage 1 from McElrath and Fortier 1983) included 4,194 artifacts weighing 24,283.2 g. Middle stage lithic production (which includes McElrath and Fortier's (1983) Stages 2 and 3) included 1,463 artifacts weighing 9,862.2 g. The final stage of lithic production (McElrath and Fortier's (1983) Stage 4) included 206 artifacts weighing 65.6 g. Altogether, the stages totaled 5,862 artifacts weighing 34,211.0 g. When looking at the chipped stone tools from White Bend (excluding PPK), there is a total of 135 artifacts weighing 1,894.0 g. Utilized flakes (n=80, 1,181.9 g) and biface fragments (n=27, 78.4 g) make up most of the assemblage, but it also includes retouched flakes, a unifacial scraper, a utilized blade, hafted bifaces, a drill/perforator, and a chert hammer. The non-chert tool assemblage from White Bend totals 46 artifacts weighing 26871.7 g. Pitted stones (n=18) make up the largest category by count, while metates (n=2, 12,660.0 g) make up the largest category by weight. The remainder of the non-chert tools include hammerstones, manos, and abraders (Nolan 2013a).

A large number of hafted bifaces, including PPK were found at White Bend, a majority (n=117, 52%) coming from the West Block. Due to its multicomponent habitation, and the overlap of point types between the late Middle and early Late Woodland periods, the authors were not able to designate each point with a specific occupation. Instead, they discussed PPK clusters together, which is what I will also do. The specific PPK types associated with late

Middle and early Late Woodland occupations found at White Bend include Snyders, Waubesa (contracting stem), Steuben, and Ansell/Mund. There are also Middle to Late Woodland transition points discussed in the White Bend report that will be considered as well.

A total of 61 Snyders points were identified from White Bend. It is noted that very few exhibit the usual array of vibrant color found on PPK during this period, with most (89%) coming from locally and regionally available chert sources; the remaining Snyders PPK are made from Coben-Dongola (3%) and Warsaw Tabular (8%) cherts (Fishel 2013f: Appendix 5). About half of the Snyders PPK are heat treated. It is also noted that there are many examples of Snyders PPK being repurposed for different uses. A total of 16 contracting stem (Waubesa) points were identified from White Bend, mostly from general midden contexts. All of these PPK are made from locally or regionally available BK chert, but one may come from a source in the Lower Illinois Valley (Grimes Hill, Odell 1984). Including the point possibly from the Lower Illinois Valley, almost 70% of Waubesa PPK are heat treated. Twenty-nine or more PPK were identified as Steuben, with all but one coming from general midden contexts. At least 21% of Steuben PPK from White Bend are made from exotic (as defined above) cherts, which nearly matches the 22% of Steuben points made from exotic cherts found during 1983-84 investigations at Carter Creek. Interestingly, none of the Steuben PPK from White Bend appear to be made from regional cherts (15-30 km from the site). Roughly 41% of Steuben PPK from White Bend show signs of heat treatment. Some Steuben PPK were repurposed for different uses. Only 11 Ansell/Mund PPK were identified at White Bend, but some other points from the site may fall into this category, although they could not be definitively typed. Nine of the 11 Ansell/Mund PPK came from midden contexts. All of the Ansell/Mund PPK are made from locally or regionally available BK and only one of these points is heat treated. A total of eight PPK are described as Transitional Middle/early Late Woodland forms, all exhibiting characteristics typical to both Snyders and Steuben type points. Some PPK preforms attributable to the Middle Woodland or Weaver occupation were identified.

Other lithic artifacts identified at White Bend that may be attributable to the Weaver occupation include ground and polished gorgets or pendants, a grooved stone hammer or maul, and a copper bead. Similar types of beads have been found at the Rench site in the Central Illinois Valley (McConaughy and Martin 1993:316). It is also noted that the groundstone tool industry at White Bend seems to be heavily missing from Weaver contexts.

Faunal and Botanical Remains

The faunal and botanical remains from White Bend show similar patterns to other sites throughout the region during this period (e.g., Styles 2000). This includes an abundance of nutshell, along with a wide variety of wild and cultivated plants in the botanical assemblage. As Keuhn (2013:282) notes, the plant remains at White Bend show a "generalized" pattern of procurement and production. This holds true for both the Middle Woodland and Weaver occupations. Faunal remains show the same, with a wide variety of aquatic and terrestrial resources, from exploitation of varying habitats. Deer and fish dominate the faunal assemblage but, overall a broad-base subsistence pattern is evident. Interestingly, the number of deer is higher in the Middle Woodland assemblage (62.1%) when compared to the West Block Weaver occupation (46.5%). The Weaver occupation also produced bone awls, flintknapping tools, bowls/scoops/rattles from turtle carapaces, and decorative items such as canine teeth pendants and cup-and-pin game pieces from deer phalanges.

Sartorius and Sartorial Splendor

Excavations and a detailed analysis of the assemblage from the Sartorius and Sartorial Splendor sites are treated together in a single report from ISAS (Fishel 2012f). As noted in Chapter 4, the main point of comparison between these sites and Carter Creek will be the formation of households and household clusters. Along with the Buffalo Chip site (discussed below), the Sartorius and Sartorial Splendor sites represent two of very few locations where archaeologists have confidently grouped clusters of pits together as households or household units. Due to this focus on the spatial layout and use of households and the much later occupation at these sites when compared to Carter Creek (around 600 CE compared to 300-400 CE), the discussion of artifacts from these sites will be brief. A more detailed discussion of pit features and their contents is provided in Chapter 6.

Ceramics

Of the total assemblage from Sartorius and Sartorial Splendor, 30.3% of the recovered artifacts were ceramic. The ceramic assemblage totaled 6,904 sherds weighing 28,600 g from feature contexts and only five features were without ceramics. This assemblage also includes 364 pieces of baked clay weighing 1,000 g, 28 pieces of daub weighing 121 g, 2 ceramic effigy appendages, and an unidentified clay object that may have been used similar to daub on house structures (Fishel 2012d).

Of the total body sherds, 98.6% have grit-grog temper, while other tempering agents include grit, grit/grog/sand, sand only, sand/grog, or are indeterminate. The body sherd assemblage is predominantly made of plain surfaced sherds (97% plain), but there are also cordmarked (n=13) and smoothed over cordmarked (n=14) sherds. The remainder of the sherds were too eroded for the surface treatment to be determined. The average thickness for each type of surface treatment was measured with plain sherds averaging 5.6 mm thick, cordmarked sherds averaging 4.82 mm, and smoothed over cordmarked sherds averaging 5.03 mm (Fishel 2012d).

The rim/vessel assemblage from these sites included 211 rims representing 91 vessels, with an additional 9 rims too fragmentary to provide data. There were also 11 rims from miniature vessels identified, totaling 13 vessels (this was based on body sherds as well). All of the rims were grit-grog tempered except four which had grit temper and one which had sand temper. All rims exhibited plain exterior surfaces. Most of the lips were round (71%), with the remainder being mostly flat (27%). The other lips had indeterminate lip shapes (Fishel 2012d).

All but two of the vessels (n=89) show decoration on the exterior lip or immediately below. Almost all of these vessels (n=87) have exterior tool impressions. These tool impressions include 13 cord-wrapped stick impressions and 73 dowel/plain stick impressions. One vessel's exterior tool impressions may have come from hollow cut bone. All of the exterior tool impressions are vertical except for five that are oblique. Nodes are found on 78% of the vessels, with 85% of noded vessels having exterior tool impressions. The nodes averaged 11.49 mm from lip to node and 17.77 mm spacing between nodes. Two vessels exhibit punctates. The ceramic assemblage at these sites is rather homogenous, except for three vessels that stand out. One of these vessels is sand tempered and undecorated. This vessel may be a trade vessel from farther west (e.g., Meinkoth 2000). The two additional vessels that stand out have lines of round punctates below exterior tool impressions and may also originate from groups farther west (e.g., O'Gorman and Hassen 2000).

Lithics

In total, lithic artifacts make up 50% of the total site assemblage at Sartorius and Sartorial Splendor, with 11,295 artifacts weighing 518,200 g. This includes 7,512 artifacts weighing 327,400 g from Sartorius and 3,783 artifacts weighing 190,800 g from Sartorial Splendor. Flaking debris from chipped stone/chert identified from these sites was categorized at primary decortification (n=94), secondary decortification (n=37), reduction flakes (n=291), bifacial thinning flakes (n=6), notching flakes (n=7), broken flakes (n=369), tertiary flakes (n=9), block shatter (n=477), thermal shatter (n=671), and natural shatter (n=174). All flakes combined to weigh 4,975 g, while all cultural shatter combined to weigh 17,041 g. Of the flaking debris 41% is intentionally heat treated. There were an additional 63 pieces of unaltered chert and 23 tested chert pieces, mostly cobbles, identified. All chipped stone from this assemblage is BK except two flakes of Warsaw chert that may come from locally available cobbles or possibly from southeast Missouri (Morrow 1994).

In total, only nine PPK were identified from the site. Six are classified as Steuben, one is classified as Mund, one has a contracting stem, and one is side-notched. The contracting stem and side-notched PPK could not confidently be ascribed to a particular type. Of the Steuben PPK, two are heat treated and two others have the base snapped off and are reworked. Other than PPK, other tools identified include 19 bifaces, 1 BK chert chopper, 29 utilized flakes, and 2 retouched flakes. There were also 66 multidirectional cores in this assemblage (Fishel 2012c).

The non-chert assemblage included 4,794 pieces of FCR weighing 250,000 g from feature contexts with an additional 544 pieces weighing 34,000 g from excavation blocks, and 8 pieces from auger tests. The assemblage also includes 886 pieces of burned limestone weighing

12,000 kg and 30 pieces of limestone weighing 1,500 g from features. Additionally, there were 58 pieces of burned or unburned limestone from excavation blocks and auger tests combined. Sandstone was very prevalent at these sites and totaled 1,704 pieces from features weighing 46,000 g. An additional 242 pieces of sandstone from excavation blocks and auger testing were identified. Only three features did not have sandstone in them. Other non-chert artifacts include cobbles or cobble fragments totaling 384 artifacts weighing 58,100 g. Other artifacts identified include hematite, limonite, ochre, quartz, a geode fragment, and small flecks of mice, likely from local igneous rock. Interestingly, three of the ochre pieces showed evidence of being ground or rubbed. The non-chert tool assemblage included 34 manos, 27 hammerstones, 54 pitted stones, 6 groundstone frags, 1 highly polished celt likely used for woodworking, and 5 abraders (Fishel 2012c). Only two pieces of ochre appeared to be worked, suggesting that ochre was not being used for ceremonial or other purposes (ochre has been used to study many aspects of human life throughout the world; Ambrose et al. 2016).

Faunal and Botanical Remains

Both the botanical and the faunal assemblages from the Sartorius and Sartorial Splendor sites reflect general patterns seen throughout the wider region during this time (e.g., Purdue and Styles 1985). This includes usual activities such as nut and seed processing from local habitats, along with a broad-based exploitation of habitats for animals. White-tailed deer and fish dominate the faunal assemblage at both sites. The botanical assemblage, on the other hand, differs somewhat between the sites. Sartorial Splendor lacks large amounts of botanical remains of any sort, indicating that it likely represents a short-term occupation, with only the necessary processing and cooking of plant remains. Sartorius shows large amounts of nut and nut meat remains, indicating that it may have represented a nut processing locus for groups during this period. Further, Sartorius was likely consistently reoccupied during the growing season (Spring to Fall).

Buffalo Chip

Excavations and a detailed analysis of the assemblage from the Buffalo Chip site is found in a Technical Report produced by ISAS (Fishel and Emerson 2013). As noted in Chapter 4, the main point of comparison between Carter Creek and Buffalo Chip will be on site layout and, more specifically, the layout of pit clusters identified as households at Buffalo Chip. Because of this, and the temporal and geographic distance of Buffalo Chip from Carter Creek, I will only briefly outline the artifact assemblage from Buffalo Chip below. A more detailed discussion of pits and household layouts at Buffalo Chip will be provided in Chapter 6.

Ceramics

The ceramic assemblage at Buffalo Chip contains materials from both the Middle Woodland and early Late Woodland occupations. The ceramic assemblage from the Middle Woodland occupation, consisting of one household cluster, one isolated pit, and some materials in two early Late Woodland clusters, consists of only 52 sherds weighing 373 g, making up at least 9 vessels. There were also 47 pieces of burned clay in this assemblage, weighing 48 g. The Middle Woodland vessel assemblage consists of 9 jars, including Baehr/Pike brushed (n=1), Hopewell (n=4) and Havana (n=4) jars (Emerson 2013).

The early Late Woodland ceramic assemblage is much more robust and consists of 3,411 sherds weighing 19,900 g, totaling at least 87 vessels. This assemblage also includes 12,903 pieces of burned clay weighing 15,152 g, 56 pieces of potter's clay weighing 105 g, 21 pieces of daub weighing 195 g, 1 mud dauber's nest, a clay owl effigy, 4 clay pipe fragments, and 19 clay objects. The vessel assemblage from this occupation consists of 69 jars, 17 pinch pots, and 1 miniature vessel. Of the 69 identified jars, 5 are decorated and 64 are undecorated. Of the 64 undecorated vessels, a majority had grit-temper (n=53), cordmarked exteriors (n=54) in either a right (n=21) or left (n=22) oblique orientation, with a flat (n=44) rim. Of the five decorated jars, decorations mostly consisted of rows of nodes parallel to the lip of the vessel. Only seven jars had tool impressions on the lip of the vessel with five on the exterior and two on the superior surface of the lip. These lip impressions included cordmarking, cord-wrapped stick, notching, notching with a stick, punctates, and smoothed over cordmarking. The average lip thickness of these vessels is 4.79 mm, the average rim thickness is 5.01 mm, and the average maximum thickness is 5.53 mm (Emerson 2013).

Lithics

The total lithic assemblage at Buffalo Chip consists of 7,497 chert/chipped stone artifacts weighing 13,800 g and 18,881 non-chert artifacts weighing 166, 100 g. Due to Buffalo Chip being located in a chert-poor location (Odell 1984), it is assumed that the majority of the chert being used at the site comes from regionally available BK sources or (somewhat) local glacial till. There were some exotic cherts found at Buffalo Chip, such as Salem, Mill Creek, and Cobden-Dongola, but only in small amounts. The early Late Woodland component at Buffalo Chip specifically has exotic cherts from southern Illinois, showing some kind of connection to that region. A large amount of the chipped stone assemblage could not be assigned to a specific chert source because many of the artifacts were too small and/or burned (Nolan 2013b:82).

In terms of tools, both chipped stone and non-chert, eight Ansell-Mund PPK were identified and can confidently be ascribed to the early Late Woodland occupation. Beyond the

PPK, other chipped stone tools identified include 20 general bifaces, 10 retouched flakes, 15 utilized flakes, and 2 chert hammers. There was a total of 66 non-chert “ground stone” tools identified, such as abraders and manos. Only one formally produced groundstone tool was identified at Buffalo Chip, a granite celt (Nolan 2013b).

Faunal and Botanical Remains

Faunal and botanical remains show that the Buffalo Chip site was a short-term encampment, at which people employed a broad-base subsistence strategy consistent with other sites (both small and large) occupied during this period (e.g., Styles 2000). One thing of interest from Buffalo Chip was the presence of tobacco remains, indicating that this may have been a site with some sort of “ritual” activity, although Simon (2013:172) cautions against taking ritual to mean “sacred” and instead use it to signify activities that would strengthen social bonds.

The early Late Woodland Period: A Regional Ceramic Context

The artifact assemblage from each of the above discussed sites fits within the general expectations for the Weaver variant throughout the wider region. Generally speaking, all sites represent domestic occupations ranging from short-term encampments at Buffalo Chip, Sartorius, and Sartorial Splendor to longer-term villages at Carter Creek, White Bend, Gast Farm, and Rosewood, covering the entire early Late Woodland period. This can be seen through the standard ceramic and lithic assemblages and the broad-based subsistence practices evidenced at each site. At the same time, these artifact assemblages and the “unusual” artifacts found in each, show that these seemingly mundane spaces were active locations for the deterritorialization and territorialization of identities during this period. While it is vital to compare the complete artifact assemblage from sites to gain a fuller understanding of these processes, the focus of this dissertation will be on ceramic vessels. Therefore, I will explore a brief comparison of the ceramic assemblages below to highlight some of the similarities and differences that can be seen.

Before getting into these brief comparisons, I wish to highlight Fishel's (2013d) discussion of LaMoine Valley Weaver occupations and the general trends observed during this period. He further defines the Camp Creek and Crooked Creek phases in this discussion. In highlighting the trends seen in the LaMoine Valley during this period, Fishel notes that most ceramic vessels found at these sites are plain surfaced, with cordmarking only dominating assemblages at earlier habitations, such as Carter Creek and White Bend. This shows that cordmarking became less popular over time. In addition, the ceramic vessels identified at early LaMoine Weaver sites do not consist of bowls and they generally have nodes placed closer to the lip (12-13 mm) than Middle Woodland vessels from the same region. Fishel also notes that almost all LaMoine Weaver vessels do not have cordmarking to the shoulder and an accompanying smoothed area above, a relatively widespread surface treatment in the Midwest (Griffin 1952:121). Other trends that Fishel highlights are a thinning of vessel walls to, on average, 5-6 mm thick, grit as the dominant temper type, higher numbers of round versus flat lips, greater than 70% of vessels in an assemblage having exterior tool impressions, and very few interior tool impressions on vessels (Fishel 2013d:321-322). A brief comparison of the ceramic assemblages from sites discussed in this chapter highlights that these trends certainly hold true throughout the LaMoine Valley (and some of them hold true throughout the region). Yet, there are outliers in the Carter Creek assemblage which make for interesting examples of the dynamism of the LaMoine Valley during this period.

When comparing the Carter Creek assemblage to that from White Bend, the trends that Fishel (2013d) discusses can be observed. At both Carter Creek and White Bend, the average maximum thickness of vessels is 6.45 mm and 5.54 mm, both roughly in the range identified; this gets even thinner at Sartorius and Sartorial Splendor where the vessel thickness averages between 4.82 and 5.60 mm, depending on the surface treatment of the vessel. Carter Creek has

Vessel Data	**Carter Creek**	**Gast Farm**	**Rosewood**	**White Bend West Block**	**White Bend West Block Middle Woodland Occupation**
Region	LaMoine Valley	Southeast Iowa	American Bottom	LaMoine Valley	LaMoine Valley
Vessel Type					
Jars	91.76%	100%	100%	100%	71.61%
Bowls	1.65%	-	-	-	28.39%
Indeterminate	6.59%	-	-	-	-
Surface Treatment					
Cordmarked/Smoothed-over cordmarked	58.79%	11%	71.1%	27.87%	41.98%
Plain	32.42%	89%	23.7%	68.85%	49.38%
Temper					
Grit	93.41%	84%	76%	75.41%	90.12%
Grit-Grog	1.10%	-	6.7%	24.59%	1.23%
Sand	3.57%	15%	-	-	2.47%
Grog	-	-	11.1%	-	-
Rim Shape					
Flat	45.60%	65%	41.5%	37.70%	39.51%
Round	51.37%	33%	57%	60.66%	56.79%
Lip Modifications					
Exterior Tool Impression	50.27%	48%	71.4%	85.25%	29.63%
Interior Tool Impression	1.37%	20%	9.5%	3.28%	18.52%
Cord-wrapped Stick	12.91%	11%	41.48%	8.20%	4.94%
Lip Modification Orientation					
Vertical	80.61%	27.59%	32.14%	92.31%	69.23%
Left Oblique	18.79%	12.07%	59.52%	-	30.77%
Right Oblique	0.61%	60.34%	3.57%	7.69%	-
Upper Body Shape					
Vertical	18.37%	32.40%	-	67.21%	56.79%
Incurved	29.59%	14.70%	51.4%	3.28%	9.88%
Outcurved	11.22%	11.20%	29.7%	14.75%	28.40%
Inslanted	12.24%	31.20%	18.9%	-	-
Other Attributes					
Vessels with Nodes	7.14%	7.15%	10.37%	55.74%	30.86%
Node distance from lip (average) (cm)	15.23	-	17.1	11.53	21.2
Lip Thickness (average) (mm)	5.37	5.29	4	5.02	6.31

Table 5.14a: Ceramic Vessel Data from sites discussed in this dissertation.

a majority of cordmarked or smoothed over cordmarked jars (58.79%), whereas at White Bend, this total is only 27.87% in vessels definitively belonging to the Weaver occupation. This falls to 0% cordmarked jars at the much later occupied Sartorius and Sartorial Splendor sites. At White

Bend, rounded vessel lips make up 60.66% of the assemblage, while at Carter Creek, rounded lips are only 51.37% of the assemblage. Both sites have more than 50% of the total vessels exhibiting exterior tool impressions (50.27% at Carter Creek and 85.25% at White Bend), with very few vessels having interior tool impressions (1.37% at Carter Creek and 3.28% at White Bend). At the same time that these general trends can be seen, Carter Creek represents an anomaly for certain ceramic vessel traits, many of which have been previously highlighted by Fishel (2013d) and others (e.g., Green and Nolan 2000).

At White Bend, nodes are found an average of 11.53 mm from the lip of vessels, whereas at Carter Creek, nodes are 15.22 mm from the lip of the vessels. Interestingly, vessels at Carter Creek show a wide variety of node to lip distance, with some vessels at Carter Creek measuring under 10 mm, and at least one measuring over 25 mm. The Rosewood site also has a high variance in the distance of nodes to lips (8.0-33.9 mm). While Carter Creek has more round than flat rims, the number of flat rims is high when compared to other sites in the LaMoine Valley (see Table 5.14). The lower ratio of round to flat rims at Carter Creek compares more to the Middle Woodland occupation at White Bend than to other LaMoine Valley Weaver sites (1.13:1 round to flat lips at Carter Creek, 1.44:1 at Middle Woodland White Bend, 2.57:1 at Weaver White Bend). Interestingly, Weaver occupations from outside of the LaMoine Valley show similar or higher percentages of flat shaped rims when compared to Carter Creek. For example, flat rims make up 41.5% of the rims at Rosewood, 85% of the rims at the Rench site (McConaughy 1993a), and 65% of the rims at Gast Farm (Weitzel and Green 1994).

Another anomaly from Carter Creek is the lack of vessels with nodes in the assemblage. Only 7.14 % of vessels at Carter Creek have nodes, whereas 55.74% at White Bend have nodes and 78% at Sartorius/Sartorial Splendor have them. The number of vessels with nodes at Carter

Creek also fits more closely with other non-LaMoine Valley sites, such as Rosewood (10.37% of vessels with nodes) and Gast farm (7.15%). Another interesting anomaly in the Carter Creek

Vessel Data	**Marlin Miller #2**	**Sartorius**	**Sartorial Splendor**	**Sartorius and Sartorial Splendor**	**Buffalo Chip**
Region	LaMoine Valley	LaMoine Valley	LaMoine Valley	LaMoine Valley	Central to Lower Illinois Valley
Vessel Type					
Jars	99.5%	100%	100%	100%	100%
Bowls	0.5%	-	-	-	-
Indeterminate	-	-	-	-	-
Surface Treatment					
Cordmarked/Smoothed-over cordmarked	44.00%	-	-	-	78.26%
Plain	55.00%	100%	100%	100%	-
Temper					
Grit	96.00%	-	12%	4.4%	76.81%
Grit-Grog	-	98%	88%	94.51%	-
Sand	-	2%	-	1.1%	-
Grog	-	-	-	-	-
Rim Shape					
Flat		38%	9%	27.47%	63.77%
Round	81.00%	62%	88%	71.43%	-
Lip Modifications					
Exterior Tool Impression	68.00%	98%	91%	96%	7.25%
Interior Tool Impression	8.00%	-	3%	1.10%	-
Cord-wrapped Stick	2.00%	19%	6%	14.29%	-
Lip Modification Orientation					
Vertical	88.00%	-	-	94.25%	-
Left Oblique	-	-	-	5.75%	-
Right Oblique	-	-	-	-	-
Upper Body Shape					
Vertical	-	-	-	-	-
Incurved	-	-	-	-	-
Outcurved	-	-	-	-	-
Inslanted	-	-	-	-	-
Other Attributes					
Vessels with Nodes	30.00%	79%	76%	78%	Yes
Node distance from lip (average) (cm)	17.71	11.58	11.44	11.53	-
Lip Thickness (average) (mm)	-	4.3	4.64	4.42	4.79

Table 5.14b: Ceramic Vessel data from sites discussed in this dissertation.

ceramic vessel assemblage is the presence of at least three vessels showing cordmarking to the shoulder with a smoothed area above (Figure 5.12). These three vessels represent a very small percentage of the total assemblage (<1% of all vessels) but indicate the diversity of the Carter Creek assemblage. Even the upper body shape of vessels at Carter Creek, when compared to

White Bend, fits more closely with non-LaMoine Valley Weaver sites. At Carter Creek, the upper body shape of vessels is mostly incurved (29.59%), but all other categories (outcurved, inslanted, and vertical/straight) also make up over 10% of the total assemblage. At Gast Farm, the same holds true, except the most popular upper body shape is inslanted at 31.20%. At White Bend, on the other hand, 67.21% of the vessels have vertical upper body shapes, with 0% being inslanted and only 3.28% being incurved.

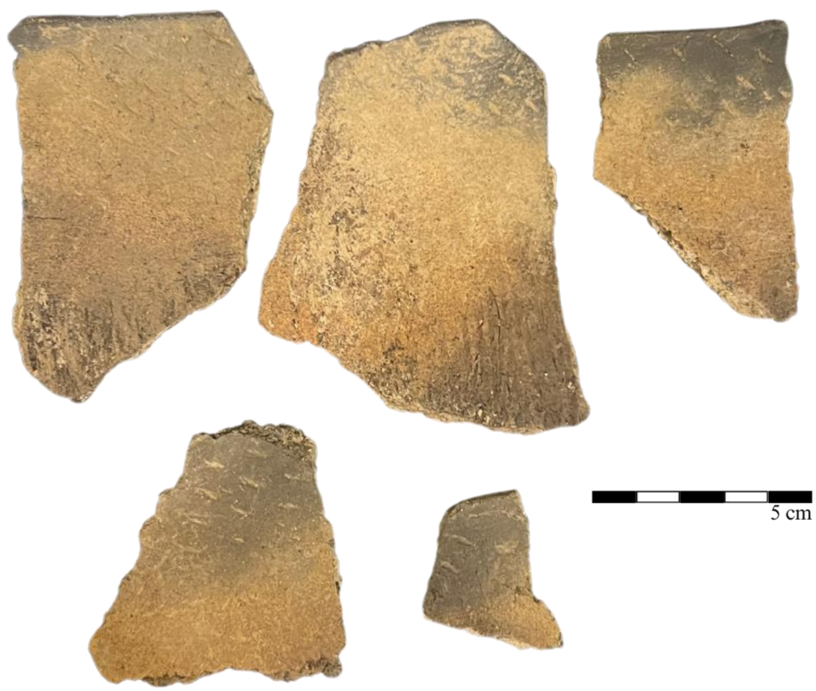

Figure 5.12: V46-3 showing a cordmarked body with a smoothed shoulder and exterior tool impressions (notches from a stick) on the neck and lip of the vessel.

What can all of this tell us about the assembling of identities during this period at Carter Creek and in the wider region? For one, and this is not necessarily a new observation, Carter Creek clearly represents a transitional site at which people with Middle Woodland-like practices were reforming their lifeways. Carter Creek is clearly a place where groups without a grounded identity came and reterritorialized their identities through the formation of new practices. This can be seen by the average distance of nodes from the lips of vessels at Carter Creek. The presence of vessels with nodes very close (<10 mm) to the lip and very far from the lip (>25 mm) suggests there was some experimentation, and no uniformity, in ceramic production at the site. This experimentation carries over into the variety of upper body shapes on vessels at Carter Creek. As will be explored further in Chapters 6 and 7, the kinds of experimentation happening at Carter Creek may have differed by household. For example, all of the non-local vessels identified during 2020 excavations came from EB1 at Carter Creek, where Structure 1 is located (discussed further in Chapter 6). This could be due to direct trade of vessels, immigration of female potters, or indirect passage of ceramic production practices. If this comes from the direct trade of vessels or immigration of potters, this shows that people using Structure1 may have maintained stronger connections to previous Middle Woodland interaction networks than the group inhabiting Structure 2 (HH2, located in EB2). If these vessels were made at Carter Creek and come from a more indirect exchange of ideas, we can still infer stronger connections to the wider region at Structure 1, which shows a different way of territorializing and displaying identities than is evident at Structure 2. At the same time, some traits of the ceramic vessel assemblage show more uniformity. For example, 80.61% of the exterior tool impressions on vessels from Carter Creek have a vertical orientation; this is also true of cordmarking orientation, where exactly 80% of the vessels have vertically placed cordmarks. To summarize, a brief comparison of Carter Creek to the wider LaMoine Valley and other sites discussed above, shows a place at which new identities were forming in the face of a shifting cultural landscape. These identities, while formed during practices at Carter Creek, clearly connected to the wider region.

Conclusion

As shown through the brief discussion presented in this chapter, people at Carter Creek were territorializing their identities through a variety of ceramic production techniques, chert procurement and production activities, and subsistence practices. When looking at ceramics, one could argue that some of these practices, such as rounded lips and exterior tool impressions on vessels, became a central part of LaMoine Valley Weaver identity as the early Late Woodland period progressed. Others, such as a variety of upper body shapes on vessels and a lack of nodes, fell out of favor as more uniform ceramic production techniques took hold in the area. This does not mean that there was no shared identity at Carter Creek, just that it may have been more in flux when compared to later LaMoine Valley habitations. This fluctuation points to the need to look beyond just the local region when thinking about the contexts in which past peoples lived.

The geographic context of the LaMoine River Valley drainage certainly offers an important starting point to understand the Weaver variant as it emerged during the early Late Woodland period, especially with Carter Creek being the earliest manifestation of a distinctly Weaver occupation in this region. This is emphasized by the clear similarities between sites in this area, allowing for the designation of the Camp Creek and Crooked Creek phases. At the same time, temporal context is quite important, especially on a wider regional level. Much of western Illinois and adjacent areas were undergoing the same social and cultural upheaval that we see in evidence from west-central Illinois as Middle Woodland practices and interaction networks shifted (e.g., Benn and Green 2000). Analysts have hypothesized that the American Bottom region was completely abandoned during the terminal Middle Woodland, before being reoccupied during the Rosewood phase around 400 CE. The kinds of pressures brought on by these changes, and the deterritorializing effects they would have had, would be felt in similar ways at all early Weaver sites, including both Gast Farm and Rosewood. It should not be surprising then, that it may be possible that we see more similarities in the kinds of reterritorializing practices occurring at temporally closer sites than at geographically closer ones.

As I will argue in Chapter 7, I do not necessarily think temporal proximity produces a stronger shared identity than geographic proximity, but I do think the shared upheaval felt by people at all early Weaver sites in the region produced similar kinds of practices and behaviors that manifested through the coalescence of assemblages at these sites.

As will be shown in Chapter 6, a brief comparison of artifact assemblages is just a starting point for better understanding the early Late Woodland period. We can begin to see the dynamic landscape of this period through items such as non-local vessels and exotic cherts, but it is with feature data, and overall site structure, that we can fully begin to understand this data and its nuances through the archaeological record, therefore bringing assemblages during this period more into focus.

CHAPTER 6: FEATURES

This chapter examines feature data from 2020 excavations at Carter Creek, along with that from other comparable early Late Woodland sites in the region. I will briefly define a household at Carter Creek, from an analytical standpoint, using feature data. I also discuss the magnetometry survey conducted at Carter Creek prior to 2020 excavations and the results of that survey. As with artifacts, features are themselves assemblages formed from the dynamic relationships between people, places, and things that created and used them. As features contain most of the artifacts archaeologists examine, we can view features as assemblages formed from the cohabitation of other assemblages. This nature of features reveals aspects of identity formation across all scales of analysis. In order to understand features as assemblages, detailed analytical measurements are needed and represent the place from which archaeologists can begin to see the threads that form these assemblages. These analytical data are the focus of this chapter, whereas the relationships between artifacts, features, and other early Late Woodland assemblages are discussed further in Chapter 7.

General feature data, including pits and postmolds, are discussed in this chapter for all sites used in this dissertation, with some focus going to special features or clusters of features that stand out. This data is considered within the larger temporal and geographic context of the early Late Woodland period. This chapter also summarizes the site layout from each site discussed. Fully detailed feature data from the 2020 excavations at Carter Creek can be found in Appendices C and D. All non-Carter Creek data discussed in this chapter is presented in chronological order, from the earliest inhabited site to the latest inhabited site. As with Carter Creek, this data is summarized, with some special features discussed in more detail. Each of the sites discussed has its own unique layout, but overall, as with most of the early Late Woodland period in this region, feature data from each site represent similar types of activities. As will be discussed in Chapter 7, by viewing this data through assemblage theory, we can parse the distinctiveness of each site and the relational assemblages that form at each, offering a much deeper and nuanced understanding of this period.

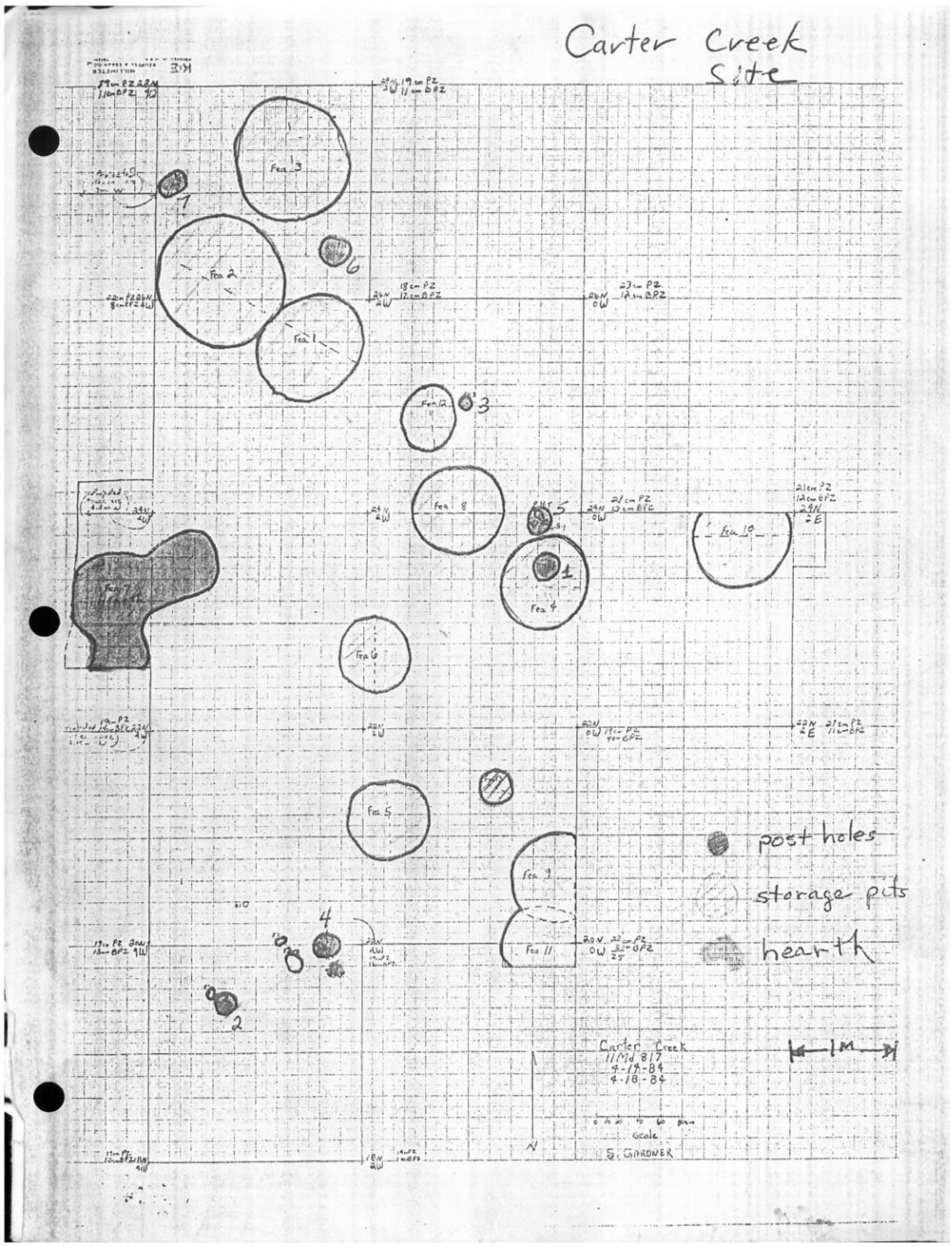

Figure 6.1: Plan Map from 1984 excavations at Carter Creek courtesy of Duane Esarey. These excavations are located in Excavation Block 2 (EB2) from 2020 work at the site.

Carter Creek (2020 and 1984 Excavations)

Features at Carter Creek consist of both pits and postmolds, uncovered in 1984 and 2020 excavations. During the 2020 work at Carter Creek, 51 pits and 33 postmolds were identified, with all at least partially excavated except 1 postmold, which was not excavated due to time and weather constraints. All of the features were located in Excavation Block 1 (EB1) except six pits. Unfortunately, detailed feature data from 1984 excavations are unavailable, but a plan map was provided by Duane Esarey (Figure 6.1). This map, the 2020 magnetometry survey that will be discussed more below, and personal knowledge from Duane Esarey (Esarey personal communication, 2019) were used to locate the 1984 excavations in order to tie these features into the 2020 grid using a total station.

Figure 6.2: Fieldwork photographs from 1984 excavations courtesy of Duane Esarey. Top shows the removal of the plow zone by hand shoveling. Bottom shows the 1984 excavation block (EB2) facing northward.

The 1984 excavations uncovered 12 storage pits, 1 hearth, and 7 postmolds, of which 10 features and 5 postmolds were relocated in 2020. An additional six previously unexcavated pits were found in the same general location as the 1984 excavations and were excavated as part of the 2020 work. These additional pits and the relocated 1984 excavations are in Excavation Block 2 (EB2; see Figure 6.2). Pits in EB1 were numbered starting with Feature 20 (F20) due to pits from the 1984 excavations starting at Feature 1 and reaching Feature 13. Due to some luck, the extra features found in EB2 were able to follow the numbering sequence from 1984 excavations, starting at Feature 14 and ending with Feature 19. Postmolds from 2020 excavations were numbered starting from Postmold 10 (PM10) due to postmolds identified during 1984 excavations numbering from PM1 to PM7. No additional postmolds were found in EB2 near 1984 excavations. Both blocks are considered to have at least one partial structure or household, although EB1 may have the edges of multiple structures within its limits (discussed more below). Due to the missing data from the 1984 features, they will not be discussed in any more detail below.

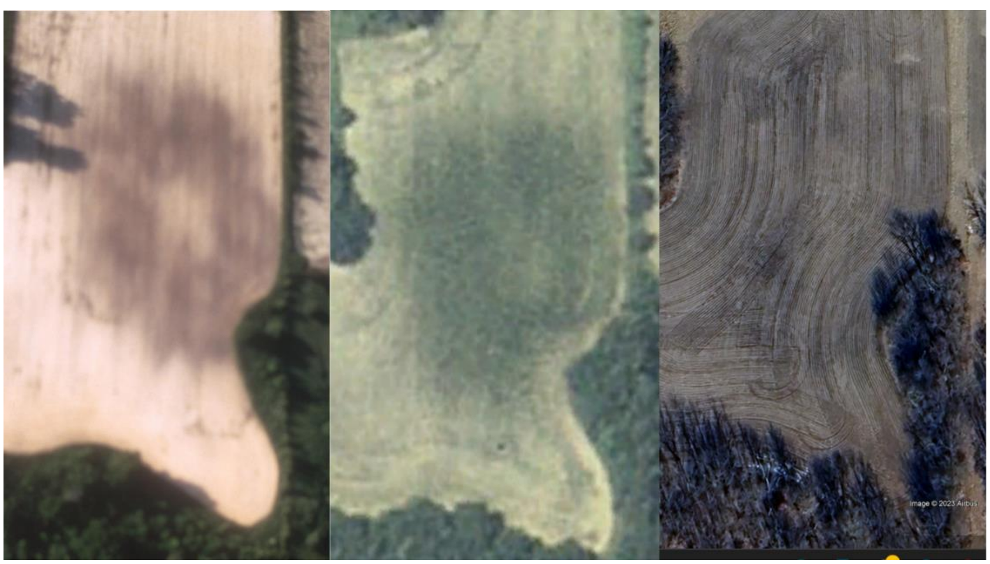

Figure 6.3: From left to right, Aerial photograph taken of Carter Creek in May 1983, Google Earth satellite image taken in August 2007, Google Earth satellite image taken in February 2023.

Site Layout

Carter Creek is an upland village representative of Stage 1 in Green's (1987) Frontier Model for west-central Illinois. Stage 1 was a period in which large groups of people moved from the major river valleys into previously uninhabited upland locations. The overall site layout fits well within this model, as Carter Creek was first identified due to the extensive midden at the site seen in aerial photographs taken in 1984 and still on satellite images today (Figure 6.3). This circular or arcuate shaped midden measures 100 meters north to south and 88 meters east to west, with an open central plaza measuring 20 meters across (Esarey et al. 1984:135). This plaza is clear in the 1984 photographs but has been muddled by agricultural work at Carter Creek and is no longer clearly visible from satellite images. Based on light-colored depressions scattered throughout the circular midden, it was estimated that 25-35 structures may have existed at the site, housing up to 175 people at one time (Holt 2005:40). A more detailed examination of the site layout, including the purpose of the central plaza and possible activity areas within the village, could only be undertaken through further excavation at the site, but the magnetometry survey performed prior to 2020 excavations offered some insight.

Magnetometry Survey (2020)

As discussed briefly in Chapter 4, the magnetometry survey completed in 2020 consisted of the survey of 29 total 20 m x 20 m squares covering the entire known Carter Creek site and the surrounding agricultural field. Portions of this survey took place immediately adjacent to the existing gravel access road to the agricultural field, along which a wire fence previously ran. Due to large anomalies coming from the location of this previous fence, the eastern portion of the survey was removed from display (Figure 6.4) as these anomalies blocked any chance to see significant data in this portion of the survey. The purpose of this survey was to relocate Duane Esarey's 1984 excavation and to find anomalies that might indicate the location of a structure for 2020 excavations. The survey was successful in both of these endeavors.

A large anomaly clearly highlights the location of 1984 excavations. This anomaly likely resulted from metal left behind by Duane Esarey after the initial excavations were complete (Duane Esarey, personal communication 2020). The anomalies highlighted for 2020 excavations consist of a larger central anomaly surrounded by a circle of smaller anomalies located to the north of the 1984 excavations. This group of anomalies appears to be located along the northern edge of the main habitation area. Other similar areas can be seen throughout the site (Figure 6.5). It should be noted that much of the midden area does not show clear signatures for structures, especially closer to the central plaza, although this could be due to the corn stubble in the field during the time of survey causing some disturbance in the data. At the same time, the roughly 20 m x 20 m plaza is clear from magnetometry data and appears to be mostly devoid of features.

One of these 20 m x 20 m squares surveyed to the immediate south of the known site appeared to be a small knob overlooking Carter Creek (the body of water). It was thought that this knob may represent the eroded and plowed down remains of a mound, but the survey revealed this not to be the case. Instead, this is likely an eroded, or extended, portion of the village outside of the main habitation that produced the midden. Interestingly, this area did have anomalies that suggest some features may be present outside of the focused habitation area closer to the plaza (Figure 6.6).

Based on the results of the 2020 excavations, it is clear that the anomalies chosen for ground truthing were representative of structures at Carter Creek. This highlights the potential for future excavations at Carter Creek to examine these other circular sets of anomalies for further ground truthing. It would also be useful to see if other clear anomalies represent worthwhile, and consistent, excavation targets. These results also highlight the potential for further magnetometry work at other circular villages from this time period to see if any structures can be located. As discussed below, magnetometry survey has been performed at Gast Farm, but no clear structures were identified (e.g., Green 2018). It would be interesting for someone with more expertise in this technique to compare magnetometry survey data from Carter Creek and Gast Farm.

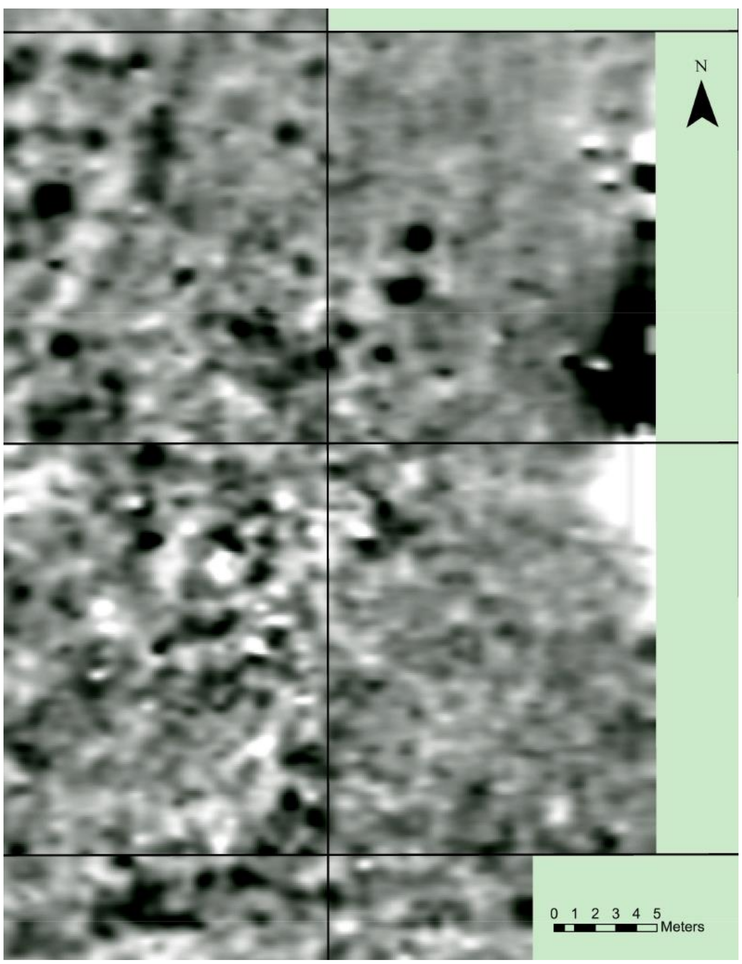

Figure 6.4: A zoomed in look at the strong anomalies created by the remnants of a fence along the edge of the agricultural field that the Carter Creek site sits within. The anomalies are shown as the large black and white shapes on the right.

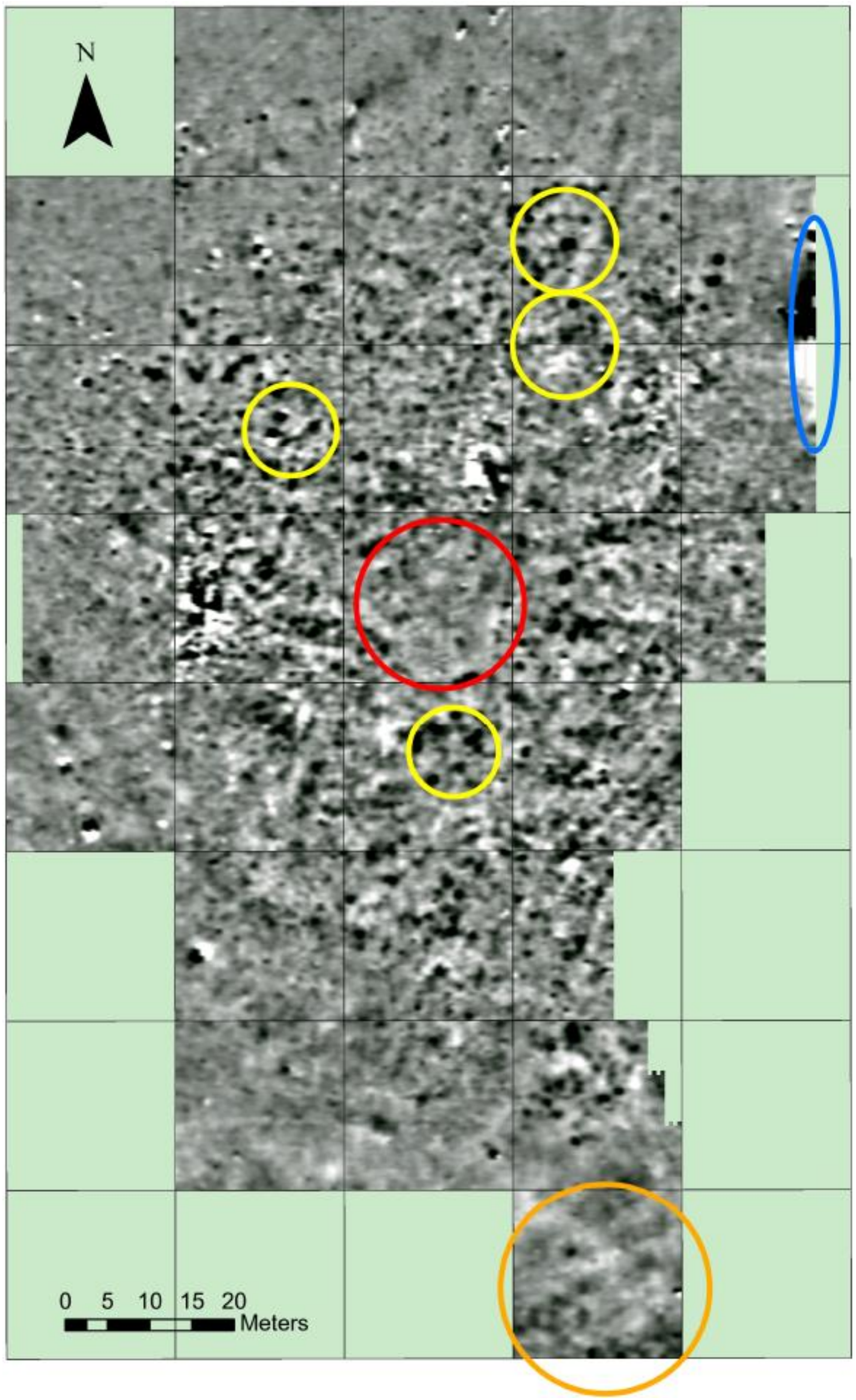

Figure 6.5: A map of the magnetometry survey data from Carter Creek. The red circle shows the presence of the central plaza, most devoid of anomalies. The orange circle is the small knob located south of the circular midden that was surveyed. The blue circle is the edge of strong anomalies that were created from the former presence of a fence (and its remnants) along the edge of an agricultural field. The yellow circle show possible structures, including Structure 1 (the farthest north yellow circle), as evidenced by roughly circular patterns of anomalies sometimes with a larger anomaly in the center.

Overall, the magnetometry survey did an excellent job of highlighting the necessary areas for the purposes of 2020 work at Carter Creek. The survey results demonstrate that the aerial photographs taken in 1984 show an accurate surface manifestation of the site layout at Carter Creek. Clearly, Carter Creek consisted of heavier habitation in a circle around an open central plaza, with some indication that light activity extended beyond this immediate area. What the survey cannot tell us is a more detailed understanding of how people were living at Carter Creek. Does the open central plaza represent a communal activity area like that at Rosewood (discussed more below)? Are there distinct activity areas or identity groups at Carter Creek? We would not have full answers to these questions until further excavations were carried out. Based on data from both the 1984 and 2020 excavations, we can begin to identify how people living at Carter Creek were actively expressing and practicing different forms of identity. Artifact data were discussed in detail in the previous chapter, so I now move on to highlight feature data from Carter Creek to begin answering these, and many other, questions.

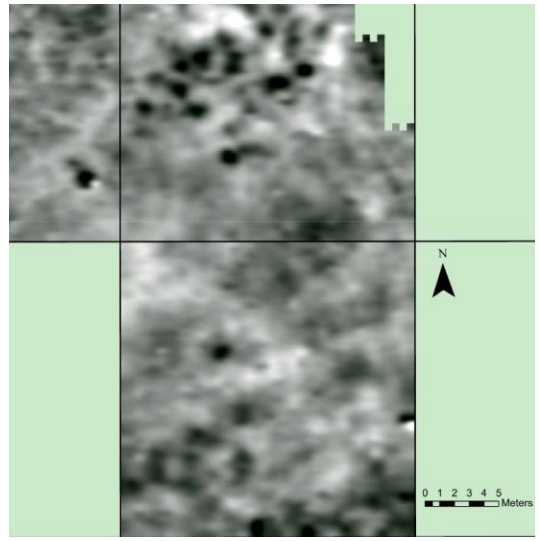

Figure 6.6: A zoomed in look at the small knob located south of the circular midden at Carter Creek that was examined during the magnetometry survey. There are some small anomalies (black circles) that may indicate the presence of some features.

Pits

In total 51 pits were excavated during 2020 work at Carter Creek. A decent portion of these pits (n=13) were partial due to being cut by other pits or cut by the plowzone. Overall, there were 20 examples of pits or postmolds superimposing on one another (Table 6.1), often coming from groups of pits clustered together, all serving similar functions. It should also be noted that Feature 56 (F56) was originally labeled as a pit, but upon excavation was determined to be a postmold (PM42). This feature and the data collected from it will only be considered in the postmold section below.

Feature X	**Superimposed on Feature Y**
16	14
11	14
28	PM18
46	45
46	PM32
47	PM37
48	PM14
49	PM14
53	54
PM11	53
54	55
PM11	54
58	PM15
59	60
60	61
62	63
65	64
65	66
65	PM20
66	PM19

Table 6.1: Superpositioned features at Carter Creek.

Feature Type/Use	**EB1**	**EB2**	**Count (all)**
Cooking/Processing	23	5	28
Open-Basin Cooking	6	-	6
Storage/Refuse	5	-	5
Indeterminate/Refuse	3	1	4
Storage	3	-	3
Earth Ovens	2	-	2
Earth Oven/Storage	2	-	2
Earth Oven/Jar Holder	1	-	1

Table 6.2: Carter Creek Features by Type/Use.

Of the 51 pits identified, 27 were circular in plan view and 24 were oval. A majority of the pits were basin-shaped in profile (n=38), with others being cylinders (n=12) or cones (n=1). Three of the cylinder-shaped pits appeared to have been cut by the plowzone and only represented the very bottom portion of the pit. These three pits are not included in the volume, artifact density, depth, and fill zone discussions below unless explicitly stated. Almost all of the pits (n=47) had evidence of fire activity, usually in the form of charcoal. Another 20 of the pits had at least one zone of ashy fill, while 10 had at least one zone of greasy fill. Another 10 pits also had slump zones located along the edges of the pits (see Appendix C for a detailed table of feature attributes).

It is assumed that all pits ended their use life as receptacles for refuse, but an attempt was still made to determine what each pit may have been used for based on the size, shape, and contents of each feature. A majority of the pits at Carter Creek were identified as cooking/processing (n=28), with the remaining pits being six open-basin cooking, five storage/refuse, four indeterminate/refuse, three storage, two earth ovens, two earth oven/storage, and one earth oven/jar holder (Table 6.2). It is thought that the indeterminate/refuse pits were likely used for food processing based on their shape, but there is no clear evidence of this in the fill zones or contents of these pits. The earth oven/jar holder was thought to be such based on the shape of the pit (cone). All the Excavation Block 2 (EB2) pits (n=6) are circular basins with five functioning as cooking/processing pits and one serving as an indeterminate/refuse pit. EB1 has the remainder of the pits (n=45). A more detailed explanation of how these different pit types were defined is offered below.

Koldehoff (2002) notes that evidence from around the world suggests pits were most often dug for either storage or cooking, but they can be filled for myriad reasons that often have nothing to do with the pit's original purpose. Archaeologists can still make useful inferences about a pit's use based on filling episodes, artifacts within the fill, shape, and burning in the pit/fill. Following other early Late Woodland sites in the region (e.g., Emerson 2013a), profile shape and size were the most used traits to infer pit function at Carter Creek, but other traits were also considered. Cylinders are likely to have been used for storage or as earth ovens, whereas basins were likely used for food processing (including cooking).

Open-basin cooking pits are usually shallow to moderately deep basins often identified by in-situ burning, but at Carter Creek this was generally rare. Many pits had ashy fills, which led to the inference that some of these pits were used for open-basin cooking and not just the refuse of ashy fills. Cooking/Processing pits are usually defined as basins that lack in-situ burning evidence, such as bands of burned sediment or charcoal. Some of these pits are expected to have ashy fills in them and usually have some kind of cooking debris (e.g., fire-cracked rock (FCR), charcoal, burned clay). These pits may lack the size or shape to be a larger open cooking pit. Storage/Refuse pits are generally deeper and have evidence for burning usually overlain by slump or washed in zones. They often have multiple zones below the slump/wash-in and are sometimes capped with refuse fills. They can be any profile shape. Earth ovens are usually deeper pits that are lined with FCR/burned limestone and have a greasy layer towards the base of the pit, possibly caused by burned plant materials used to line the pits or cover the materials being cooked (e.g., Emerson 2013a:23). Sometimes earth ovens are hard to differentiate from storage/refuse pits. Storage pits are medium to deep sized, without clear dumping zones and can be any profile shape. They are often multi-zoned with a sterile layer near the base of the pit overlain by slump zones or washed in midden debris (see Figure 6.7 for a selection of pit profiles that fit these different use types).

The average dimensions of all pits at Carter Creek are 72.61 centimeters (cm) x 67.25 cm x 25.16 cm. Basins averaged 74.82 cm x 68.87 cm x 21.71 cm, while cylinders averaged 65.83 cm x 61.1 cm x 42.56 cm. The single cone-shaped pit was 70 cm x 72 cm x 48 cm. The deepest basin is 39 cm (F49), and the deepest cylinder is 52 cm (F27). Over half of the pits, excluding those that were cut by the plowzone, had one fill zone (n=25/48), but the average number of fill zones is 1.66 fills. The remaining pits either had two fill zones (n=17) or three fill zones (n=6).

Basins were below the site average with a mean of only 1.39 fill zones; 15 of the basins had two fill zones. For cylinders, the average number of fill zones was much higher at 2.56 fills, with most having more than one fill zone (n=9 out of 12). The single cone-shaped pit had three fill zones (Table 6.3).

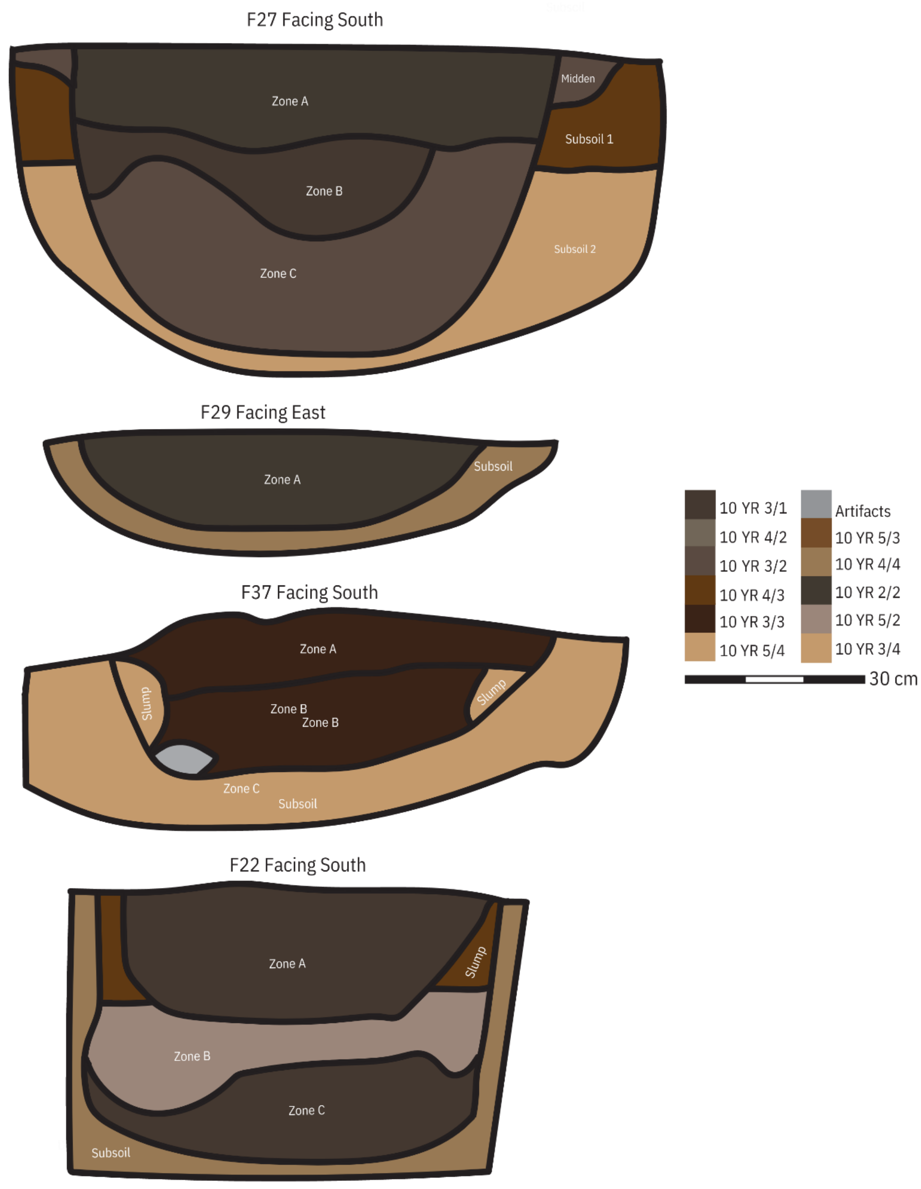

Figure 6.7: Examples of different pit types at Carter Creek, including earth oven (F27), open-basin cooking (F29), cooking/processing (F37), and storage/refuse (F22).

The average volume for all types of pits was 73.66 liters (L), with artifact densities averaging 34.81 grams per liter (g/L) overall. The average volume of basins was 54.4 L with a density of 48.27 g/L, mostly made up of lithics at 42.8 g/L. The average volume of cylinders is 172.57 L with an artifact density of 19.7 g/L, also mostly from lithics (16.47 g/L). The single cone had a volume of 100.6 L and an artifact density of 33.37 g/L (30.62 g/L of lithics). Cylinder shaped pits are generally higher in volume due to their use as earth ovens or for storage, which require more depth than open-basin cooking or cooking/processing pits. For example, pits in the American Bottom get deeper beyond the early Late Woodland period due to a change in cooking methods from direct heat cooking to indirect heat (earth oven) cooking (Jackson et al. 2014).

Feature Profile Shape	**EB1**	**EB2**	**All Pits**
Basins			
Average Volume (L)	55.08	50.57	54.4
Average Artifact Density (g/L)	41.36	88.21	48.27
Average Dimensions (cm) (l x w x h)	75.06 x 67.94 x 21.75	73.5 x 73.83 x 21.5	74.82 x 68.87 x 21.71
Average # of fill zones	1.38	1.5	1.39
Cylinders			
Average Volume (L)	133.33	-	172.57
Average Artifact Density (g/L)	19.70	-	19.70
Average Dimensions (cm)(l x w x h)	65.83 x 61.1 x 42.56	-	65.83 x 61.1 x 42.56
Average # of fill zones	2.56	-	2.56
Cones			
Average Volume (L)	100.6	-	100.6
Average Artifact Density (g/L)	33.37	-	33.37
Average Dimensions (cm) (l x w x h)	70 x 72 x 48	-	70 x 72 x 48
Average # of fill zones	3	-	3
All Pits			
Average Volume (L)	76.74	50.57	73.66
Average Artifact Density (g/L)	30.11	88.21	34.81
Average Dimensions (cm) (l x w x h)	72.49 x 66.32 x 26.83	73.5 x 73.83 x 21.5	72.61 x 67.25 x 25.16
Average # of fill zones	1.67	1.5	1.61

Table 6.3: Selected Pit attributes by Excavation Block and Pit Profile Shape. Cylinder averages do not include pits that were clearly cut by the plowzone.

When comparing the two excavation blocks, the dimensions of pits are roughly similar, but the pits in EB2 clearly have a much higher artifact density, while the pits in EB1 are larger by volume (Table 6.3). The average dimension of pits from EB1 is 72.49 cm x 66.31cm x 26.83 cm with the deepest being 52 cm (F27). The average dimensions of pits from EB2 are 73.5 cm x 73.83 cm x 21.5 cm with deepest being 25 cm (F16). The average number of fill zones from EB1 is 1.67 and the average number of fill zones from EB2 is 1.5. The average volume from EB1 is 76.74 L and the average volume from EB2 is 50.57 L. The artifact density from EB1 is 30.11 g/L, while the artifact density from EB2 is extremely high at 88.21 g/L. The differences in the pits from each block may come from the much different sample size, or perhaps from different activities taking place at each portion of the site, leading to different refuse practices.

Outside of the general characteristics of the pits as a collection, I want to highlight some of the more unique traits identified. Feature 49 had the most burned clay in its fill (101.64 g), which may have come from its use as a cooking/processing pit. Features 16 and 19 are the only two pits with more than 500 g of ceramics in their fill, with 2,013.57 g and 1,333.16 g respectively. There is no evidence that either of these pits were used for ceramic production practices, but their proximity to the structure in EB2 and the sheer amount of ceramics in each pit may suggest that ceramic production was taking place within or near this area.

In terms of total vessels, F16 had the most with 13. Other features with a large number of vessels include F30 (10 vessels), F28 (6 vessels), F27 (5 vessels), and F48 (5 vessels). Interestingly, all of the vessels identified as Middle to Late Woodland transition come from EB1. It should also be noted that all non-local vessels identified (e.g., Lima Lake) also come from EB1. Feature 27 also stands out

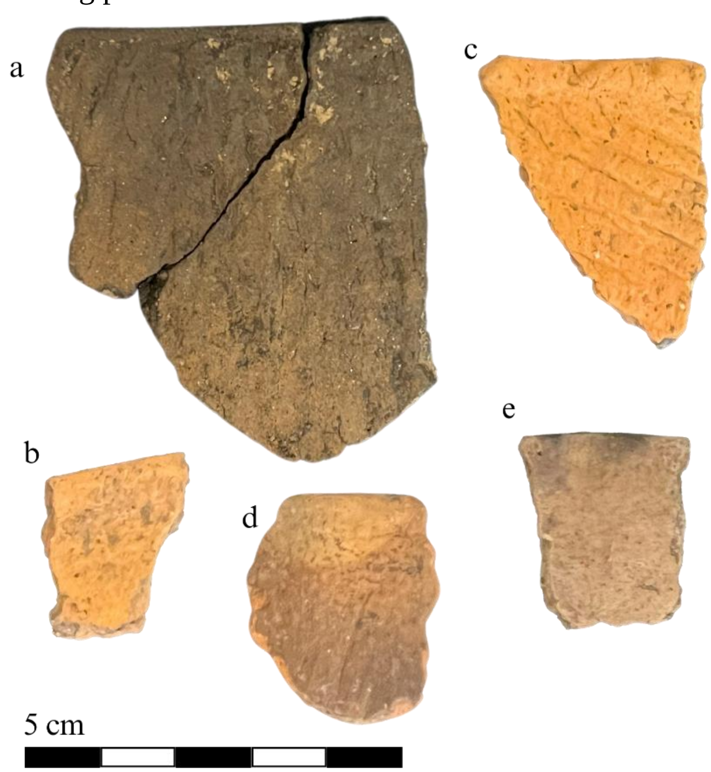

Figure 6.8: Vessels from F27. (a) V27-1, (b) V27-2, (c) V27-3, (d) V27-4, (e) V27-5.

in regard to its ceramic assemblage. This pit was identified as an earth oven, which may explain the large amount of burned clay in the features fill (second most at 100.39 g). Interestingly, this feature also had the second most potter's clay by weight (56.95 g) behind only F28 (61.01 g). It also contained the remnants of at least five vessels, including a brushed vessel with grit-grog tempering, a Lima Lake vessel with grog tempering, and a sand-tempered vessel (Figure 6.8). This feature also has the highest volume out of all pits (294.92 L) and the highest artifact density out of all cylinders (27.72 g/L), excluding those cut by the plowzone.

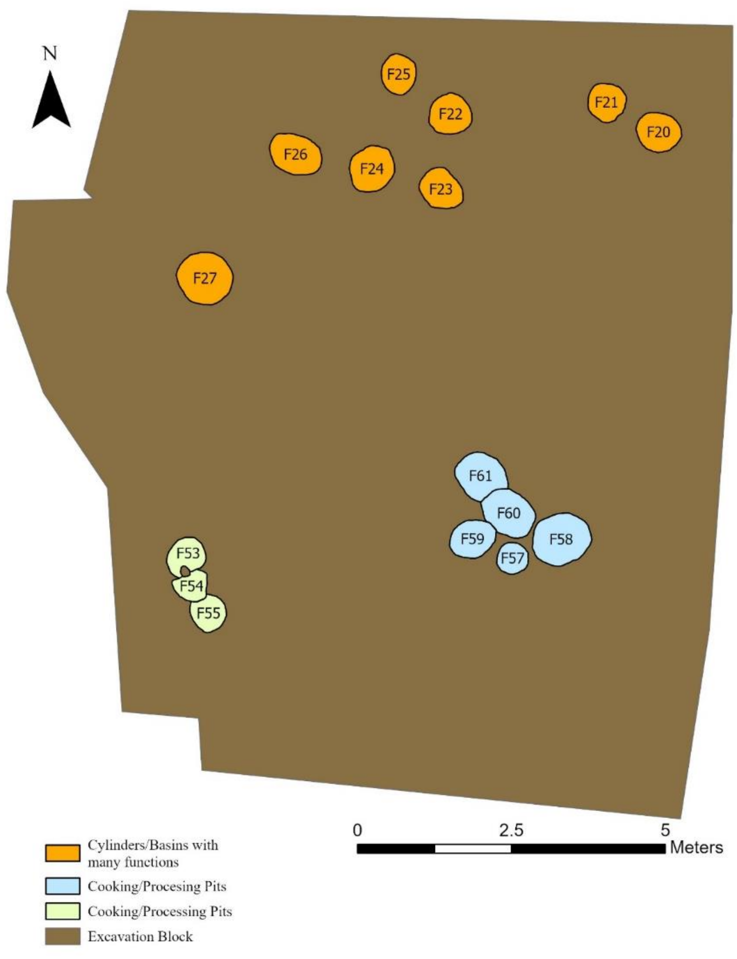

Figure 6.9: Clusters of features from Excavation Block 1 (EB1) that have similar uses and may represent activity areas.

The largest basin by volume is Feature 41 (212.0 L) and it is located roughly in the center of what appears to be a structure in EB1 (defined as Structure 1 below). It was first thought that this feature was a central hearth, similar to that uncovered during 1984 excavations, but there was no evidence of in-situ burning when it was excavated. Instead, it was defined as a standard, albeit very large, cooking/processing pit. Two other basins have volumes equal to or over 100.0 L (features 30 and 49, at 150.0 and 100.0 L). These two basins are located in different portions of the excavation block and sit outside of or along the edges of the identified structure. Feature 16, partially due to the large amount of ceramic refuse in its fill, has the highest density for all features at Carter Creek (254.78 g/L) and is the only feature over 90.0 g/L of artifact density. The weight of all ceramics and lithics from the fill in F16 makes up 7.1% of the total artifact weight from 2020 excavations.

Figure 6.10: Zoomed in look at F53, F54, and F55, three cooking/processing pits that overlapped. These pits are also possibly associated with Screen 2.

There are also some clusters of features that should be noted (see Figures 6.9 and 6.10). Features 53, 54, and 55 all overlap in the southwestern corner of EB1 and served similar functions as cooking/processing pits. Features 57, 58, 59, 60, and 61 all cluster in the southern portion of EB1 and are likely cooking/processing and open-basin cooking pits that were used in conjunction with one another. Features 20, 21, 22, 23, 24, and 26 are all cylinders located in the north to northeastern portion of EB1, serving similar functions; F27 to the southwest is also a cylinder and F25 to the north is a basin. These pits have cooking/processing and storage/refuse functions and may have served as a focal point of activity just outside of Structure 1.

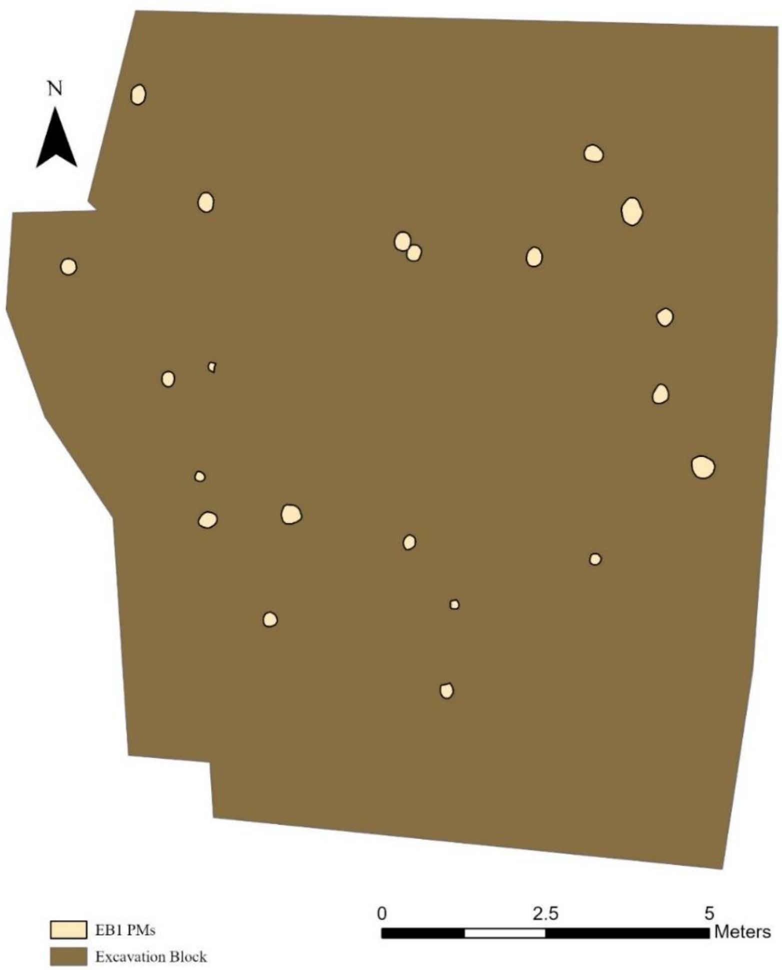

Figure 6.11: A map of all possible PMs identified in Excavation Block 1 (EB1).

Postmolds

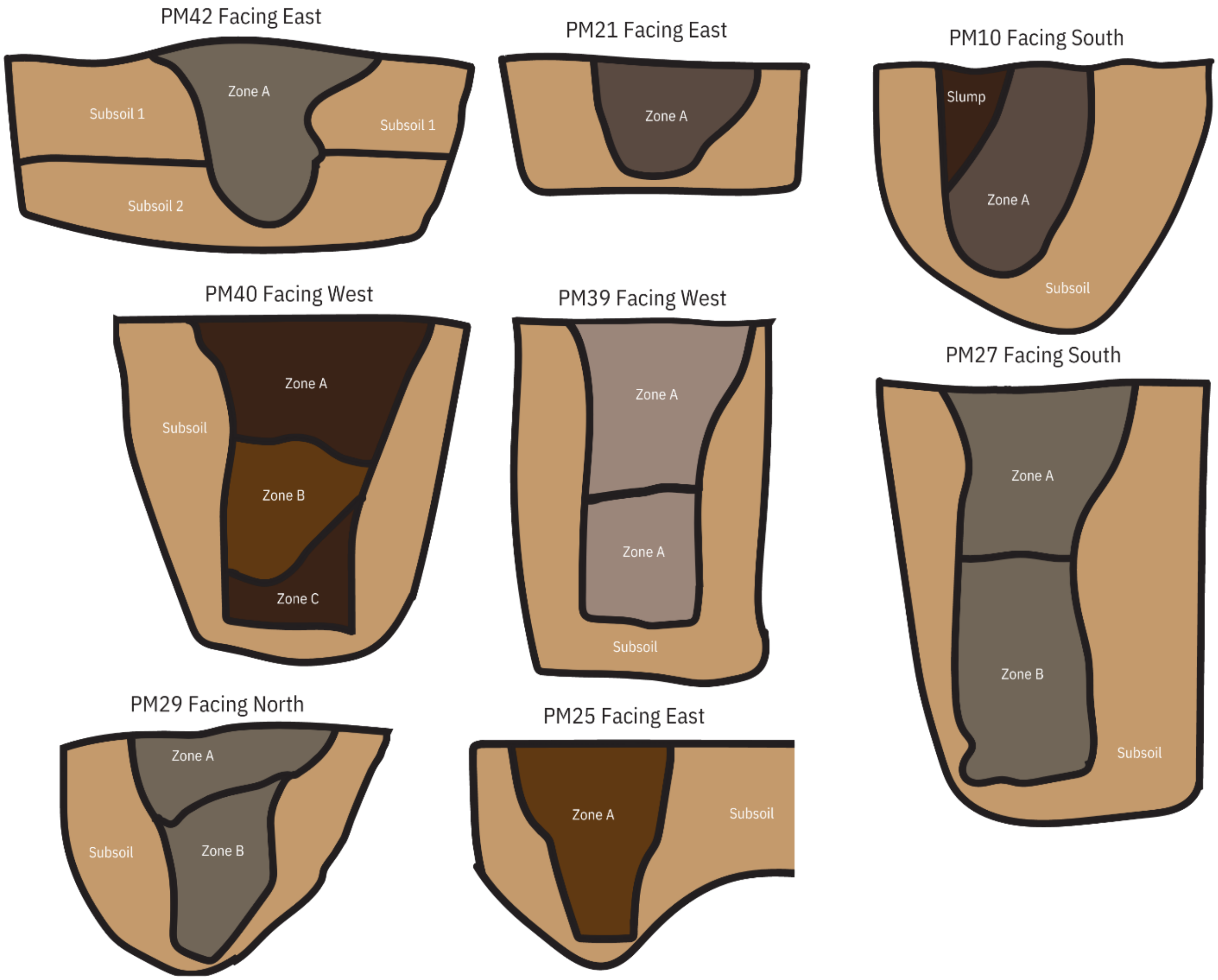

Figure 6.12: Profiles for all posts that show evidence for pulling or removal, excluding those that were also considered questionable (PM23 and PM41).

In total, 33 postmolds (PMs) were identified during 2020 excavations at Carter Creek (Table 6.4, Figure 6.11). Of these, 19 are circular in plan view, 13 are oval shaped in plan view, and 1 was indeterminate due to it not being located until the bottom of pit excavation. The profile shape of the PMs at Carter Creek includes 14 with a rounded base, 13 with a flat base, 4 with a pointed base, and 2 with indeterminate shapes due to super positioning not showing the full profile. PM37 was not excavated as weather towards the end of excavations covered it in standing water. In total, 6 of the PMs were considered questionable and 10 showed evidence of pulling (pulling means that the post in this hole would have been removed, and likely relocated, instead of being burned or rotting in place), such as slump and/or ramping at the top edges of the PM (Figure 6.12). Of all the PMs, most (n=22) show evidence of burning, 4 had ashy fills, and 1 had a definite slump zone. A total of seven PMs were partial due to pits cutting into them. All of the PMs that were identified at or near the bottom of pits are located in the southern half of EB1 (Figure 6.13).

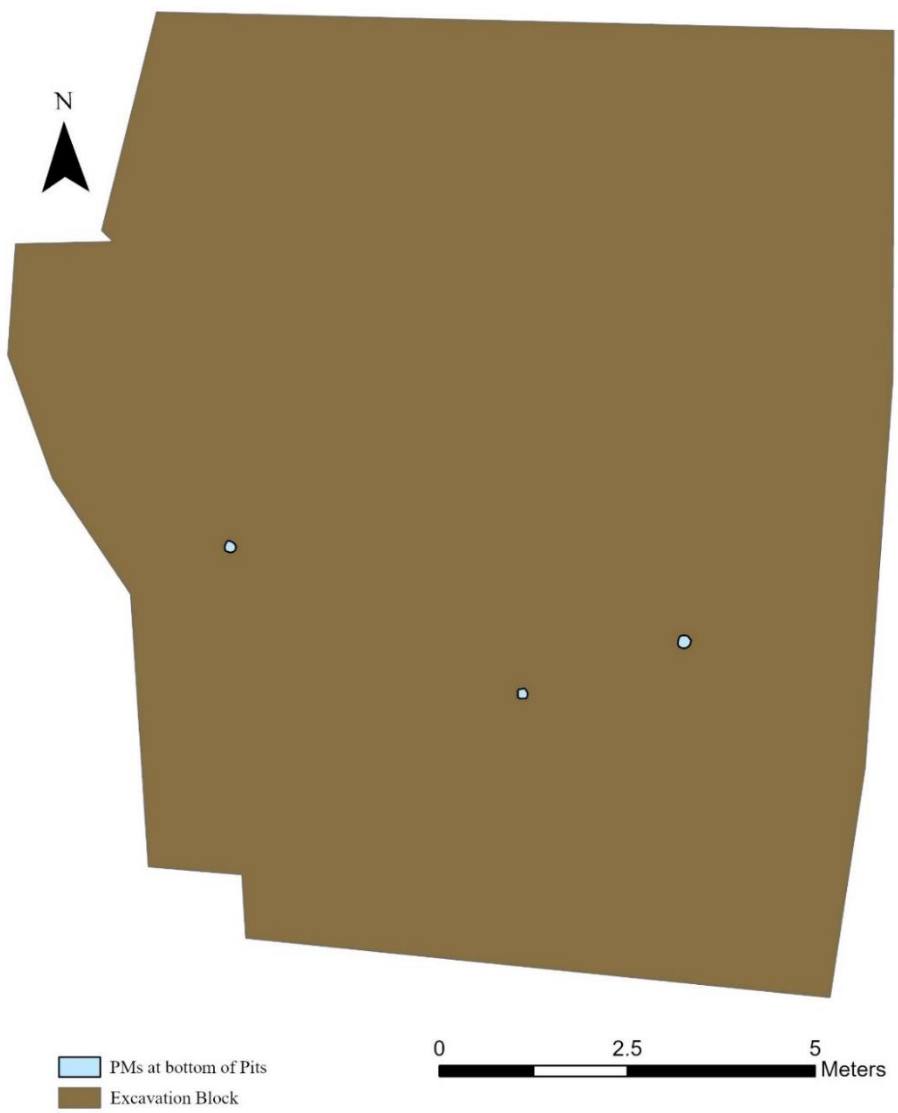

Figure 6.13: A map of PMs identified at the bottom of pits indicating that they were cut into by the pits after removal.

The average dimensions of all PMs were 23.55 cm x 21.9 cm x 24.28 cm, although this includes some PMs that were not identified until the bottom of pits which would impact the dimensions. The average depth of all PMs excluding those cut by other features was 25.18 cm. When excluding the questionable PMs, the average dimensions are 22.59 cm x 21.44 cm x 24.69 cm. PMs showing evidence of being pulled were generally larger and had average dimensions of 27.7 cm x 25.5 cm x 34.5 cm. All PMs together averaged 1.21 fill zones; 27 had only one fill zone. When only considering the definite PMs, the average number of fill zones is slightly higher at 1.26 fills. The pulled PMs had 1.5 fill zones on average.

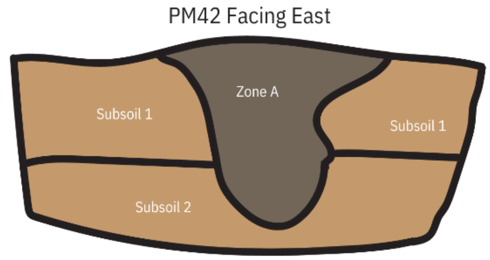

Figure 6.14: Profile of PM42 which may have been a support post and had notable amounts of FCR near and at its base.

Postmold (PM) Attributes	**N=33**
Plan Shape	
Circular	19
Oval	13
Indeterminate	1
Profile Shape	
Rounded Base	14
Flat Base	13
Pointed Base	4
Indeterminate	2
Other Attributes	
Questionable	6
Evidence for pulling	10
Evidence of burning	22
Ashy Fills	4
Average Dimensions (all) (l x w x h) (cm)	23.55 x 21.9 x 24.28
Average Dimensions (definite PMs)	22.59 x 21.44 x 24.69
Average Dimensions (pulled PMs)	27.7 x 25.5 x 34.5
Average # of fill zones (all)	1.21
Average # of fill zones (definite PMs)	1.26
Average # of fill zones (pulled PMs)	1.5

Table 6.4: Selected Attributes for all Postmolds from 2020 excavations at Carter Creek.

Most of the PMs do not exhibit notable characteristics, but some should be discussed further. Although it seems likely that most of the artifacts found in PMs came from backfilling, PM40 was notable as it had one non-chert tool and the partial rim of one vessel in it. This PM was the second deepest (46 cm) and also one of the larger PMs by length and width (30 x 30 cm). PM14 had a charcoal concentration at the bottom, suggesting it may have burned in place; PM36 also showed evidence of burning in place based on the heavy amount of charcoal in its fill. PM42 (originally F56) had FCR near its base that may have been support for the post (Figure 6.14).

Households/Structures

This section will only discuss the general outlines of the structures identified at Carter Creek. A more detailed discussion will take place below to examine the function of these structures. Both the 1984 and 2020 excavations show at least one oval structure, although it seems possible that EB1 has partial walls of more than one structure. Based on the definite PMs (Figure 6.15) the structure in EB1 roughly measures roughly 8 meters east to west and 7.5 meters north to south (47 square meters (m^2)); this structure is hereafter referred to as Structure 1.

Based on the random assortment of posts, especially in the southern and western portions of EB1, it seems possible that Structure 1 was either rebuilt/repaired multiple times, or that the eastern/northeastern wall of another structure butts up to it. Additionally, most of the PMs that were identified at or near the bottom of pits due to the pits cutting through the tops of the PMs are located in the southern/southwestern portions of EB1. This indicates that this portion of EB1 saw more reuse than the northern and eastern portions, as do the higher number of super-positioned pits in this area. Whether these super-positioned PMs/pits represent the reuse of the area by new or seasonal occupants, or the repair of Structure 1 is currently unknown. The PMs in the southern and eastern portions of EB1 show a much cleaner structural outline. Further, there is a relatively large gap between posts in the northwestern corner of Structure 1. This may indicate that this portion of the structure was open and acted as an entryway. It should be noted that

PM33, 24 cm x 18 cm x 24 cm dimensions, may sit roughly at the center or near the center of Structure 1, depending on where the southern wall of the structure was located.

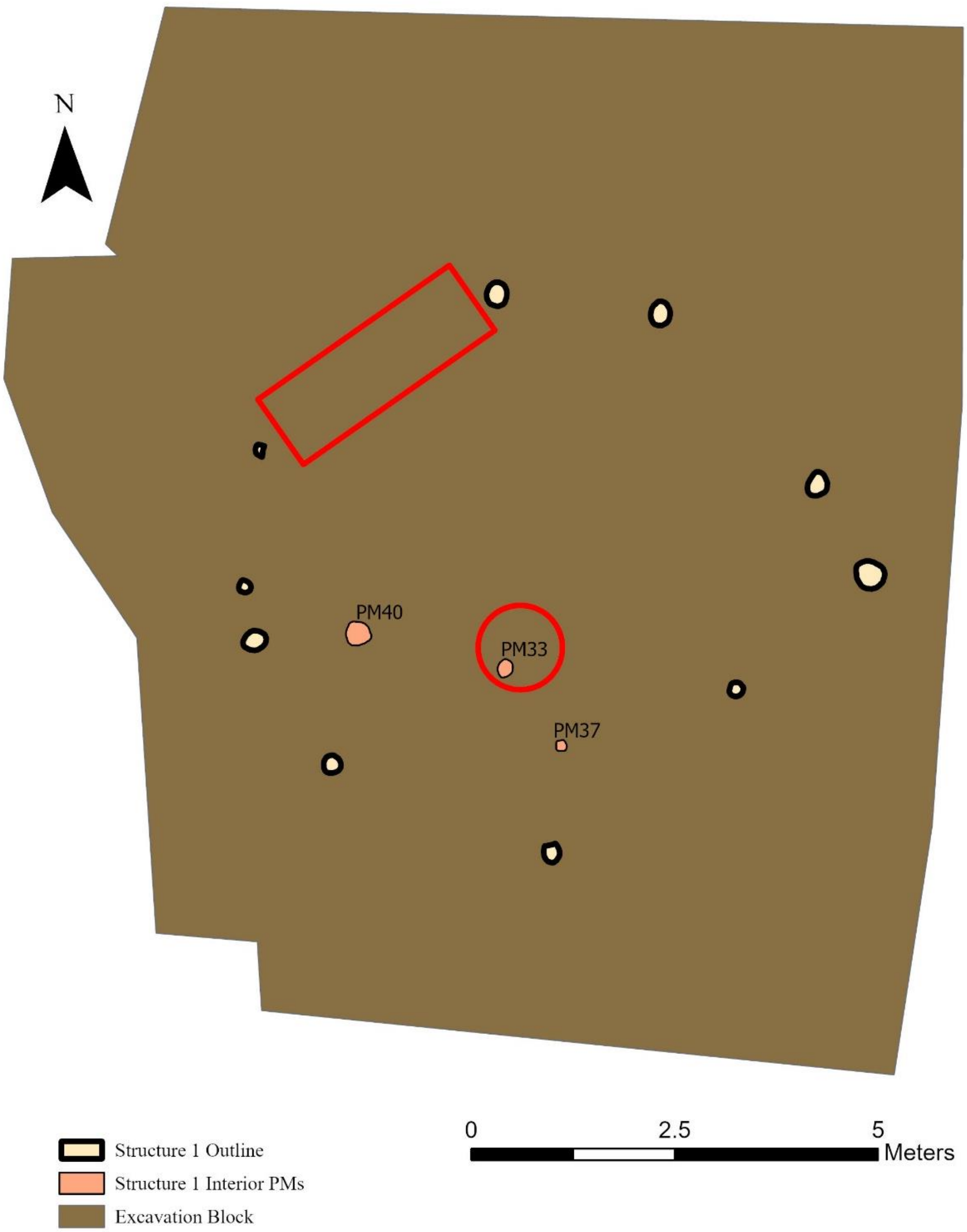

Figure 6.15: A map of Structure 1 and interior PMs. The red rectangle may represent an entryway facing to the northwest. PM33 (circled in red) may be a center post and/or a support post along with the other interior posts (PM40 and PM37).

Screen Attributes	Screen 1	Screen 2	Screen 3
Postmolds configuring Screen	21, 34, 12, 30	11, 24, 20, 19	13, 36, 35, 31
Length (approximate) in meters (m)	3	3	3
Direction	North to South	Northwest to Southeast	Northeast to Southwest

Table 6.5: Carter Creek Post Screens attributes.

Another possible explanation for the additional PMs found in the southern/western portions of EB1 May come from the Rosewood site. Fortier (2014c) suggest that roughly straight lines of posts at the Rosewood site may represent “screens” that could be used for windbreaks, privacy, or food processing. It seems possible that three such screens could be present at Carter Creek (Table 6.5, Figure 6.16). One screen (Screen 1) may have consisted of PMs 21, 34, 12, and 30, measuring roughly three meters long and running north to south just outside the western wall of Structure 1. A second screen (Screen 2) may have consisted of PMs 11, 24, and 20, measuring roughly three meters long and running northwest to southeast just outside the southwestern wall of Structure 1. The last possible screen (Screen 3) may have consisted of PMs 13, 36, 35, and 31, measuring roughly three meters long and running northeast to southwest just outside the southeastern wall of Structure 1. All three of these possible screens are located in a portion of EB1 with numerous, often overlapping, cooking/processing and open-basin cooking pits (Figure 6.17). Perhaps these screens served as, relatively, temporary food processing structures.

If we assume that the PMs found in EB1 were either the wall of Structure 1, repairs of Structure 1, or screens for cooking activities just outside of Structure 1, it would seem that most or all of the pits located in this block are associated with a single household unit. This determination cannot be definitively made, so it is difficult to directly associate any of the pits outside of Structure 1 with its direct occupation. At the same time, there is a clear central area of Structure 1 that has very few pits located within it, except features 41, 42, and 43. These features, as well as others that seem to sit right along the outside wall of Structure 1, are very likely associated with its inhabitants.

Excavation Block 2 (EB2) shows the clear outline of half of a structure, without the additional complexities of numerous superimposed pits and PMs like EB1 (Figure 6.18). Excavations from 1984 show a clearly oval structure measuring roughly 9 x 7 meters (49 m^2) with a clear eastern wall represented by a single row of PMs; hereafter referred to as Structure 2. A central hearth was also located during these excavations, as well as additional pits within and immediately outside of Structure 2. The six pits uncovered in EB2 during 2020 excavations all fall outside of Structure 2 and may be associated with its occupation.

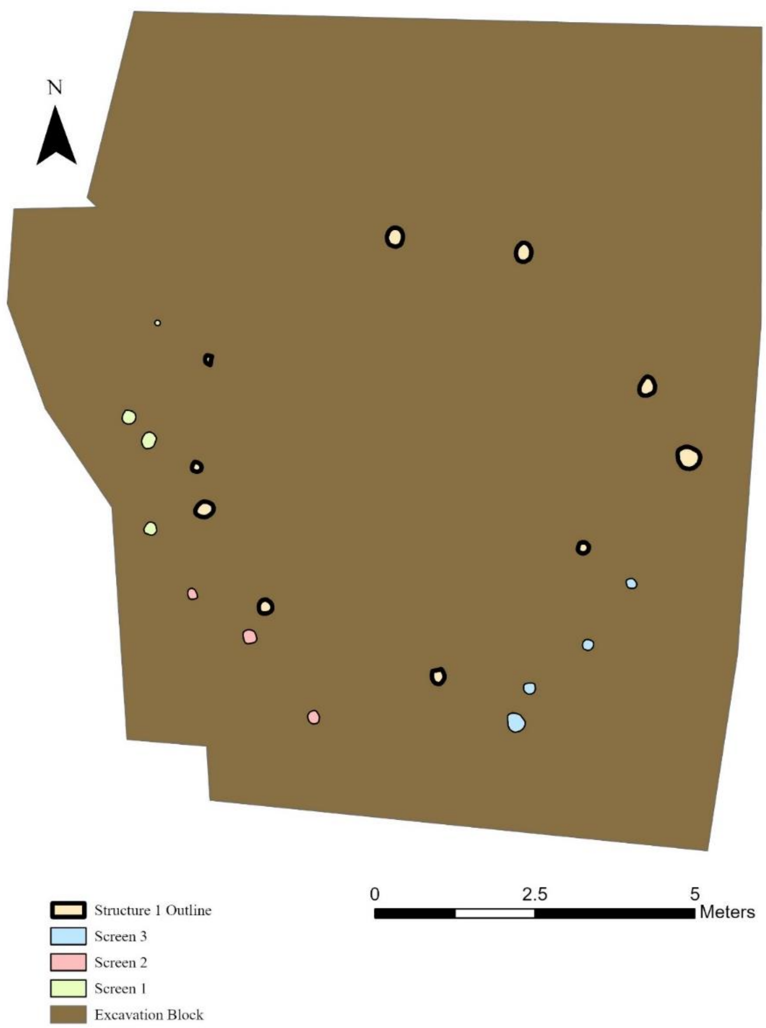

Figure 6.16: A map showing the locations of three screens that may have been used in cooking/processing activities outside of Structure 1.

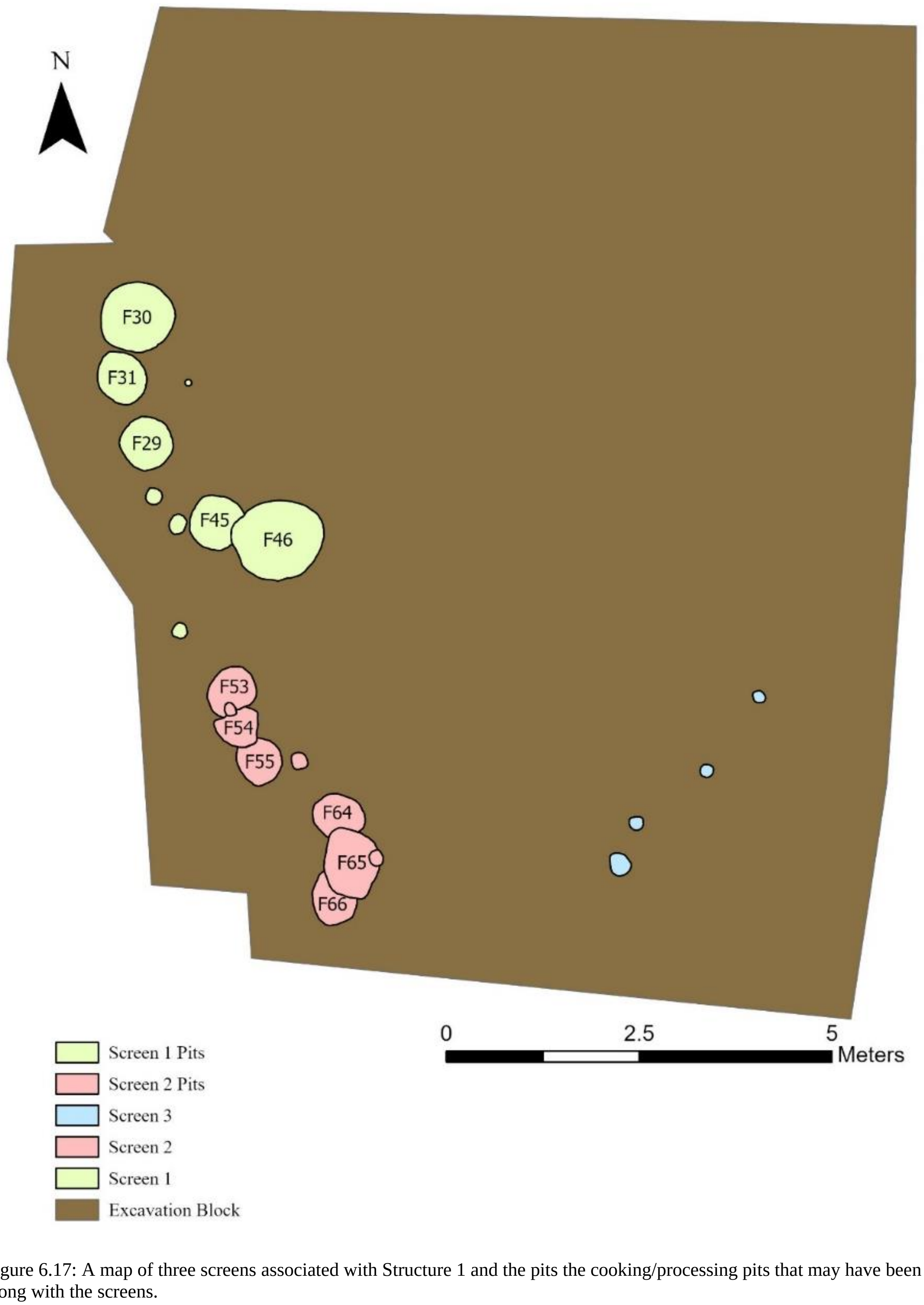

Figure 6.17: A map of three screens associated with Structure 1 and the pits the cooking/processing pits that may have been used along with the screens.

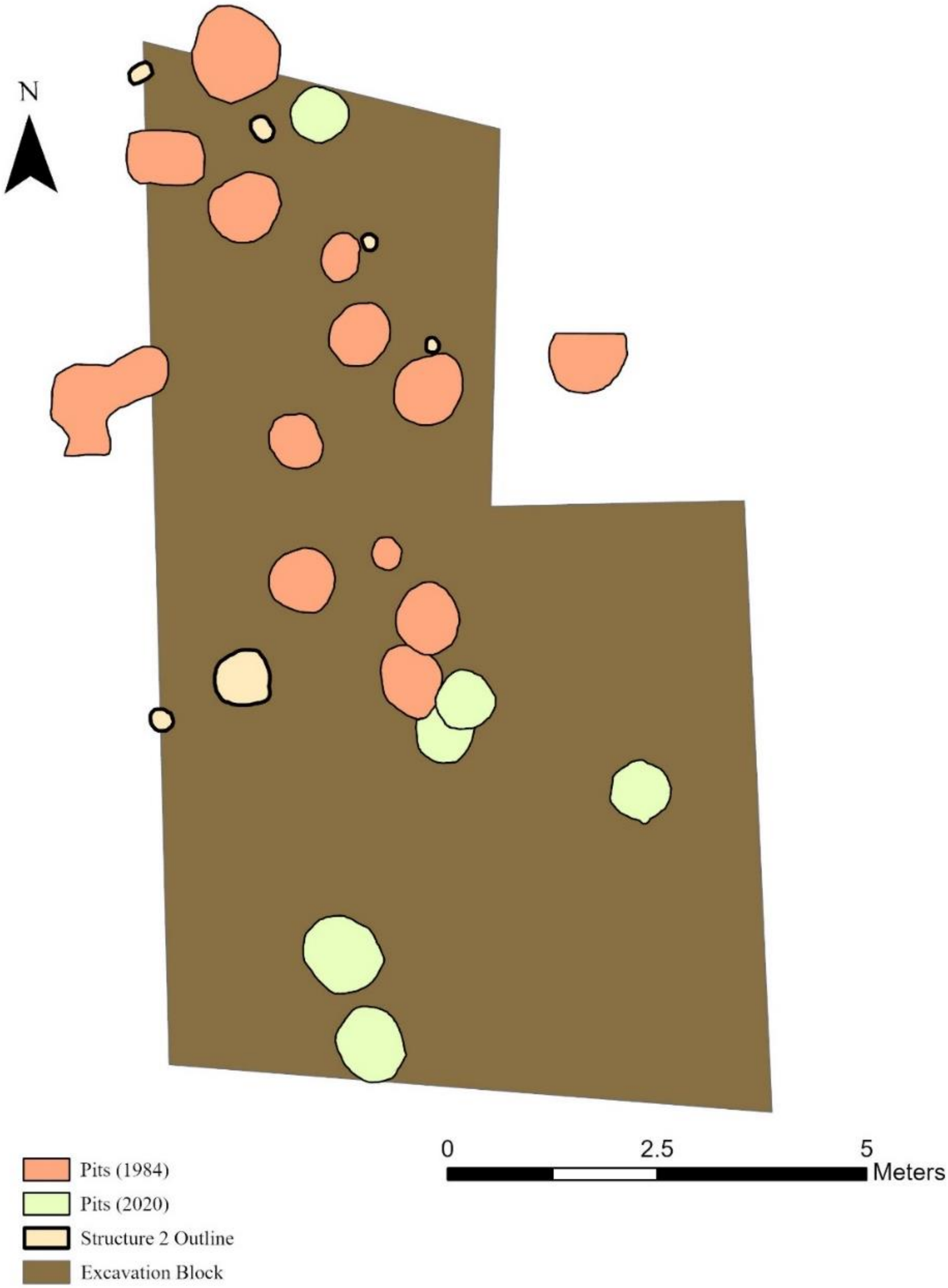

Figure 6.18: A map of Structure 2 and all associated pits.

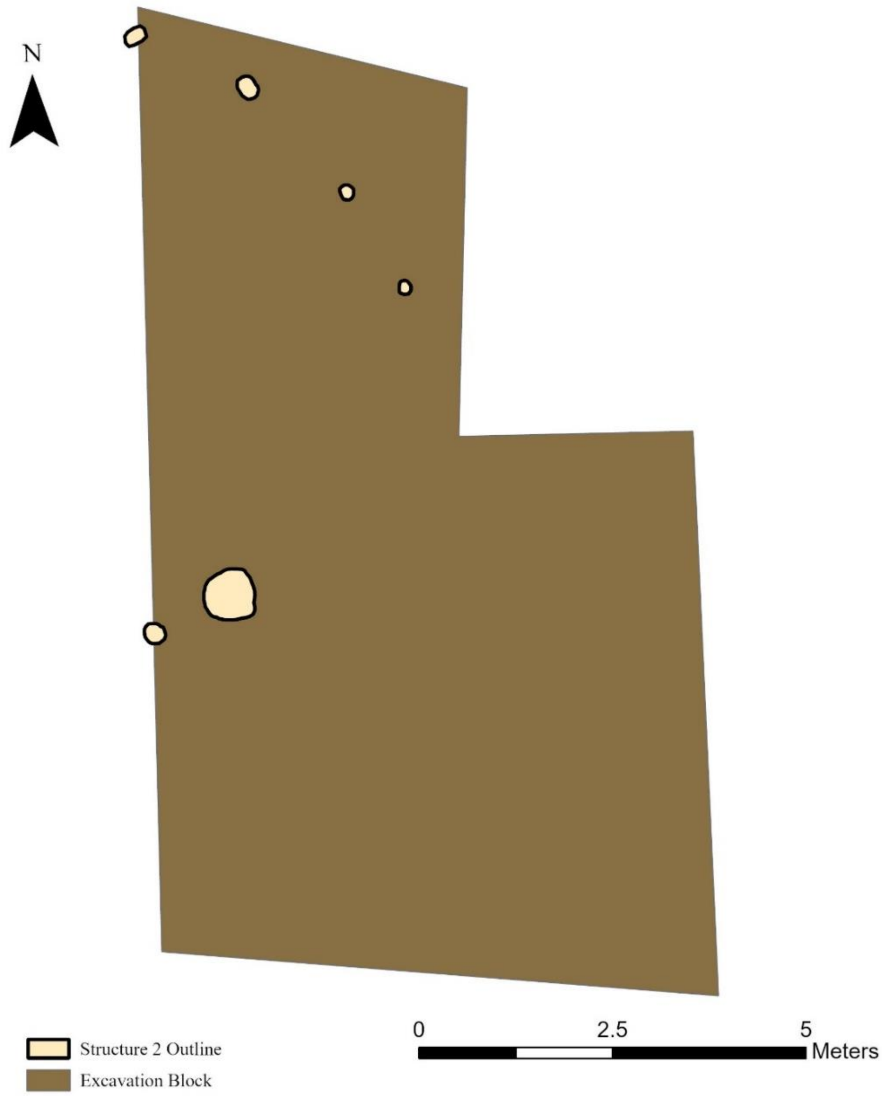

Figure 6.19: A map of the PMs that make up the outline of Structure 2.

This juxtaposition between a clear structural outline in EB2 and a much messier outline in EB1 suggests these areas were being used in different ways. Perhaps the area in EB2 was kept generally cleaner than that of EB1, with less overall activity due to the location of Structure 2 being much closer to the central plaza of Carter Creek. Another explanation could be different uses of these structures. The number of pits with evidence of burning in EB1 (42 out of 45), along with the number of cooking/processing pits, open-basin cooking pits, and earth ovens, suggest EB1 was heavily used for cooking and other food processing activities. EB2, on the other hand, has evidence of burning in five of the six excavated pits, but none of them have ashy fills and only one has a single zone of greasy fill (F14). This may help explain why there are so many overlapping features in EB1. The heavier use of Structure 1 may have been due to it being a communal cooking space, which may explain the three potential screens (Fortier (2014c) suggests that the central portion of the Rosewood site with five post screens was likely a communal space). It could have also been the main role of the household in Structure 1 to perform cooking duties for the larger community. In either case, heavy use of the area for cooking would necessitate the need for numerous cooking pits, which would have to be immediately replaced when they ended their use life (perhaps by immediately adjacent cooking pits). Further consideration of how these structures were being used by household units will help to elucidate the ways that living spaces and the activities that occur in them can be central to a household (or larger) identity.

Gast Farm

The Gast Farm site represents an early Late Woodland circular village that was occupied around the same time as Carter Creek. Due to its similar occupation dates and site structure, Gast Farm offers an excellent glimpse into the lifeways of early Weaver peoples outside of the LaMoine Valley as they first began to grapple with the transition between the Middle and Late Woodland periods. Based on available published data, 45 total features have been excavated from the Weaver occupation at Gast Farm, including 33 pits/hearths, 10 PMs, 1 surface stain, and 1 potential house basin. These features were identified through the excavation of 5 blocks measuring 10 m x 10 m in different portions of the site. Unfortunately, detailed data on these features are unavailable, although the volumes and functions of pits are discussed in Neverett's

(2001) dissertation. At the same time, a detailed magnetometry survey has been done at the site in recent years, giving archaeologists an excellent idea of how Gast Farm was used during both its Middle Woodland and Weaver occupations. The discussion below will highlight the available data.

Site Layout

Gast Farm sits atop an alluvial fan just five kilometers (km) west of the Mississippi River in eastern Iowa. This site's occupation mainly consists of a Middle Woodland village/ceremonial center and an early Late Woodland (Weaver) village, although some Early Woodland artifacts have been found there (Neverett and Whelan 1996). These two major occupations are situated on opposite sides of a mound group consisting of a central conical mound and several smaller circular mounds (Wiewel and Devor 2018).

The Middle Woodland habitation appears to be oval-shaped, leaving a midden that is 120 m x 170 m across with a 40 m x 60 m central plaza. This is very similar in size to the Weaver village at Gast Farm, which measures 150 m x 110 m with a 50 m x 30 m central plaza. The Weaver village is very similar in shape and layout to other early Late Woodland circular or arcuate villages throughout the wider region, including Carter Creek, Millville in Wisconsin (Freeman 1969), White Bend (Fishel 2013b), Rench in the Central Illinois Valley (McConaughy 1993b), Allison Lamotte sites in the Ohio River Valley (Stephens 1975), and possibly the Rosewood site (Jackson and Fortier 2014) as discussed more below. The overall site structure and mound shapes were recently verified via a geophysical survey at Gast Farm (Green 2018; Wiewel and Devor 2018), including a magnetometry survey.

Pits

There have been four main feature types identified at Gast Farm: 1) small basins that are 30-50 cm in diameter, 15-25 cm in depth and may have been used as jar holders, 2) large basins that were 70-100 cm in diameter, 10-25 cm in depth, and would have been used as storage pits, 3) shallow flat-bottom pits 50-130 cm in diameter, 5-20 cm deep with in-situ burning used as earth ovens, and 4) deep flat-bottom pits 35-60 cm deep used as storage pits or deep hearths (Campbell 1994). More details on these pits are yet to be published, but Neverett (2001) provides the volumes of the different pits excavated at Gast Farm based on the 10 m x 10 m block in which they were found.

The North Block at Gast Farm had 3 refuse/storage pits, 2 PMs, 1 hearth, 1 earth oven, and 1 surface stain ranging from 2.45 to 346.4 L in volume. The West Block had 8 PMs, 1 earth oven, and 1 potential house basin stain, ranging from 4.3 to 196.4 L in volume. The South Block had 5 refuse/storage pits and 2 hearths, ranging from 1.9 to 235.6 L in volume. The East Block had 7 refuse/storage pits ranging from 4.0 to 55.2 L in volume. The Central (Plaza) Block had 4 hearths and 9 storage/refuse pits ranging from 4.9 to 73.2 L in volume (Neverett 2001). It is suggested by Benn and Green (2000) that the central area of the site may have been used for communal feasting based on the large number of ceramics and faunal remains found on the surface in this portion of the site.

No other detailed information on pits/features at Gast Farm is available. No specific details on PMs have been published outside of the general volume data given by Neverett (2001). There is no evidence outside of one potential house basin stain for clear structures at Gast Farm, although it seems likely that some clustering of pits and/or PM patterns would be seen with additional excavation at the site. It would also be fruitful to use the magnetometry data from Gast

Farm (Wiewel and Devor 2018) to identify locations for further investigation, possibly looking for signatures similar to those identifying a structure at Carter Creek.

Rosewood

Detailed data from Rosewood are available, making the site a good point of comparison to Carter Creek, as earlier Late Woodland villages in slightly different geographic locations. Rosewood may represent a circular village like Carter Creek, although this designation is not definite. In total 124 pit features, 4 post structures, 1 structural compound, 3 post pits, 3 large, paired posts, 1 large post, 6 post screens, 116 isolated posts, and 1 midden feature were identified during excavations at Rosewood. The structures defined in Jackson and Fortier (2014) were identified after excavations and not in the field (except for one), so the association of pits to those structures is ambiguous.

Site Layout

The Rosewood site consists of a central, communal area with two more densely inhabited portions to both sides. This site layout is likely not exact due to the limits of excavations following only what was exposed during construction of the neighborhood where the site now lies. Interestingly, a 1940 aerial photo may show evidence of the site being a circular or arcuate village due to a dark C-shape area located roughly where the site sits. It is not known if this was midden or a low-lying area, so this determination cannot be made confidently. Based on some super-positioning of pits and PMs, it is also possible that the two sides of Rosewood are just a series of occupations, not a larger village. Jackson and Fortier (2014) argue that most of the excavated portion of the site was contemporary and that the site is very likely a larger village occupation.

Pits

Of the 124 pits excavated at Rosewood, some have no known data or missing data, which did not allow for accounting of all attributes. Of the pits with known profiles, 99 were classified as basins, 14 were flat-based, and 2 had irregular profiles. The basins averaged 53.12 L in volume and 14.91 cm in depth. The flat-based pits averaged 454.46 L in volume and 28.13 cm in depth. The two irregular shaped pits averaged 163.5 L in volume and 24.5 cm in depth. All of the pits together averaged 75.7 L in volume and 16.82 cm in depth. Only 12 pits had more than 1 fill zone and only 4 pits had more than 2. The maximum was four fill zones. The deepest pit at Rosewood is only 49 cm, but it had over 1,000 L of fill (Fortier 2014c).

There is some evidence of fire activity in 89.8% of pits, such as charcoal, burned nutshell, burned rock, and burned clay, so it seems possible that most pits were general fire pits used for cooking/processing. The overall shallow nature of pits at Rosewood may have come from erosion or the removal of fill by the contractor before archaeologists could excavate. The overall lack of cylindrical earth ovens and storage pits is "striking" (Fortier 2014c:43), although Rosewood phase pits generally tend to be shallow. Faunal remains from the site are heavily calcined which indicates open-fire cooking, so deeper pits would not have been necessary. It is also suggested that storage pits may have been in an unexcavated portion of the site (Fortier 2014c).

Postmolds

A total of 212 PMs were identified during excavations at Rosewood, although not all of them were excavated. I will discuss some of the unique PMs in this section, but most details will be given with the discussion of structures at Rosewood below. The three post pits ranged from 23 to 67 cm deep and 14 to 30 cm wide. All of the post pits showed ramping and one showed signs of burning (ramping is indicated by the upper portion of a post's profile being wider than the lower portion, often with a different fill that would come from the intentional removal of the post, using this ramp for support). The three paired posts ranged from 38 to 48 cm deep and 29 to 38 cm wide. One set of paired posts showed burning, with ash at the bottom of one PM in that pair. F97 is one of the large posts and measured 44 cm x 38cm in plan and 50 cm deep, with a rounded base and no discernible ramp. Charcoal flecks suggest the post in F97 was burned. The 116 isolated PMs averaged 20 cm in depth and four were over 40 cm deep (Fortier 2014c).

Fortier (2014c:48, Figure 4.21) identified six post screens at Rosewood, all represented by linear lines of posts that could have been purposed for privacy, wind breaks, or processing/drying racks. All but one screen (Screen 6) is located in the center portion of the site. Screen 1 is 2.6 m long and made of 5 posts, running east to west. The PMs in Screen 1 average 25.6 cm in diameter. Screen 2 is 8.5 m long with 10 posts, including a set of paired posts, running east to west. The PMs in Screen 2 average 27.5 cm in diameter and 32.6 cm in depth. Screen 3 is 5.16 m long and consists of 8 posts, running north to south. The PMs in Screen 3 average 28 cm in diameter and 21 cm in depth. Screen 4 is 2.42 m long, consists of 6 posts, and runs east to west. The PMs in Screen 4 average 28 cm in diameter and 23 cm in depth. Screen 5 is 7.62 m long and consists of 11 posts running north to south and northwest to southeast. The north to south portion is 3.76 m long with 5 posts, and the northwest to southeast portion is 3.88 m long with 6 posts. The PMs in Screen 5 average 28.1 cm in diameter. Screen 6 is 1.06 m long and consists of 4 posts running northeast to southwest. The PMs in Screen 6 average 16.7 cm in diameter and 12.2 cm in depth.

Households/Structures

Notes from the original excavations identified eight structures, but they were never defined on maps or numbered. The only structure that was defined during original excavations is now labeled Structure 3. Structures 1 and 2 sit on one side of the site, while Structures 3, 4, and 5 sit on the other side; Structure 5 is considered a structural compound. The structures on either side sit approximately 42 meters apart with post screens, post pits, paired posts, and cooking pits in between in the central portion of the site. It should also be noted that Structures 1 and 2 share some PMs so they may not be contemporaneous. This is also true for Structures 4 and 5. Structure 3 is located only five meters from Structure 4 (Fortier 2014c).

F137 is defined as a midden feature. It was originally defined in the field but not excavated and may represent the remnants of a structure basin, although this cannot be confirmed. This single section of midden produced up to 34 vessel fragments just from shovel scraping (shovel scraping is a technique in which a possible feature is slowly scraped at the excavating surface to better define the feature in plan view). It is possible that the midden existed over the whole site and F137 is just a remnant that survived excavations by construction contractors (Fortier 2014c).

Of the definite structures, Structure 1 consists of 22 PMs in a square shape with rounded corners, measuring 6.50 m x 6.46 m (41.99 m^2). The PMs for Structure 1 average 21.8 cm in diameter and 13 cm deep. The southern wall posts of this structure were mostly burned, and all PMs have rounded bases except one that is pointed. Structure 2 consists of 20 PMs in a roughly rectangular shape, measuring 8.18 m x 7.10 m (58 m^2). The PMs of Structure 2 average 27.3 cm in diameter and 21.6 cm in depth. Of these, 10 have rounded bases, 2 have irregular bases, 2 have pointed bases, and the rest were unexcavated. A total of 10 posts from Structure 2 have charcoal laden fills, suggesting the structure may have been burned in place. The north wall of Structure 2 overlaps with the south wall of Structure 1 (Features 2014c).

When looking at the other set of structures, Structure 3 consists of 14 PMs measuring 5.60 m x 3.14 m (18 m^2). The PMs from Structure 3 average 19.1 cm in diameter and 18.9 cm in depth. Of these PMs, seven are flat-bottomed, six are rounded, and one has an irregular base. One interior post in Structure 3 slants towards the outside wall with limestone at its base, likely as a brace or support for the post; this post is 36 cm deep (Fortier 2014c).

Structure 4 is more complex than Structure 3. Structure 4 consists of 15 wall PMs, 13 interior PMs, 2 center posts, a 7-post entry way and is roughly circular in shape with diameter of 5.7 to 6.8 m (approximately 30m^2). Wall posts for Structure 4 average 24.5 cm in diameter and 22.1 cm in depth. Of the wall PMs, seven have rounded bases, three have flat bases, three have pointed bases, and two have irregular bases, with all but four posts showing burning. The interior posts of Structure 4 consist of 3 paired support posts, 2 center posts, and5 miscellaneous posts averaging 18.9 cm in diameter and 17.9 cm in depth. The paired posts form a triangle and two of the pairs show burning. None of the paired posts are oriented towards the center and instead slant slightly towards the outside walls of the structure. Of the two center posts, one is deeper than the other (25 cm versus 6 cm), so it seems possible that the deeper post was a support for the shallower post; the deeper post shows evidence of burning. The miscellaneous posts all show evidence of burning (Fortier 2014c).

The entryway to Structure 4 consists of seven PMs on the southeast corner of the structure, facing eastward. The entryway has three posts on the northern line, three on the southern line, and one likely repair post. The PMs in the Structure 4 entryway average 19.4 cm in diameter and 10.9 cm in depth. The entryway is approximately 1.3 m wide. Screen 6 (see above) is less than one meter south of this structure (Fortier 2014c). It is also noted that Structure 4 is similar in design to one from the Middle Woodland Truck #7 site and may show continuity in building practices (Fortier 1985).

Structure 5 is a structural compound with a northern ring encompassed by a southern ring. The northern ring consists of 20 PMs in a roughly circular shape, with maximum diameter of 8.9 m (7.5 m minimum, approximately 76 m^2). The southern ring consists of 16 PMs and merges with the northern ring, with a maximum diameter of 15.64 m (12.34 m minimum, approximately 100 m^2). There are numerous posts and pits within the compound, but it is unclear if they were associated specifically with this structure. PMs in the northern ring average 15.6 cm deep, while PMs in the southern ring average 14.6 cm deep. Of the PMs in the northern ring, 65% show evidence of burning; 44% of southern ring PMs show evidence of burning. It is noted that there are no clear analogues to this structure, but it seems possible that the southern ring was a wall or wind break with the interior being a communal area. It is also possible that the northern ring was a covered facility with the southern ring a communal area (Fortier 2014c). This kind of structure may represent a precursor to later Patrick Phase compounds in the American Bottom (Kelly et al. 1987:176-178), but there is no definite connection between the two.

White Bend

The Weaver occupation at White Bend is a semi-circular village located in the LaMoine Valley occupied somewhat later than Carter Creek, but still allowing for a good comparison of this site type both geographically and temporally. Data from these excavations are available through a site report (Fishel 2013f). As mentioned in previous chapters, the excavations at White Bend consisted of both a West and East Block, but only the West Block is being considered for this dissertation, including both the Weaver circular village and a late Middle Woodland occupation. In total the West Block at White Bend had 256 features, including 170 pits, 84 PMs, and 2 artifact concentrations.

Site Layout

The Weaver occupation at White Bend consists of the aforementioned semi-circular pattern of pits surrounding a mostly open central plaza. The Weaver pits create a pattern that is 25 m to 30 m across, around a central plaza that is 14 m across with less features (only 9); the interior plaza features also seem to form a semicircular pattern. The nine interior features of the central plaza are roughly half the size of the other features in the west block and have less debris (63.09 g/L). The southern portion of the circular habitation was likely scoured after the Weaver occupation, and this may have been a full ring village when it was occupied. Middle Woodland features do not show a discernible pattern (Fishel 2013b).

Pits

The collection of features at White Bend consists of 86 Weaver pits and 63 Middle Woodland pits, with an additional 15 late Late Woodland pits and 7 non-diagnostic pits. The average pit dimensions are 79 cm x 75 cm x 19 cm. Of all the pits, 157 are classified as basins, 12 are classified as cylinders, and 1 is bell-shaped. The average dimensions of all basins are 80 cm x 75 cm x 19 cm with 1.1 fill zones. The average dimensions of all cylinders are 66 cm x 54 cm x 29 cm with 1.25 fill zones. The dimensions of the bell-shaped pit are 118 cm x 116 cm x 40 cm with 2 fill zones. Both the Middle Woodland and the early Late Woodland occupations had a large number of superimposed pits (Fishel 2013b).

There are 58 basins and 4 cylinders from the Middle Woodland occupation of White Bend, averaging dimensions of 79 cm x 72 cm x 18 cm with 1.15 fill zones. Of the Middle

Woodland pits, the average artifact density of all basins is 121.59 g/L, and the average volume of all basins is 41.7 L. Of all the Middle Woodland cylinders, the average artifact density is 121.59 g/L and the average volume is 74 L. There is no clear clustering or pattern to the Middle Woodland pits. It is noted that three of the features (F78/79/314) are adjacent to one another, with all having evidence of burning with botanical remains. These three pits may represent a nut processing area. Both of the identified artifact concentrations are Middle Woodland and mainly consisted of ceramic sherds (Fishel 2013b).

Of the 86 pits classified as Weaver, 79 are basins, 6 are cylinders, and 1 is bell-shaped. All of the pits combined have the average dimensions of 79 cm x 78 cm x 20 cm with 1.12 fill zones. The average volume of Weaver basins is 49.8L and the average volume of Weaver cylinders is 102.2 L. The average artifact density of all Weaver features is 78.65 g/L (Fishel 2013b).

Postmolds

A total of 84 PMs were identified at White Bend, but their cultural affiliation could not be determined. These PMs consisted of 50 with rounded bases, 23 with flat bases, and 11 with pointed bases. The rounded PMs average dimensions are 23 cm x 23cm x 35 cm. The average dimensions of the pointed PMs are 20 cm x 19 cm x 24 cm. The average dimensions of the flat PMs are 23 cm x 23 cm x 31 cm. There are 15 PMs deeper than 50 cm (compared to only one at Carter Creek) and two that are significantly deeper than the rest; F348 is 91 cm deep and F384 is 104 cm deep. The largest PM by plan dimensions is F220 at 37 cm x 35 cm. All of the PMs have one fill zone except three which have either two (n=2) or three (n=1) fill zones. There is no clear clustering to the PMs and only one possible structure, although it is noted that the two deepest PMs only sit around one meter apart (Fishel 2013b).

Households/Structures

There is one potential oval structure at White Bend measuring 4 m x 2.5 m (roughly 8 m^2). This possible structure consists of 11 PMs and 2 larger posts internal to the structure. Unfortunately, there is no clear cultural affiliation to this possible structure, although its smaller size would suggest it is more likely Weaver than Middle Woodland. Pits at White Bend did not cluster in clear household groups as they did at the sites discussed below (Fishel 2013b).

Sartorius and Sartorial Splendor

Sartorius and Sartorial Splendor are two of the few sites at which archaeologists in the LaMoine Valley, and the surrounding region, have been able to define households based on the distinct clustering of pits. Because of this, they both offer a useful point of comparison when thinking about households at Carter Creek. In total, 11 households were defined at Sartorius and Sartorial Splendor (7 at Sartorius and 4 at Sartorial Splendor). These households sit atop a high upland ridge and were all treated together in one site report (Fishel 2012f). In total, 114 Weaver features and 1 probable archaic feature were identified. Of those, 80 are at Sartorius and 38 are at Sartorial Splendor (3 of features at Sartorius are non-cultural, e.g., tree roots). Only one PM was identified at these sites, and it will not be discussed further below.

Site Layout

Sets of households at both Sartorius and Sartorial Splendor are spread across a high upland ridge into distinct feature clusters. These clusters represent individual households or activity areas. When compared to Buffalo Chip (discussed below), the clusters are not as obviously spaced. The pits that identify these households are all in semi-circular shaped patterns around an open central area. The open area is assumed to be a structure location or an entryway of some sort. If the open areas are entryways, the direction faced is mostly south (n=8) toward an intermittent stream (2012a).

Pits

Of the 115 pits identified between the two sites, 45 are cylindrical storage pits and 68 are basin-shaped processing pits; some cylinders may also have been earth ovens. These pits were the only features identified, as there are no clear structures, hearths, or bell-shaped pits at either site (bell-shaped pits are more closely associated with the Lower Illinois Valley during this time; Studenmund 2000). The cylinders from these two sites average 154 L by volume and 46 g/L by artifact density. The basins average 47 L by volume and 78 g/L by artifact density. All of the pits combined average 74 L by volume and 65 g/L by artifact density. It is noted that all pits from Sartorius should be considered minimum estimates because they may have been partially removed from quarrying and timbering at the site prior to excavation (Fishel 2012b).

When considering all of the pits, the average number of fill zones is 1.56 zones, with most pits (n=60) being single-zoned or double-zoned (n=44). Other pits either had three (n=8) or four (n=1) zones and cylinders tended to have more filling episodes than basins. Two features at Sartorius and four features at Sartorial Splendor were lined with FCR along the portions of pit walls, and F33 shows possible in-situ burning. A total of 13 features had smaller basin-like pits dug into the center of a preexisting, filled, pit, showing reuse of these features (Fishel 2012b).

Households/Structures

Each household at Sartorius and Sartorial Splendor has its own unique characteristics based on the size and function of pits included in the cluster. The households were labeled as Household 1-11, with Households 1-7 at Sartorius and Households 8-11 at Sartorial Splendor. The details of each household are explored below.

When considering the household at Sartorius, Household 1 consists of 5 storage and 7 processing pits that averaged 18.42 cm in depth, 1.17 fill zones, 50.06 L by volume, and 76.29 g/L artifact density. The approximate area covered by this household cluster is 82 m^2. Household 2 consists of 5 storage and 7 processing pits averaging 23 cm in depth, 1.64 fill zones, 84.75 L by volume, and 32.39 g/L artifact density. The approximate area covered by this household cluster is 41 m^2. Household 3 consists of 5 storage and 4 processing pits averaging 23.22 cm in depth, 1.56 fill zones, 95.57 L by volume, and 70.22 g/L artifact density. The approximate area covered by this household cluster is 67 m^2. Household 4 consists of 3 storage and 8 processing pits averaging 21 cm in depth, 1.64 fill zones, 55.14 L by volume, and 118.93 g/L artifact density. The approximate area covered by this household cluster is 58 m^2. Household 5 consists of 7 storage and 4 processing pits averaging 24.91 cm in depth, 1.82 fill zones, 88.98 L by volume, and 74.5 g/L artifact density. The approximate area covered by this household cluster is 26 m^2. Household 6 consists of 6 storage and 3 processing pits averaging 21.89 cm in depth, 1.89 fill zones, 89.85 L by volume, and 66.7 g/L artifact density. The approximate area covered by this household cluster is 24 m^2. Household 7 consists of 3 storage and 6 processing pits averaging 16 cm in depth, 1.22 fill zones, 48.14 L by volume, and 39.92 g/L artifact density. The approximate area covered by this household cluster is 16 m^2 (Fishel 2012b).

When looking at the households at Sartorial Splendor, Household 8 consists of 6 storage and 5 processing pits averaging 19.27 cm in depth, 1.27 fill zones, 67.66 L by volume, and 121.65 g/L artifact density. The approximate area covered by this household cluster is 78 m^2. Household 9 consists of 6 processing pits averaging 14.83 cm in depth, 1.5 fill zones, 63.07 L by volume, and 12.14 g/L artifact density. The approximate area covered by this household cluster is 18 m^2. Household 10 consists of 5 storage and 8 processing pits averaging 23.64 cm in depth, 1.82 fill zones, 78.42 L by volume, and 57.74 g/L artifact density. The approximate area covered by this household cluster is 46 m^2. Household 11 consists of 6 processing pits averaging 19 cm in depth, 1.5 fill zones, 43.3 L by volume, and 17.97 g/L artifact density. The approximate area covered by this household cluster is 23 m^2. See Fishel (2012b:25-28, Table 4.3) for a comparison of all households by features.

The households appear to have been contemporary and occupied year-round for no more than 10 years of time. The average number of vessels found in each household was 7.5 vessels per household, with Household 6 having the most at 22 (2 of these vessels are firing failures). Household 6 is clearly associated with ceramic production based on the number of vessels found in it, the firing failures identified from its assemblage, and it had the most ceramics by density of any household with 1,020.29 g/feature. The relative diversity of ceramics at the site suggests multiple potters, but Household 6 may have been a communal kiln or workshop. Interestingly, Household 10 had over 500 g of ochre identified in its assemblage, although most of it appeared to be unworked (Fishel 2012b).

It is noted that Household 4 varies the most from the norm at the site due to punctated ceramic vessels, 20 cobble tools, and the second highest artifact density 118.73 g/L (Household 8 has the highest). This household may have been a food processing structure/area. It is also the only household with intersecting features (F68/69) and may have been occupied longer than the other households at these sites (Fishel 2012b).

Buffalo Chip

Buffalo Chip is another site at which archaeologists were able to identify clear households based on the clustering of pits, similar to Sartorius and Sartorial Splendor. This makes Buffalo Chip a useful point of comparison when trying to define a household at Carter

Creek. In total 120 cultural features were identified at Buffalo Chip, including 116 pits, 3 PMs and 1 special activity area. These features formed nine Household areas. One of the household clusters is considered to be from a Middle Woodland habitation (Cluster1) and the rest are Weaver. Both Buffalo Chip and Sartorius/Sartorial Splendor clearly fall into Green's (1993) Stage II of his Frontier Model, during which upland groups split and formed smaller, household focused habitations.

Site Layout

The household clusters at Buffalo Chip are laid out linearly along an upland ridge. Most of the household clusters can be assumed to have been family areas, although some may have functioned as communal or special purpose areas. The household clusters are all located 10-20 m apart and do not overlap. It is likely that all of the Weaver households (Clusters 2-9) were contemporaneous based on spacing and the overall lack of super-positioning at the site.

Pits

Of the 120 features identified at Buffalo Chip, 112 were assigned a Weaver affiliation and 8 were assigned a Middle Woodland affiliation. Middle Woodland features include seven pits in Cluster 1 and one isolated pit. In total, six of these pits were used for cooking/processing and the remaining two pits were used for storage/refuse. Six of the pits were defined as basins and all had a single fill zone. The Middle Woodland cone-shaped pits averaged a volume of 32.82 L, a depth of 15.7 cm, and an artifact density of 2.536 g/L. Middle Woodland cylinders averaged a volume of 547.6 L, a depth of 56.5 cm, and an artifact density of 2.973 g/L (Emerson 2013a).

Weaver features at Buffalo Chip include 106 belonging to clusters, 5 scattered around the site, 1 isolated pit, and 1 activity area. Of the Weaver pits, 46 are bell-shaped, 34 cylindrical, 22 are cone-shaped, and 8 are circular/elliptical. Of the cone-shaped pits, the average volume was 228.3 L, average depth was 41.5 cm, and average artifact density was 7.679 g/L. For all cylindrical pits, the average volume was 558.4 L, average depth was 57 cm, and average artifact density was 1.3 g/L. For the bell-shaped pits, the average volume was 701.6 L, average depth was 74.8 cm, and average artifact density was 2.342 g/L. For all circular-elliptical pits, the average volume was 140.0 L, the average depth was 24.1 cm, and the average artifact density was 1.880 g/L (Emerson 2013a).

When looking at the depth of pits, bell-shaped pits averaged 74.7 cm depth and were typically multi-zoned. Cylinders averaged 57 cm in depth were typically multi-zoned. Cone-shaped pits averaged 41.5 cm in depth and just over half were multi-zoned. Circular-Elliptical pits averaged 24.1 cm in depth and were typically single-zoned. The pits were also defined according to their probable function and consisted of 3 open-basin cooking/roasting pits, 28 cooking/processing pits, 65 storage/refuse pits, 19 storage pits, 3 miscellaneous pits, and 3 PMs. This low number of PMs does not warrant further discussion in a separate section (Emerson 2013a).

Households/Structures

Households at Buffalo Chip were each defined by a distinct cluster of pits. Each of these clusters was formed from a unique mix of different pit sizes and functions. The one non-Weaver cluster (Cluster 1) is considered to be from a Middle Woodland habitation. This cluster has no super-positioning of features. It consists of five cooking/processing pits and two storage pits, with all features having very little material. It was likely a seasonal occupation or campsite (Emerson 2013b).

Cluster 2, while Weaver in affiliation, has some Middle Woodland material mixed in its assemblage. Further, some of the pits in this cluster were superimposed on one another. This cluster consists of two PMs, one open-basin cooking pit, one cooking/processing pit, seven storage/refuse pits, and three storage pits. The total cluster volume was 5260.0 L with an average artifact density of 4.812 g/L. This is likely from a family group (2013b).

Cluster 3 is unique in that it has many features over a meter deep (the average depth of storage pits in this cluster is 96.7 cm). This cluster consists of 3 cooking/processing, 11 storage/refuse, 3 storage, and 1 activity area from constant reuse of pits with multiple filling, emptying, and refilling episodes. The total volume of this cluster was 15,015.2 L and the average artifact density was 2.060 g/L. Some of the pits in this cluster were constructed to purposefully not overlap with others. This cluster may have been used for caching for seasonal visits or as a community storage/processing/cooking locus (Emerson 2013b).

Cluster 4 consists of one cooking/refuse, five storage, and three storage/refuse pits. These pits average 66.8 cm in. This cluster has a total volume of 5220.0 L, with an average artifact density of 1.828 g/L. It is likely that this cluster was a short-term occupation or a low activity area for communal storage. It is also possibly a last site occupation due to the lack of dumping in these pits (Emerson 2013b).

Cluster 5 is split into a north and south area. All six of the north area pits were used for storage/refuse. In the south area seven pits were used for storage/refuse, one pit was used for storage, and one pit was used for cooking/processing. The pits from the north area averaged 81 cm deep, totaled 3858.7 L by volume total, and had an average artifact density of 2.672 g/L. The pits from the south area averaged 76 cm deep, totaled 6712.5 L by volume, and had an average artifact density of 1.429 g/L. This cluster likely served as a communal storage/cooking area (Emerson 2013b).

Cluster 6 was also split into north and south areas. Overall, this cluster had more shallow cooking/processing pits than other clusters. The north consisted of four cooking/refuse and four storage/refuse pits. The south area consisted of two cooking/refuse and five storage/refuse pits. The average depth of pits in the north area was 57.4 cm; in the south the average was 57.6 cm. The combined volume of all pits in this cluster was 4602.0 L with an average artifact density of 1.722 g/L, excluding two features which included heavy amounts of non-chert lithics (Emerson 2013b).

Cluster 7 consisted of mostly small and shallow pits, with three cooking/refuse, two storage, and one storage/refuse pit. These pits had an average depth of 67 cm, totaled 2245.8 L by volume, and had an average artifact density of 0.506 g/L density. This cluster had minimal evidence for activities or storing of materials and may have been a family group cluster (Emerson 2013b).

Cluster 8 had no superimposed features despite the high number and tight packing of the pits in this cluster. This cluster consisted of 2 open-basin cooking pits, 4 storage pits, 12 storage/refuse pits, and 1 PM. The storage/refuse pits averaged 64.4 cm in depth. All features in the cluster had an average artifact density of 2.691 g/L. The wide variety of pits by function in this cluster likely means this was a family facility. This conclusion is also supported by the moderately sized storage pits and a cleared central area with no pits. It is noted that pits on the east end of the cluster are small and shallow with burned fills suggesting they may have served as intramural (meaning they sat within the walls of a structure) hearths/cooking facilities (Emerson 2013b).

Cluster 9 may have had some of the feature fill accidentally removed during uncontrolled machine scraping prior to excavation. This cluster consists of one storage pit, three storage/refuse pits, and two cooking/processing pits. The total volume of all pits in this cluster was 2922.2 L, with an average artifact density of 2.272 g/L mostly from cooking/processing pits. This area does not have a clearly defined use but may have been a small family group cluster (Emerson 2013b).

Of the six isolated/scattered features without clear cultural diagnostics, five are just south of Cluster 6 and could possibly be another household remnant. If this is the case, these pits total 2460.9 L in volume and have an average artifact density of 0.724 g/L. This cluster would consist of one cooking/refuse, one storage, and two storage/refuse pits. F70 is isolated by itself and functioned as a cooking pit with an artifact density of 4.14 g/L (Emerson 2013b).

Households and Structures at Carter Creek

In this section I provide interpretations of the basic functions of the two structures identified at Carter Creek, what activities may have taken place in or near them, and how this relates, generally, to defining a household at Carter Creek and during this period. In order to do this, I first want to briefly revisit my discussion from Chapter 2 on the differences between household identities and household structures. Households are, at their core, an identity assemblage that takes place on a quotidian scale. They are spatially emplaced in the same ways that communities are geographically emplaced (Mac Sweeney 2011), meaning that these identity groupings are tied to particular shared spaces and the activities that take place within them. This emplacement is evoked through the ways that household assemblages connect the humans who are a part of them to different places, memories, and ancestors (Hendon 2009; Kahn 2016; Nash 2009).

Drawing from this understanding of a household assemblage as spatially emplaced, but not inherently tied to a particular house structure or activity area, a household specifically refers to an assemblage. When referring to the physical space of a house, I will use “house structure” or “structure”. When referring to particular activities that took place within a given space within or near a house structure (such as at Carter Creek), I will use “activity area” (following, for example, Flannery 1976, Gougeon 2012). Structure 2 at Carter Creek is a house structure and would likely have been used by a single household. Structure 1 may not have been used as a house and was likely used by multiple households. The purpose of this section is not to define household identities at Carter Creek (this will be presented in the next chapter), but rather to define the house structures at Carter Creek and what activities took place within and near them. I will suggest further points of discussion here but will only briefly touch on them.

Structure 2 at Carter Creek, found in Excavation Block 2, has only been half excavated and was originally identified during 1984 excavations at the site. It consists of seven postmolds in a roughly oval shape, encompassing an approximately 49 m^2 area (Figure 6.19). This house structure has a central hearth and up to 19 pit features just within or outside of the structure’s walls. The only super-positioning of features near this structure comes from Postmold 1 and Feature 4 (it is unclear which feature cut into the other) and a cluster of four pits located approximately two meters southeast of the structure. Two of these pits were excavated in 1984 and their function is unknown (F9 and F11), but the other two pits (F14 and F16) were both used for cooking/processing activities, which may indicate that the other pits in this cluster were used for the same purpose. Feature 16 and Feature 11 both cut into Feature 14; the relationship between Feature 9 and Feature 11 is unclear. Other features excavated in 2020 which were seemingly related to this feature were all cooking/processing pits or indeterminate in function (See Table 6.2). Feature 16, which has been discussed in detail above, is particularly notable for its high artifact density. It should be noted that all of the pits from 1984 excavations are labeled as “storage pits” on the plan map from those excavations, so it is possible that this area has a mix of both cooking/processing and storage pits.

Based on the available information, it seems likely that Structure 2 was used as a family facility, with general activities taking place within or near the structure. Further, the central hearth in this structure would have likely been used by this family for cooking activities.

Site	Household/Cluster	Storage Pits	Cooking/Processing Pits	Average Pit Volume (L)	Household/Structure Area (m^2)
Carter Creek	Structure 2	+13	5	50.57	49
Sartorius	Household 1	5	7	50.06	82
	Household 2	5	7	84.75	41
	Household 3	5	4	95.57	67
	Household 4	3	8	55.14	58
	Household 5	7	4	88.98	26
	Household 6*	6	3	89.85	24
	Household 7	3	6	48.14	16
Sartorial Splendor	Household 8	6	5	67.66	78
	Household 9	-	6	63.07	18
	Household 10	5	8	78.42	46
	Household 11	-	6	43.30	23
Buffalo Chip	Cluster 7	3	3	374.30	-
	Cluster 9	4	2	487.03	-

Table 6.6: Comparison of selected attributes from Household Structures/Areas identified at Carter Creek, Sartorius, Sartorial Splendor, and Buffalo Chip. It should be noted that the massive volume of pits ta Buffalo Chip is likely related to the use of bell-shaped pits at this site as opposed to basin or cylinder-shaped pits at Carter Creek, Sartorius, and Sartorial Splendor. *Household 6 may have been a communal ceramic production facility/kiln. +This is assuming all pits labeled as “Storage” from 1984 excavations served this function.

The potential mix of pit functions and the general size of this structure is similar to household clusters identified as family spaces at both Sartorius/Sartorial Splendor and Buffalo Chip (see Table 6.6 for some comparisons). If the features identified during 1984 excavations were all used for storage purposes, this structure may have served as a specialized storage facility/communal storage area, but this remains speculative without the data from those excavations. The location of this structure near the central plaza at Carter Creek is interesting and should be explored when further excavations are carried out at the site.

Structure 1 at Carter Creek has much more data associated with it and was defined both during 2020 excavations and with analysis afterwards; this entire structure and associated features have been excavated. This structure consists of 11 postmolds in an oval shape, encompassing a roughly 47 m^2 area (Figure 6.15). There are an additional three interior posts, one of which is unexcavated (PM37). None of the interior posts sits at the center of the structure, and all may have served to support exterior wall posts; one of the interior posts was pulled (PM40). In relation to this structure are three post screens, all defined above, that would have been used for cooking/processing activities. Feature 41 sits near the center of this feature and may have been used as a central cooking/processing pit. Along the northern edge of this structure there was a storage area, as evidenced by deeper, cylindrical pits with slump and/or ashy/burned fills. To the immediate south and west of the structure, within the same spaces as the post screens, were extensive cooking/processing and open-basin cooking pits that often overlapped, suggesting heavy use and reuse of this area (Figure 6.20).

Based on the information gathered during 2020 excavations and in post-excavation analysis, I argue that Structure 1 was used specifically as a cooking/processing facility, likely communally. The amount of cooking/processing pits, open-basin cooking pits, and earth ovens associated with this structure indicate that heavy amounts of cooking took place within and near it. This is further evidenced by the number of pit features in EB1 showing some evidence of fire activity (n=42, 93.3%), ashy fills (n=20,47.62%), or greasy fills (n=10, 23.81%). The wide variety of ceramic production techniques within this structure and the surrounding area also indicate that different identity groups were using this space. This is not to conflate ceramic decoration directly with identity, but the presence of non-local surface treatments (e.g., net-impressions), non-local temper (e.g., sand), and non-local decoration (e.g., circular punctates) suggests that people or ceramic vessels from outside of the region were either traveling to Carter Creek, or the ideas on how to create them were.

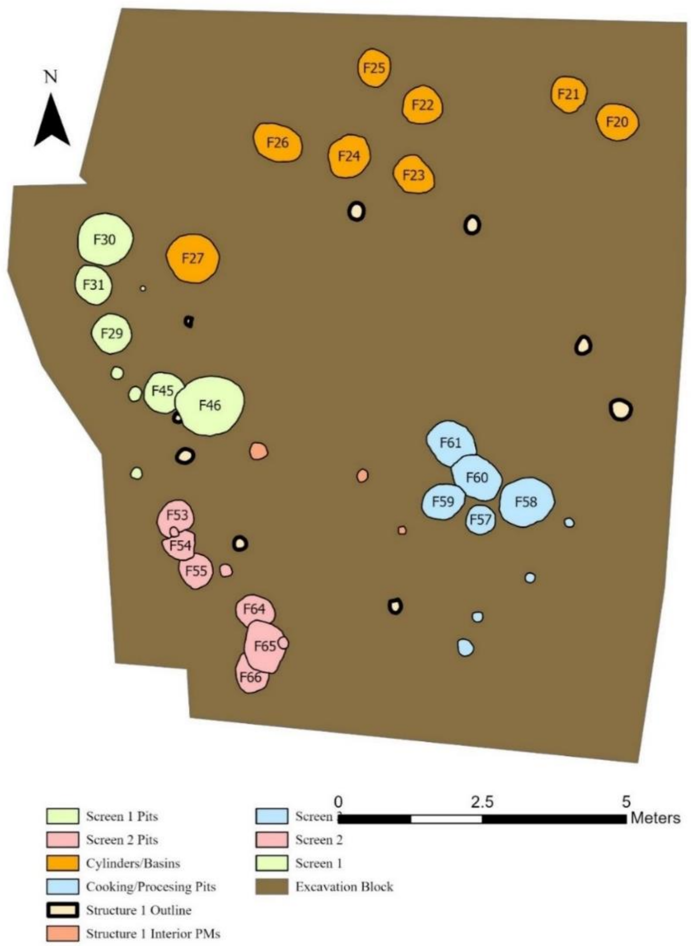

Figure 6.20: A map of Structure 1 with associated screens and pit clusters (activity areas) highlighted. The interior posts of this structure are also noted.

This shows that Structure 1 may have been inhabited/used, perhaps at different times, by people with different household identities who may have represented the wider community at Carter Creek. Another, not mutually exclusive, explanation is that the people using Structure 1 did not have a clearly defined stylistic identity, which was displayed through the ceramic variability in this assemblage. This may indicate that the edges of the occupation at Carter Creek were being used for communal purposes, perhaps in tandem with (or opposition to) the central plaza.

The early Late Woodland Period: Features Within a Regional Context

The collection of features, and the artifacts they contained, at each of the sites discussed above provide a window into the lives of people inhabiting these spaces. In each case, the features tell us a story about what activities were taking place at these sites, how long people inhabited these locations, and what ways people were interacting with these spaces. At some sites, we can clearly see longer-term, village level, occupations. At other sites, the features represent shorter occupations, sometimes even seasonal. No matter the use of the site, all of these sites fit generally into the expectations of Weaver (and non-Weaver) people during this period. At the same time, each site, and each feature, has its own unique traits that, when viewed through the lens of assemblage theory, can transform everyday living spaces into vibrant and dynamic expressions of identity. These features, and the sites at which they were used, were active locations for the deterritorialization of Middle Woodland identities and the reterritorialization of early Late Woodland identities. In order to understand these active and dynamic spaces, it would be helpful to offer a brief comparison between the sites to highlight some of the similarities and differences.

Before discussing these comparisons in more detail, I want to again highlight Fishel's (2013d) discussion of LaMoine Valley Weaver sites, and the overall trends seen during this period. In particular, Fishel (2013d:387) notes that most LaMoine Valley Weaver sites have relatively small pits, especially when compared to other Woodland-age features in west-central

Illinois (e.g., Nolan 1995). This is especially shown by the overall lack of bell-shaped pits at these sites. Fishel further notes that we typically only see small basins and some cylinders, with the basins often averaging around 30-60 L by volume and the cylinders two to three times that.

As briefly discussed above, the identification of structures and/or household spaces is rare during this period. In the LaMoine Valley, only Carter Creek, possibly White Bend (Fishel 2013f), Marlin Miller (Fishel 2015b), and Sartorius/Sartorial Splendor (Fishel 2012f) have possible structures or household spaces. The household spaces at the later occupied Sartorius/Sartorial Splendor average approximately 44 m^2, while the earlier structures noted at Marlin Miller and possibly White Bend, are only 7-8 m^2. The two structures at Carter Creek are 47 m^2 (Structure 1) and 49 m^2 (Structure 2). The structures at Carter Creek and the household spaces at Sartorius/Sartorial Splendor fall more in line with what is expected during this period. Braun (1987, 1991) and Smith (1992) estimate Middle Woodland house sizes to be over 70m^2 between 1-200 CE (also see Freeman 1969; Wray and MacNeish 1961). On the other hand, Late Woodland houses are expected to be about half of the size and usually circular or rectangular in shape. Other structures identified during this period at the Rench and Millville sites are 20-30 m^2 in size (McConaughy 1993b, Smith 1992). The structures at the Rosewood site measure from 18-58 m^2 (average 37 m^2), with the larger structural compound consisting of structures at 76 m^2 and 100 m^2. These general trends offer a useful place to begin with comparison between the sites discussed above and highlight the dynamic nature of this period as a whole.

When looking at the features across the sites discussed above, it is clear that there is more of a similarity between sites inhabited earlier in this period than later. Carter Creek, White Bend, and Rosewood all have roughly similar average dimensions to their pits (see Table 6.7); this similarity also extends, unsurprisingly, to the average volume of pits at these sites. The average volume of pits at Rosewood is almost exactly the same as Carter Creek (75.7 L at Rosewood and 73.85 L at Carter Creek). These similarities are also seen at the Marlin Miller site (Fishel 2015b), a LaMoine Valley Weaver site inhabited around 400 CE, where the general dimensions and volume of pits is also comparable to Carter Creek. Unfortunately, there is not enough data from Gast Farm to make useful comparisons here, but the largest pit by volume at Gast Farm falls roughly in line with other early Weaver sites (346.4 L). Sartorius/Sartorial Splendor has a very similar average volume to Carter Creek (74.0 L), while the average volume of just basins (typically the lowest volume pits) at Buffalo Chip is 140.0 L. This suggests similar pit size throughout the early Late Woodland period within the LaMoine Valley, but not necessarily outside of it.

Attribute	**Carter Creek**	**Gast Farm**	**Rosewood**	**Marlin Miller**
Feature Types	Basins, Cylinders, Cones	Basins, Cylinders	Basins, Cylinders, Irregular-shaped	Basins, Cylinders, Bell-shaped
Special Features	Structures, Post Screens, Midden	Possible House Stain	Structures, Post Screens, Large posts	Structure(s), Bell-shaped pits, Midden
Basins (% of total)	74.51%	-	86.09%	82.67%
Cylinders/Flat-based (% of total)	23.53%	-	12.17%	14.67%
Other (% of total)	1.96%	-	1.74%	2.67%
Storage/Refuse Pits (% of total)	19.61%	70%	12.17%	17.33%
Cooking/Processing Pits (% of total)	80.39%	30%	86.09%	82.67%
Total Postmolds	33	10	212	31
Structures/Households	2 (25-35 likely)	-	5	
Average Dimensions (All) (l x w x h) (cm)	73 x 67 x 25	-	16.82 cm (depth)	78 x 61 x 19
Average Dimensions (Basins)	75 x 69 x 22	-	14.91 cm (depth)	81 x 70 x 18
Average Dimensions (Cylinders)	66 x 61 x 43	-	28.13 cm (depth)	78 x 68 x 24
Average Dimensions (Other)	70 x 72 x 48	-	24.5 cm (depth)	75 x 64 x 44
Average # of fill zones (All)	1.66	-	1.15	1.3
Average # of fill zones (Basins)	1.39	-	-	1.2
Average # of fill zones (Cylinders)	2.56	-	-	1.4
Average Volume (L) (All)	73.85	2.45-346.4	75.7	-
Average Volume (Basins)	54.4	-	53.12	52.7
Average Volume (Cylinders)	172.57	-	454.46	112.3
Average Volume (Other)	100.6	-	165.3	170.9
Average Artifact Densities (g/L)	34.72 (88.21 EB2)	-	-	26.8-52.7
Evidence of burning in pits (% of total)	92.16%	30%	89.80%	82.67%

Table 6.7a: Comparison of pits and other features from all sites discussed in this dissertation. In instances where there is a "-" the data was unavailable or unpublished.

These similarities between earlier sites also occur when looking at the percentage of basins at these sites. Carter Creek has the lowest number of basins among the early sites (74.51%), but still has more than either Sartorius/Sartorial Splendor (60.18%) or Buffalo Chip (27.27%). More of the pits seemed to be used for cooking/processing activities at earlier sites (e.g., 80.39% at Carter Creek) when compared to the later sites (e.g., 60.18% at Sartorius/Sartorial Splendor); this is assuming basins were typically used for these sorts of activities at sites where specific pit functions were not determined. Interestingly, the limited data on Gast Farm suggests it had approximately 70% storage pits, which is much higher than even the later sites examined in this dissertation. This disparity likely comes from the small, and random, sample of pits excavated at Gast Farm, but could be interesting to examine upon further excavation there. Carter Creek generally has more cylindrical pits than the other comparable early sites but has less than later occupied sites. Both White Bend, and Marlin Miller, have bell-shaped pits, which are typically not found at early weaver sites in the LaMoine Valley, but there is only one at White Bend (1.16% of pits) and four at Marlin Miller (2.67% of pits). Carter Creek, Rosewood, Gast Farm, and Sartorius/Sartorial Splendor do not have any known bell-shaped pits. At Buffalo Chip, bell-shaped pits are the most frequent of all pit shapes (n=46, 41.82%).

One place where Carter Creek stands out when compared to other earlier sites is the number of fill zones in pits. Carter Creek has an average of 1.66 fill zones per pit, with cylinders averaging 2.56 as a group. All of the other earlier sites where the data is available average less than 1.20 fill zones per pit (including the Marlin Miller site). The number of fill zones at Sartorius/Sartorial Splendor is much closer to Carter Creek (1.56 fill zones). At Buffalo Chip, there is no specific average given for fill zones, but it appears that a majority of the pits here had multiple zones, meaning that the average is likely high. This disparity between Carter Creek and other earlier early Late Woodland sites could be due to the specific use of Structure 1 as a cooking/processing facility. Other than Gast Farm, Carter Creek is the largest site by area, and it may have had the most inhabitants out of all the sites, although the other sites discussed in this dissertation have not been examined for a population total. The sheer population of Carter Creek could also help explain the difference in average fill zones because spaces at the site may have been more heavily used and reused than elsewhere.

Attribute	**White Bend**	**Sartorius and Sartorial Splendor**	**Buffalo Chip**
Feature Types	Basins, Cylinders, Bell-shaped	Basins, Cylinders	Basins, Cylinders, Bell-shaped
Special Features	Bell-shaped pit, possible structure	Household clusters	Bells, Household Clusters
Basins (% of total)	91.86%	60.18%	27.27%
Cylinders/Flat-based (% of total)	6.98%	39.82%	30.91%
Other (% of total)	1.16%	0%	41.82%
Storage/Refuse Pits (% of total)	8.14%	39.82%	27.68%
Cooking/Processing Pits (% of total)	91.86%	60.18%	75.00%
Total Postmolds	84	1	3
Structures/Households	1 possible	11	9
Average Dimensions (All) (l x w x h) (cm)	79 x 78 x 20	-	-
Average Dimensions (Basins)	80 x 75 x 19	-	24.1-41.5 cm (depth)
Average Dimensions (Cylinders)	66 x 54 x 29	-	57 cm (depth)
Average Dimensions (Other)	118 x 116 x 40	-	74.8 cm (depth)
Average # of fill zones (All)	1.12	1.56	-
Average # of fill zones (Basins)	-	-	-
Average # of fill zones (Cylinders)	-	-	-
Average Volume (L) (All)	-	74	-
Average Volume (Basins)	49.8	47	140-228.3
Average Volume (Cylinders)	102.2	154	558.4
Average Volume (Other)	-	-	701.6
Average Artifact Densities (g/L)	78.65	65	1.3-7.68
Evidence of burning in pits (% of total)	91.86%	60.18%	75%

Table 6.7b: Comparison of pits and other features from all sites discussed in this dissertation. In instances where there is a "-" the data was unavailable or unpublished.

The artifact density of pits varies across sites during this period, but this trait is likely more related to refuse patterns than actual use patterns and does not necessarily tell us much about how each of these sites was used. The only site that stands out in terms of average artifact density is Buffalo Chip, where these numbers range from 1.3 to 7.68 g/L depending on the household cluster. In this case, the location and seemingly short-term nature of the occupation at Buffalo Chip, along with the low artifact densities, suggests that the site was not heavily used, so there was little to dispose of. Artifact density may be more useful when looking at the general use of specific pits/pit clusters. For example, the ceramic artifact density in F16 at Carter Creek (46.17 g/L) is over double the next highest pit (F19, 20.37 g/L, which is more than double the next closest pit feature itself), which may indicate that ceramic production was prevalent in the nearby area. The high number of vessels found in the assemblage from F16 (n=13), also indicates that this may be the case. At the same time, F16 also has the highest lithic artifact density (208.61 g/L) and overall artifact density (254.78 g/L) by more than double, which may mean that this pit was heavily used for a variety of refuse materials.

An interesting point of comparison between Carter Creek and the other sites discussed in this dissertation is the amount of super-positioned features at each site, which indicates reuse of certain activity areas. At Carter Creek, roughly 30% of all pit features are superimposed on or by another pit feature (n=16); if we add in pit features that superimpose on postmolds, the number rises to roughly 40% (n=21). White Bend is the only other site where extensive feature super-positioning is noted, and much of this may come from the multicomponent nature of occupation there (Fishel 2013b:53, Table 5.3). It is specifically noted at Rosewood, Sartorius/Sartorial Splendor, and Buffalo Chip that few features overlap; there are no data on this from Gast Farm. An interesting point of comparison comes also from Marlin Miller (Fishel 2015b) where it is noted that approximately 20% of the features superimpose with another, although this is also a multicomponent site where some of the feature overlap can be explained by the different periods of occupation. The explanation for the amount of super-positioned features at Carter Creek is unclear, but it may simply relate to the function of Structure 1 as a heavily used cooking facility, rather than a different kind of occupation at the site. The three sites with noted amounts of super positioned features are all early LaMoine Valley sites, so this particular use of space may have been more prevalent in this specific region or may relate to larger (by population) occupations in that area.

One other interesting idea of note is the general size of pits at Carter Creek. Fortier (2014c:43) observe that smaller pits are sometimes tied to more mobile communities, even though other evidence at Rosewood (and Carter Creek) would indicate more permanent, year-round, occupations. They also observe that later Patrick Phase occupations in the American Bottom have very large pits but have also been determined to be rather mobile (Koldehoff and Galloy 2006), so there is not an easy one-to-one relationship between pit size and group mobility. We must also consider that larger storage pits may exist at both Rosewood and Carter Creek and that they have not yet been uncovered and excavated.

What can all of this tell us about lifeways and identity in the early Late Woodland period? At a basic level, it seems that the general ways of life in this region were relatively similar. People lived in larger, more permanent, villages at the start of the early Late Woodland period, where they performed everyday activities, such as cooking/processing, ceramic production, and lithic tool production. As this period wore on, these villages began to disperse into smaller, often shorter term, habitations, such as those at Sartorius/Sartorial Splendor and Buffalo Chip. As Green (1993) notes for Stage 2 of his Frontier Model, this dispersal of villages likely represented a shift in group decision making, from a village-level council to the household. These trends are highlighted by the similar site structures, feature types and uses, and feature sizes at earlier sites when compared to later sites. At the same time, there may have also been some locally persistent traditions, which would explain why the feature collection at

Sartorius/Sartorial Splendor is much more similar to others from earlier LaMoine Valley occupations than it is to Buffalo Chip, which was occupied around the same time but farther away geographically. What this shows is that general ways of life were not necessarily practices from which identity was being heavily defined, especially in reference to others who did not share that identity. If we think back to the artifact assemblages discussed in Chapter 5, we can see places where identity assemblages were more affective.

As observed towards the end of Chapter 5, ceramic assemblages from the sites discussed in this dissertation were rather variable. Some general temporal trends in the LaMoine Valley hold true when looking at the ceramic assemblage from Carter Creek, but overall, each site had somewhat unique ceramic expressions through a variety of decorations and surface treatments. There are clear differences in the kinds of exotic and regional cherts being used at each site, showing differing connections across the wider social landscape. When taken with the general uniformity of features and their uses across this region and this time period, one could argue that ceramic variability is the place where identity was most able to territorialize. As a brief thought experiment, Structure 1 at Carter Creek clearly seems to resemble some kind of cooking/processing facility. There are a large number of different decorations, surface treatments, and even tempers among the vessels found in and around this structure. This may indicate that Structure 1 was a place where communal cooking activities took place. At this location, people would have actively engaged with local and non-local cooking vessels, local and non-local chert tools, the smells and sounds of cooking, the animals and plants being processed for meals, the other people doing these same activities, and the spaces in which these activities took place. It is within this amalgam of affective experiences that identity assemblages could begin to form into what we find in the archaeological record as artifacts and features.

Conclusion

As shown in the brief discussion above, people at Carter Creek and throughout the wider early Late Woodland landscape, were actively assembling their identities through specific uses of space and the features this produces in the archaeological record. Such conduct included the digging of pits, use of pits for a variety of activities, reuse of pits, and eventual closing of a pit, usually through refuse disposal. Some sites in this region show clear evidence for household clusters and house structures that would have tied people to particular places; this form of their identity was spatially emplaced at this location. It is clear that site structure and pit attributes are roughly the same across the earlier portion of this period regardless of the geographic location of sites, as people created and used mostly small, basin-shaped, pits in villages that were most often circular or at least had some kind of central plaza area (e.g., Rosewood). Later in this period, the pits become bigger, more cylindrical-shaped pits are used for storage or as earth ovens, and site structure is defined by distinct household spaces, not formed around a central, seemingly communal, area. This points to the potential for similar lifeways across the wider region during the earlier and later portions of this period, and possibly a somewhat shared identity that materializes through these similar uses of space. At the same time, these widespread similarities point to the need to look at a smaller scale to recognize the diversity of this cultural landscape as was presented briefly in Chapter 5.

The upheaval experienced across the wider Midwest during the early Late Woodland period clearly manifested itself in myriad ways, from the simple surface treatment of a ceramic vessel to the ways in which house structures were built and used. In all instances where this upheaval was felt and acted upon, identities deterritorialized and territorialized as ever-flowing assemblages. I have laid out the technical, analytical, data which archaeologists can use to look at these emergent assemblages in the last two chapters, but without further discussion this data would not reveal the dynamic nature of this period. To that point, in Chapter 7, I will explore the data presented in the last two chapters to detail what early Late Woodland identity looked like from the household to the community, and how these identities were forming in different locations, but especially at Carter Creek. As I will argue in the next chapter, Carter Creek, and most early Late Woodland villages, were places at which people were both experimenting with the territorialization of new identity assemblages and also reinforcing and strengthening already existing identity assemblages in the face of widespread cultural transition.

CHAPTER 7: REASSEMBLED IDENTITIES AND EARLY LATE WOODLAND TERRITORIALIZATION

The previous two chapters have focused on the analytical traits of the artifacts and features recorded at multiple early Late Woodland sites in the Midwest, with a particular focus on data from Carter Creek in west-central Illinois. These chapters provide the foundation from which archaeologists can make larger connections and inferences about this temporal period and geographic region. The purpose of this chapter is to examine the connections highlighted by these analytical traits, and the contexts in which they take place, and to explore the assemblages into which these connections formed. Understanding the myriad relationships that are active parts of the formation and reformation of these assemblages allows for identity, at its multiple scales, to be defined and interpreted.

To examine early Late Woodland identity assemblages in the wider context of this period, I start at the smaller scale of style and work up to the wider scale of community. I first define style, household identity, and community identity at Carter Creek to form a point from which I can compare other identity assemblages from this period. I then examine identity assemblages at the other early Late Woodland sites discussed in this dissertation. I end the chapter by examining the wider social transformations seen during this period through the unique identity assemblages that formed across the wider geographic landscape. The bulk of this discussion focuses on the earlier part of the early Late Woodland period, as that was the timespan in which Carter Creek was occupied. I will also make connections across the period as a whole where possible.

As I will show, Carter Creek was a location at which the effects of the Middle to Late Woodland transition were directly felt, leading to the deterritorialization of a general, shared, Middle Woodland identity and style. At the same time there developed a territorialization of newly emergent identities and styles, oftentimes with rather blurry, hard-to-define, edges. This emergence took place at both the household and community scales. The same kind of blurry territorialization of newly emergent identities is also seen at other early village sites (e.g., Rosewood), but each site's context provides a unique setting in which these processes were taking place. At later sites, more distinct identities, with clearer boundaries, can be seen. Altogether, as I will show in this chapter, identity assemblages were in a constant state of reformation during the early portions of this period but appear to be more "concrete" later on.

Identity Assemblages at Carter Creek

Before defining style, household identity, and community identity at Carter Creek, it will be helpful to reintroduce how I defined those terms in Chapter 2. I described each of these terms as an assemblage (following Harris 2014, 2016, 2017) at differing scales. Although these identity assemblages exist at different scales, they are not treated differently, as they all can be defined using the same rules (i.e., Harris 2017:127). In treating these assemblages in the same manner, it is important to reiterate that an assemblage, at any of these scales, is made up (at least partially) from other assemblages, so we cannot treat each category of identity assemblage as separate or distinct because there is a constant state of interaction and flow between these formations as they territorialize, deterritorialize, and reterritorialize. By identifying each of these assemblages below at Carter Creek and other early Late Woodland sites, I will be able to trace dynamic relationships that make up this period in a way that exposes their vibrancy, so this period can be understood beyond the categorization of "good grey cultures" (Williams 1963).

From my perspective, identity, as an assemblage, is the foundation from which household identity, community identity, and style can best be understood. Identity can be understood as an assemblage of people, places, things, spaces, and emotions that emerges out of particular configurations of these parts. These elements can be identified through the archaeological record as the constituent parts come together and break apart. This emergence, and therefore identity, is always in a state of becoming, ever fluid and in-flux. These assemblages occur at multiple scales which necessarily overlap and interact with one another, causing real effects on the world in which they reside.

Community, or a community identity, is best understood as a scale of identity that emerges from and creates particular "spaces of possibility". I identify community at scales larger than the household, but not necessarily tied to a particular site. I do not want to overemphasize the geographically emplaced nature of a community assemblage, nor am I arguing that a community must involve closely shared spaces. However, I recognize that archaeology is particularly well suited to study the emergence of communities in particular geographical areas (*sensu* Marsh 2016). Community assemblages are not just geographically emplaced, but also temporally emplaced. Their ties to the past can create connections with people, places, and things without direct, physical, interaction.

A household, or household identity, is best seen as a particular type of identity assemblage that takes place at a particular scale. A household assemblage forms at the scale of the "everyday" and in relatively small spaces. At the same time, the everyday activities that are part of a household connect to the larger world around them. Therefore, a household identity can be best defined as an assemblage of people, places, memories, things, house structures, and activity areas which takes form through the interaction of its parts at the everyday level.

Style is defined as an assemblage that expresses identity at multiple scales (Wiessner 1983) to people both within and outside of a given group. This kind of assemblage is affective in that it creates aesthetic, emotional, and sensual (following Hodder 1990:46) effects on humans that experience it. Through this affectiveness, style has power; in other words, it is particularly "sticky" (Ahmed 2004) in its ability to impress upon other parts of an assemblage, especially the human parts. This powerful nature of style also resides in its consistent and uniform expression, which creates an apparent sameness (Hodder 1990:51) except when detached from its referent (Wiessner 1983:257). Most often style is expressed through symbols, such as decoration on a ceramic vessel, which are recognizable to group members (whether they connotate sameness or difference), but these symbols do not have to be in the form of decoration. It is important to note here that style is not just any "choice" made by a person. Instead, it is an expression of identity (at any scale) that communicates that identity (or is in opposition to an identity). This expression is an assemblage of many parts that come together to create an affective field, from which this identity can be understood by others. The assemblage of style is, of course, part of the larger identity assemblages that it is expressing.

As I highlighted in Chapter 2, style is expressed in two forms, emblemic style and assertive style. Emblemic style carries information about groups and boundaries, drawing from a direct referent. On the other hand, assertive style does not have a direct referent and often carries information related more to individual, rather than group, identity (e.g., Wiessner 1983). Importantly, assertive style is often employed when there is competition between groups (e.g., Fennell 2017:19), which may have been the case across the wider early Late Woodland cultural landscape. Emblemic style expresses membership in a group, while assertive style expresses individual identity. Emblemic style is more visible during the early Late Woodland period due to the lack of fine-grained data at most sites occupied during this period, but there are places where I believe assertive style may be visible, which I will highlight below.

One final concept to reconsider when examining the formation of identity assemblages at Carter Creek, and during the early Late Woodland period in general, is that of "frontier boundaries" from Green and Nolan (2000:349). As discussed in Chapter 3, Green (1987, 1993; Green and Nolan 2000) has argued that the Late Woodland period in west-central Illinois is one of frontier expansion (his "Frontier Model"), as people began to inhabit new locations on the landscape, moving away from previously dominant lifeways and social connections. I (Sutherland 2018) and Koldehoff and Galloy (2006) have applied the Frontier Model concept to other parts of Illinois during this period. The newly inhabited locations, and the wider landscape, represent an internal frontier. Green and Nolan (2000:349) add to this formulation, noting that within this internal frontier are boundaries that can be understood as "zones of cross-cutting social networks" where we can see Late Woodland peoples interacting, producing innovation and cultural change. As I argue below, it is at these blurry and dynamic frontier boundaries where early Late Woodland household identity, community identity, and style were deterritorializing and reterritorializing in the face of a shifting cultural landscape.

Style

Style, as an assemblage that expresses and communicates identity, can be seen in numerous ways at Carter Creek. This includes the ways in which people structured household spaces, what cherts they used, the decorations and surface treatments they adorned their ceramic vessels with, and the larger site layout. Each of these expressions of style are distinct assemblages that show the various identities people at Carter Creek held and interacted with. In some cases, such as the larger circular layout with a central plaza, more detailed information is needed to compare Carter Creek to other sites in the region (e.g., the Rench Site, McConaughy 1993b) in order to establish what, if any, stylistic expression is seen through this. Style is not entailed in every human practice, but rather those activities that express identity. The wider increase in frequency of circular (or arcuate) villages during this period throughout the Midwest (Benn 2011; Burks 2004; Farnsworth 1976; Kellar 1979; Leone 2007; McConaughy 1993b; Mehre et al. 1996; Owens 1994, 1997; Strezewski and Peterson 2019) may be a regional expression of sameness, or a convenient form of habitation that does not express identity at all. In other cases, such as the decoration and surface treatments on vessels at Carter Creek, a notable body of evidence shows the ways in which people were expressing personal, household, and community identities. The focus of my discussion on style at Carter Creek is on ceramic data, but other forms that style takes will also be included as appropriate.

Ceramic Production Techniques

A good place to start when exploring style through ceramic production techniques at Carter Creek is a comparison of the ceramic assemblages from Excavation Block 1 (EB1) and Excavation Block 2 (EB2). It is suggested that all ceramic data from EB1 is likely associated with Structure 1 and all ceramic data from EB2 is associated with Structure 2 (see Table 7.1 for a comparison of the ceramic assemblages of the two excavation blocks). More specifically, when looking at the ceramic vessel assemblages from each excavation block, there are some interesting differences that suggest varying styles between these two structures.

One major difference between Structure 1 and Structure 2 is the presence (or absence) of definitively non-Weaver/non-local ceramic vessels. In EB2, there are no vessels that have been typed as Middle to Late Woodland transition or other non-local traditions, whereas in EB1, 12.40% of all vessels are either Middle to Late Woodland transition (n=6, 8.33%), Lima Lake (n=1, 1.39%), Sny Bottom (n=1, 1.39%), or Levsen (n=1, 1.39%) (see Table 7.2 for a comparison of these vessels). Interestingly, less types of decorations were used on vessels found in EB1 and less vessels in EB1 show some kind of decoration overall (18.06 % in EB1 compared to 26.92% in EB2). In EB1, 29.17% of the vessels show a plain surface, whereas in EB2 this total is only 15.38%.

Vessel Type	**EB1**	**EB2**			**EB1**	**EB2**
Temper				Lip Modification (location)		
Grit	58	21		*Exterior*	33	14
Grit-Grog	0	4		*Interior*	1	-
Sand	7	1		*N/A*	38	12
Indeterminate	7	0		Lip Modification (orientation)		
Surface Treatment				*Vertical*	15	6
Cordmarking	34	14		*Left Oblique*	8	2
Plain	21	4		*Right Oblique*	3	2
Smoothed-over cordmarking	5	4		*Horizontal*	1	2
Single Cord	2	1		*Indeterminate*	7	2
Brushed	1	-		*N/A*	38	12
Net-Impressed	1	-		Vessel Use		
Fabric-Impressed	1	-		*Jar*	49	20
Indeterminate	7	3		*Bowl*	5	1
Cordmarking Orientation				*Indeterminate*	18	5
Vertical (V)	33	15		Decorations		
Left Oblique (LO)	3	3		*Nodes*	7	3
Right Oblique (RO)	2	-		*Incisions/Notches*	3	1
V/LO	2	1		*Circular Punctate*	2	1
V/LO/Horizontal	1	-		*Oval Punctate*	0	2
Rim Shape				*Fingernail*	0	1
Flat	48	12		*Stick*	1	-
Round	18	12		Other Attributes		
Interior Beveled	2	-		*Average Lip Thickness (mm)**	5.18	5.72
Exterior Beveled	1	1		*Vessels with Nodes*	7	3
Flat/Interior Beveled	1	1		*Node Diameter (mm)*	7.70	8.57
Flat/Exterior Beveled	1	-		*Node distance below rim (mm)*	15.22	15.23
Indeterminate	1	-		Vessel Type		
Lip Modification (tool used)				Weaver	42	18
Stick/Dowel	19	9		Weaver?	8	5
Cord-wrapped Stick	7	3		Lime Lake	1	-
Cordmarking	3	1		Sny Bottom	1	-
Channeled	3	-		MW-LW Transition	6	-
Notched	2	-		Indeterminate	7	3
Oval Dentate	-	1		Miniature Vessel	5	1
None	38	12		Pinch Pot	1	-

Table 7.1: Carter Creek Ceramic Vessel data by Excavation Block (EB). *Measurement excludes miniature vessels and pinch pots.

In both blocks, there were more flat-shaped rims than anticipated. In EB1, 66.67% of the vessels have flat rims and in EB2, 46.15% of the vessels have flat rims (the same total as rounded rims in this block). Fishel (2013d) notes that other Camp Creek phase sites usually have a much higher number of rounded rims compared to flat rims.

Provenience	**F27-4, S, Zone A**	**F27-8, S, Zone C**	**F28-1, N, Zone all**	**F32-3, N, Zone A**	**F33-1, N, Zone all**
Ceramic Type	Lima Lake	Mini Pot	MW-LW*	Sny Bottom	MW-LW
Vessel Form	Jar	Ind	Jar	Jar	Jar
Weight (g)	7.46	4.75	2.27	3.5	75.83
Temper	Grit	GG	Grit	Grit	Grit
Orifice Diameter (cm)	15	6	-	-	26
Orifice %	6	10	-	-	5
Rim Shape	Flat	Round	Round	Flat	Flat
Lip Thickness (mm)	4.38	3.03	4.82	5.33	6.37
Rim Thickness (mm)	4.65	3.99	6.82	5.62	5.99
Lip Modification	Stick	-	Channeled	-	-
Lip Modification Location	Exterior	-	-	-	-
Lip Modification Orientation	Vertical	-	-	-	-
Exterior Surface Treatment	Net Impressed	Brushed	Plain	Fabric-Impressed	CM/SCM+
CM Orientation	Vertical/Left Oblique	-	-	-	Vertical/Horizontal/Left Oblique
Decoration	-	-	-	-	Nodes
Decoration Below Rim (mm)	-	-	-	-	28.17
Use-wear	-	-	-	Some soot on rim	-
Vessel No.	V27-3	V27-4	V28-1	V32-2	V33-1

Table 7.2a: Carter Creek non-Weaver and non-local vessel attributes. *MW-LW= Middle to Late Woodland transition. +CM/SCM= Cordmarked/Smoothed-over Cordmarked.

At the same time that these two blocks and associated structures have differences, there are also some clear similarities. Both excavation blocks have roughly 80% grit tempered vessels, although it should be noted that 15.38% of the vessels in EB2 are grit-grog tempered, while EB1 has no vessels with this temper. Both blocks also have at least one vessel identified as a possible bowl (something thought to have disappeared from early Late Woodland ceramic assemblages, although possible bowls are also present at Marlin Miller; Fishel 2015a), with the bowl from EB2 being grit-grog tempered and one bowl from EB1 having sand temper (Figure 7.1). The use of non-grit temper is generally considered to be a non-local trait during this period (e.g., Studenmund 2000) so both of these bowls could have come from or connected to non-local spaces. In both blocks, roughly 50% of the vessels have lip modifications and the thickness of vessels is comparable. There was also one clay effigy fragment found in each excavation block. These effigies do have a similar paste color, but do not show any clear signs that they came from the same effigy figurine (Figure 7.2).

Provenience	**F43-2, E, Zone A**	**F44-1, N, Zone all**	**F44-2, S, Zone A**	**F64-2, N, Zone all**	**F65-7, W, Zone B**
Ceramic Type	MW-LW	MW-LW	MW-LW	MW-LW	Levsen
Vessel Form	Jar	Bowl	Jar	Jar	Ind
Weight (g)	15.39	15.99	17.32	31.68	3.31
Temper	Grit	Grit	Grit	Grit	Grit
Orifice Diameter (cm)	13	22	-	27	-
Orifice %	7	5	-	5	-
Rim Shape	Int beveled	Round	Flat	Flat	-
Lip Thickness (mm)	5.68	6.41	6.24	7.18	-
Rim Thickness (mm)	6.83	6.17	7.43	8.6	-
Lip Modification	CM	Stick	Notched	Dowel	-
Lip Modification Location	Exterior	Exterior	Exterior	Interior	-
Lip Modification Orientation	Vertical	Left Oblique	Left Oblique	Vertical	-
Exterior Surface Treatment	CM	Plain	CM	Single Cord	CM
CM Orientation	Vertical	-	Vertical	Vertical	Vertical
Decoration	-	-	-	Node, Notches	Circular Punctates in two parallel rows
Decoration Below Rim (mm)	-	-	-	9.28	-
Use-wear	-	-	-	-	-
Vessel No.	V43-1	V44-1	V44-2	V64-2	-

Table 7.2b: Carter Creek non-Weaver and non-local vessel attributes. *MW-LW= Middle to Late Woodland transition. +CM/SCM= Cordmarked/Smoothed-over Cordmarked.

Another set of data to consider when examining style at Carter Creek comes from the Illinois Archaeological Survey's (ISAS) reanalysis of ceramic sherds collected on the surface of the site in 1983 (Sampson 1983; Fishel 2013d). Overall, this assemblage is similar to that from the 2020 excavations, although there are some notable differences (see Table 7.3). Almost all of the vessels identified from 1983 surface collections were grit tempered (98.12%), while only 80.61% of the vessels from 2020 excavations were grit tempered. Interestingly, no grit-grog tempered vessels were identified from the 1983 collection or in EB1, so the presence of this temper may be related to the group living in Structure 2. There were also many more rounded rims found in the 1983 assemblage (59.02%) when compared to the 2020 assemblage (30.61%). The 2020 assemblage had no vessels with interior lip modifications, but the 1983 collection had 5 (only 1.88%). Of the 141 vessels with lip modification from the 1983 assemblage, a large majority (79.43%) had vertically oriented modifications, whereas less than half (44.68%) of the vessels with lip modifications from the 2020 assemblage were vertically oriented. In both assemblages, roughly 50% of the vessels had some form of exterior tool modification on the lips of vessels.

Vessel Data	**Carter Creek 2020**	**% of total**	**Carter Creek 2010**	**% of total**	**Carter Creek Totals**
Vessel Use					
Jars	68	69.39%	266		334
Bowls	6	6.12%	-	-	6
Indeterminate	24	24.49%	-	-	24
Surface Treatment					
Cordmarked/Smoothed-over cordmarked	57	58.16%	157	59.02%	214
Plain	25	25.51%	93	34.96%	118
Temper					
Grit	79	80.61%	261	98.12%	340
Grit-Grog	4	4.08%	-	-	4
Sand	8	8.16%	5	1.88%	13
Grog	-	-	-	-	0
Rim Shape					
Flat	60	61.22%	106	39.85%	166
Round	30	30.61%	157	59.02%	187
Lip Modification					
Exterior Tool	47	47.96%	136	51.13%	183
Interior Tool	-	-	5	1.88%	5
Cord-wrapped Stick	10	10.20%	37	13.91%	47
Lip Modification Orientation					
Vertical	21	44.68%	112	79.43%	133
Left Oblique	10	10.20%	21	7.89%	31
Right Oblique	-	-	1	0.38%	1
Upper Body Shape					
Vertical	18	18.37%	-	-	18
Incurved	29	29.59%	-	-	29
Outcurved	11	11.22%	-	-	11
Inslanted	12	12.24%	-	-	12
Other Attributes					
Noded Vessels	10	10.20%	16	6.02%	26
Node distance from lip (mm)	15.23	-	-	-	15.23
Average Lip Thickness (mm)	5.17	-	5.45	-	5.37

Table 7.3: Carter Creek Vessel data from 2020 excavations and 1983 surface collections. 1983 Collections data taken from Fishel (2013d:319, Table 12.3).

When these two assemblages are combined (Table 7.3), they show a relatively standard LaMoine Valley, Camp Creek Phase, ceramic assemblage. Almost all of the vessels are jars (91.76%), a majority of which have cordmarked/smoother-over cordmarked exteriors (58.79%). On top of this, grit temper dominates the assemblage (93.41%), with rounded rims (51.37%) outnumbering flat-shaped rims (45.60%) and almost exactly half of the vessels have exterior tool lip modifications (50.27%). Further, the vessels at Carter Creek are generally thin with the average lip thickness being 5.37 millimeters (mm). Having looked at the similarities and differences of the various ceramic assemblages at Carter Creek, what can I say about style assemblages at Carter Creek?

Based on the observable ceramic data from Carter Creek, there is clearly a difference in the expression of style between Structure 1 and Structure 2, and the families/households that used these spaces. Structure 1 shows connections to non-local ceramic production techniques and decorations/surface treatments. A couple of specific examples will show this. Vessel 33-1 (V33-1), found in the North half of Feature 33 (F33), has been typed as a Middle to Late Woodland transition vessel based on its measurable traits (Figure 7.3). These traits include a thicker vessel (6.37 mm lip thickness and 8.76 mm maximum thickness) with cordmarking/smoothed-over cordmarking that is haphazard in its orientation; the cordmarking was applied to the vessel in vertical, horizontal, and left-oblique

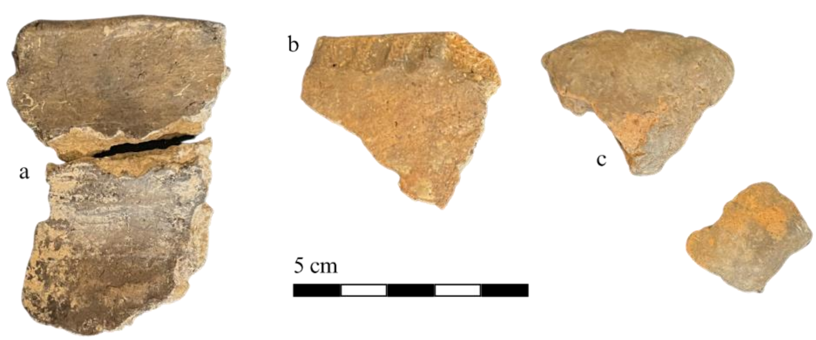

Figure 7.1: All rims of vessels identified as bowls from 2020 excavation at Carter Creek. (a) V14-1; (b) V44-1; (c) V48-5.

patterns. This vessel also has a single observable node that sits 28.17 mm from the lip of the vessel. These traits are not typical in LaMoine Weaver assemblages. Thicker vessels are associated with Middle Woodland occupations, as thinner vessel walls are seen throughout the region during the early Late Woodland period (e.g., McElrath and Fortier 2000; Benn and Green 2000); the same is true of nodes, which are found to be much closer to the lip of vessels at Weaver sites (e.g., Green and Nolan 2000). The haphazard application of cordmarking is also rare at LaMoine Valley Weaver sites and is generally considered to be a trait of White Hall Phase sites in the Lower Illinois Valley (Studenmund 2000). At the same time that this vessel exhibits atypical traits, it also exhibits some standard LaMoine Weaver traits with the

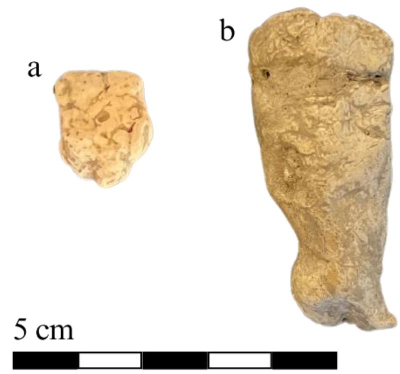

Figure 7.2: Clay effigy fragments from (a) F19 and (b) F62).

Figure 7.3: V33-1 interior (left) and exterior (right) showing haphazard cordmarking and a node spaced 28.17 mm below the rim.

vessel being a jar with grit tempering and a flat rim. It should be noted that F33 is one of the few clearly interior pits associated with Structure 1.

Other vessels associated with Structure 1 that show non-local connections are the Net-impressed Lima Lake vessel (V27-3), the Fabric-impressed Sny Bottom vessel (V32-2), and the Levsen type body sherd (F65-7) with parallel rows of circular punctates (see Figure 7.4); both the Sny Bottom and the Levsen sherds were found in the southeastern portion of EB1. Each of these vessels exhibits surface treatments and/or decoration that clearly ties them to locations in the Mississippi Valley (Benn 2012; Morgan 1985, 1986; O'Gorman 2000), which is not surprising, as Fishel (2013d) argues that regional interactions shift from the east/southeast to the southwest/west during this period. These vessels may have been brought to Carter Creek as trade vessels or may have been made by female potters who moved to Carter Creek from these Mississippi Valley areas (i.e., Fishel 2018), but the definitive reason they appear at Carter Creek is unknown. One thing to consider is work from Shannon Fie (2006, 2008) that may provide insight into this.

Figure 7.4: Vessels from EB1 showing nonlocal connections. (a) a Levsen style (Linn Ware) sherd with connection to northeastern Iowa; (b) V32-2, a fabric-impressed sherd with connections to the Sny Bottom region of the Mississippi Valley; (c) V27-3, a net-impressed sherd with connections to the Lima Lake region of the Mississippi Valley.

Fie (2006, 2008) used neutron activation analysis to source the clay for ceramics from Middle Woodland sites in the Lower Illinois Valley. While she came to many conclusions from this analysis, the one that ties to this research comes from her examination of the sourcing of clays for both "utilitarian" and finer-made vessels. She hypothesized that utilitarian vessels would be expected to come from local sources, whereas finer-made vessels would have been trade items and would have come from more distant sources. It has even been shown ethnographically and ethnohistorically, for more recent periods and culture groups (e.g., Arnold 1985), that clays to make utilitarian vessels most often come from local sources. Her analysis produced results opposite of her expectations, in which utilitarian vessels were more often made from non-local clays and finer-made vessels were made from locally available clay sources. This pattern may hold true at Carter Creek.

The LaMoine Valley is toward the southern extent of what is typically considered the Central Illinois Valley (with the Lower Illinois Valley immediately adjacent to the south) in the context of the Middle and Late Woodland periods (Fishel 2013d). Therefore, it would not be surprising for some of the people living at Carter Creek to have come from the Lower Illinois Valley. This could have been partially driven by an influx of people from the American Bottom into the Lower Illinois Valley during this period (e.g., McElrath and Fortier 2000), causing some groups from the Lower Valley to move northward into the Central Illinois Valley and the LaMoine Valley. Green (1987, 1993) and others (e.g., McElrath et al. 2000) also argue that early circular villages during this period resulted from groups leaving habitations in or near major river valleys (the Illinois and Mississippi) and moving into the uplands. Thus, this location close to both the Central and Lower Illinois Valleys may have invited groups from both areas, and possibly even from the Mississippi Valley. There are also other clear connections to the south shown in the total artifact assemblage at Carter Creek, including the haphazardly cordmarked vessel described above (V33-1) and many of the non-local chert sources found at the site (e.g., Esarey 1983). With this information in mind, and following Fie's (2006, 2008) analysis from Middle Woodland sites, I argue that these non-local decorations and surface treatments were not incoming vessels from non-local groups, but rather locally made vessels that followed non-local traditions.

Other non-local ceramic traits, such as sand and grit-grog tempering may follow the same pattern or may represent trade vessels. Interestingly, almost none of the non-grit vessels from the 2020 excavations at Carter Creek have any traits that would suggest they are non-Weaver vessels (Figure 7.5). An exception is for one miniature vessel (V27-4), which comes from the same pit as the aforementioned Lima Lake vessel (V27-3), which exhibits a brushed exterior surface (Figure 7.6). Brushing is typically considered a terminal Middle Woodland trait (e.g., Fishel 2015a:100), so it is possible this vessel was brought to Carter Creek as some kind of heirloom; one brushed sherd was also noted from the 1983 surface collections (Sampson 1983; Fishel 2013d). It is unclear from the available data whether non-grit vessels at Carter Creek were made locally or brought in as trade vessels or vessels carrying trade items.

Figure 7.5: Two examples of Weaver non-grit tempered vessels, both from Excavation Block 2 (EB2). (a) V14-2; (b) V17-1.

Figure 7.6: Vessel 27-4, showing brushing on the exterior surface of the vessel.

When examining Structure 2, the ceramic assemblage is much more uniform, with the exception of four grit-grog tempered vessels. A typical vessel from Structure 2 would be a grit-tempered jar with either a flat or rounded rim, and exterior lip tool modifications made from a stick/dowel with a vertical orientation. This vessel would likely have been cordmarked on the exterior surface below the lip, with the cordmarking also being vertically oriented (Figure 7.7). Some vessels from Structure 2 were decorated below the lip (30.77%), but it was more likely that the vessel was undecorated (see Table 7.1).

As I argued in Chapter 6, it seems likely that Structure 1 served as some kind of communal, or at least heavily used, cooking/processing space based on the number of pits showing burned/ashy/greasy fills, along with the possible presence of post screens immediately adjacent to Structure 1, which would have been used to aid in these activities. On the other hand, Structure 2 seems to have been used by a family unit (or multiple family units) as a typical, all-purpose, household space. Understanding these differences may point to why style is expressed so much differently in these two spaces. Perhaps the need to outwardly express more precise, clear, style in activities associated with Structure 1 would have been stronger due to it being a shared communal space, leading to the variety of ceramic traits identified in the Structure 1 assemblage. During activities at Structure 2, a group of possibly related individuals would have interacted in their day-to-day lives, perhaps with little need to express an identity tied to clear decorative motifs due to their membership in that household already being established through access to and use of that household space.

Figure 7.7: A standard Excavation Block 2 (EB2) vessel with grit temper and vertically oriented cordmarking. The vessel also has stick impressions on the lip of the vessel.

Throughout this examination of style at Carter Creek, I have pointed to the differences between the possible expressions of style at Structure 1 and Structure 2, but I have not explicitly touched on how style emerged as an assemblage in these spaces and what these style assemblages consisted of. Understanding the styles of Structures 1 and 2 through an assemblage theory lens will help to show the ways that these styles were active participants in the ongoings at Carter Creek and in the wider region. The style of people using Structure 1, as expressed through ceramic production techniques, would have been plural, with no clear singular style present. While certain Weaver ceramic traits dominate the assemblage, such as grit tempering and cordmarked exteriors of vessels, there is still a great deal of variety. This means that the style assemblages expressing identity in and around Structure 1 would have always been in flux, flowing in and out of this space, not taking on a clear group identity.

Take, for example, Vessel 33-1 again. The person (or persons) who made and used this vessel could actively participate in the identity it expressed. This style assemblage likely included the haphazard cordmarking on the exterior of the vessel, the deliberately spaced node well below the lip of the vessel, and the literal production of the vessel. This style assemblage could express a particular connection to Middle Woodland practices, which could also have been part of this assemblage. This connection to the Middle Woodland would have been actively felt as the person making this vessel molded the clay and applied the cordmarking and nodes. Once the pot was fired and finished, the use and eventual deposition of this pot in Structure 1 was likely tied not only the vessel's users to the Middle Woodland but also provided a signal to other people at Carter Creek that its users still felt a connection to the past that other people may have been deliberately avoiding (more on this below). Thus, the style assemblage that included this vessel likely included the use of this vessel in the cooking/processing activities taking place around Structure 1, as these ceramic production techniques were displayed for others to see. Similar to V33-1, the brushed miniature vessel (V27-4) could also express connections to a Middle Woodland identity (see Figures 7.3 and 7.6).

The same kinds of style assemblages likely emerged out of the production and use of other non-local decorations and surface treatments. The local production and use of net-impressed, fabric-impressed, and Levsen-style vessels could assert ties to the Mississippi Valley (see Figure 7.4). The people making and using these pots could be physically (through the act of production and use) and emotionally (through the affectiveness of these pots) connected to distant locations and traditions as a way to express their identity in a communal space. These pots, as with V33-1, were likely parts of style assemblages that literally included the distant locations and practices they displayed through surface treatments and decoration.

All of these non-Weaver/non-local vessels were likely central to the active formation and interaction of different styles, and the identities they expressed, in and around Structure 1. As Harris (2014, 2016, 2018) pointed out, assemblages have power through the affective atmosphere they create, and the deliberate use of these unique ceramic production techniques could be particularly affective as these style assemblages territorialized in the spaces associated with Structure 1. These style assemblages would literally connect people at Carter Creek to distant geographic and temporal locations and traditions as people interacting with these vessels felt their sticky affectiveness. The communal space in and around Structure 1 afforded for this amalgam of different style assemblages as people at Carter Creek were attempting to territorialize new identities in a newly inhabited space. The loss of interaction and group identity from Middle Woodland ceremonial practices likely also afforded the space for competing styles as the social upheaval of this period disconnected people from Middle Woodland referents. Without these referents, style lacked the ability to express a sameness (following Wiessner 1983) that identity could be tied to. As people used this space, and expressed their identities through these vessels, they could also participate in group activities that tied them to other people and groups expressing competing identities. The interaction and melding of these different style assemblages was likely central to the territorialization of a larger group identity, or lack thereof, at Structure 1 and Carter Creek as a whole, which will be discussed more later in this chapter.

If Structure 1 is a space in which communal activities led to the interaction of myriad style assemblages, Structure 2 is best thought of as a space in which a family unit or household held domain and did not need to express their identity through clear and precise ceramic production techniques. The ceramic assemblage associated with Structure 2 is relatively uniform, so there may be little space left for the territorialization of style in this space, but this may be a misreading of the data. Wobst (1977) argued that emblemic style was used to express connections to exterior groups because it would be inefficient to create objects that expressed a sameness to people you interact with regularly. In fact, Wobst argued that verbal communication would have been the preferred method of expressing intragroup identity because it would be the most efficient way to do so. Studies have shown that Wobst's argument was flawed, and there are numerous examples of intragroup expressions of emblemic style (e.g., Bowser 2000; David et al. 1988; Hegmon 1998) that would not be the most efficient uses of resources. Bowser (2000) has specifically shown that the use of intragroup emblemic style may be strongest during tumultuous times when social networks are shifting. While these networks are in flux, ambiguous styles may emerge that may be an active avoidance of established stylistic expressions (Wiessner 1989:57). As Fennell (2017:19; Fennell 2003, 2007) has explained it, ambiguous expressions may lead to stylistic choices with multiple meanings that help to facilitate communication and interaction among groups where a more prevalent style has lost popularity. These ambiguous expressions may eventually territorialize into newly formed, and more widely shared identities. Thus, I argue that Structure 2 should not be seen as having a lack of style, but instead is best thought of as a space in which an intragroup emblemic style, one that was relatively bland and existed at the household level, emerged as the Middle to Late Woodland transition created a turbulent atmosphere in which past expressions and styles deterritorialized. As I argue below, during the latter part of the early Late Woodland period in the LaMoine Valley, we may see the territorialization of ambiguous styles mentioned by Fennell (2017:19). It could also be argued that there is some form of assertive style expressed at Structure 2.

Figure 7.8: A selection of decorated vessels from EB2. (a) V16-11 with oval-shaped stick impressions; (b) a body sherd from F14 with fingernail punctates; (c) V16-2 with circular dowel impressions and possible circular punctates or node holes below; (d) V16-5 with oval dentate impressions over cordmarking.

As Wiessner (1983) notes, assertive style does not need a direct referent, and is a personal expression of one's identity; in contrast, emblemic style has a referent and expresses a group identity. In the Structure 2 ceramic assemblage, an assertive style may be located in the variety of decorations used. Nodes, incisions/notches, circular punctates, oval punctates/impressions, and fingernail decorations are found on the limited number of decorated vessels (n=8) (Figure 7.8). If multiple potters were involved in the production of pots associated with Structure 2, these small differences may have been their ways of expressing individual identities within a shared household. The same kind of argument could be posited for lip modifications. However, almost all of the lip modifications identified in the Structure 2 assemblage are either stick (64.29%) or cord wrapped stick (21.43%) impressions. As a result, there does not seem to be much individual style emerging out of those techniques. It could also be argued that the use of grit-grog temper in some vessels was an expression of personal, assertive, style. Taken together, Structure 1 and Structure 2 show the different ways that style could emerge through ceramic production techniques in the same village, both relating to the upheaval of this period and the differing use of these spaces.

Lithics and Other Style Assemblages

The discussion of style assemblages at Carter Creek has so far focused on ceramics and ceramic production techniques, especially as seen through the vessels identified. This is partially due to the focus of this dissertation being on the ceramic assemblage from this site, but this artifact class is not the only place where archaeologists can see style emerge. The other major artifact assemblage discussed in this dissertation is lithics, and through the examination of chert types and tools, we can see places where style may have expressed identity at Carter Creek. This is especially true when comparing Structure 1 and Structure 2.

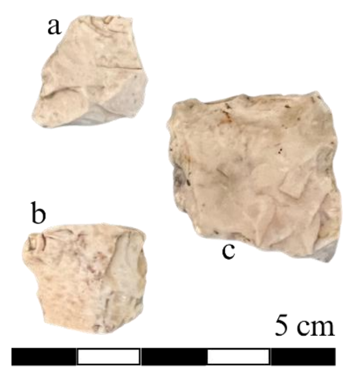

Figure 7.9: BK chert tools from EB2. (a) A biface fragment from F14; (b) a biface fragment from the back dirt; (c) a scraper from the back dirt.

Structure 2 is a space in which emblemic style may have territorialized through chert tool production and use. All the tools associated with

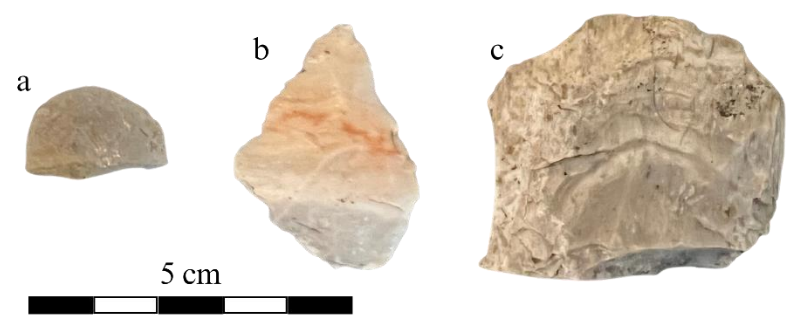

Figure 7.10: Nonlocal chert tools from EB1. (a) A utilized flake of Mill Creek chert from F28; (b) a utilized flake of “Crescent Hills?” chert from the plow zone above EB1; (c) a gouge of Mill Creek chert from F23.

Structure 2 were made using locally available Burlington-Keokuk (BK) cherts (n=4) (Figure 7.9). Additionally, there is a very limited amount of non-local chert in the Structure 2 lithic assemblage overall. This points to a household group that likely held an identity that was tied to local places. There were also no Projectile Points/Knives (PPK) identified in the artifacts associated with Structure 2, so we do not know what type of PPK was being used by the people in this space. The blandness of the lithic assemblage from Structure 2 may, similarly to the ceramic data, point to the emergence of an intragroup emblemic style in this space, or may just reflect the use of easily available resources.

Structure 1, on the other hand, does show some connection to non-local locations through chert types. Generally speaking, there were very few non-BK cherts used at Carter Creek that were identified from 2020 excavations, but most of them were associated with Structure 1. This includes six non-BK tools, which are made from Mill Creek, Crescent Hills, Cobden, and St. Genevieve cherts, showing further connections with the Mississippi Valley and areas near it (Figure 7.10). When it comes to PPK, most identified from Structure 1 were

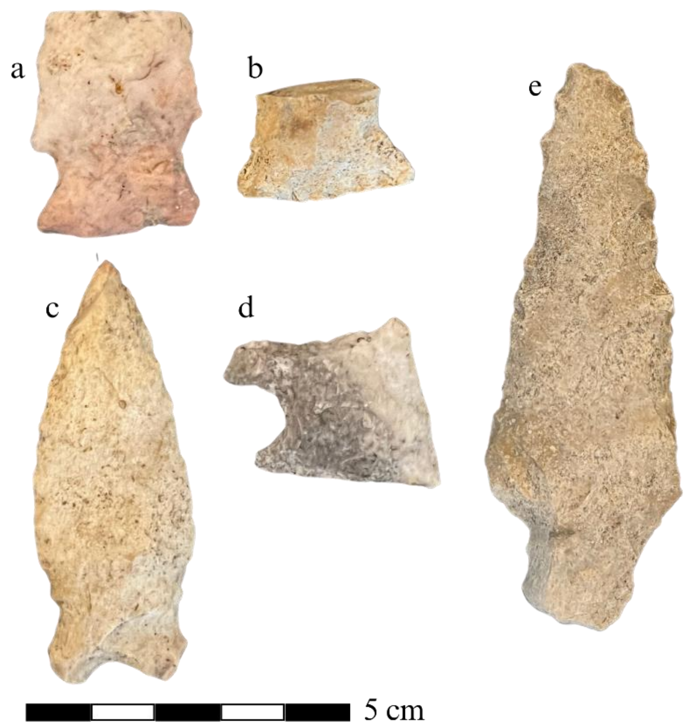

Figure 7.11: A selection of typed PPK from EB1. (a) A Steuben PPK of BK chert from above the plow zone above EB1; (b) A Steuben PPK base of BK chert from F24; (c) a Steuben PPK (PP4501) of BK chert found in the subsoil of EB1; (d) a Snyders PPK base of BK chert from F27; € a Contracting Stem PPK of BK chert from F58.

indeterminate types due to their fragmentary nature, but four Steuben, one Contracting Stem, and one Snyders type were identified (Figure 7.11). These types of PPK are expected for this period. Interestingly, the Snyders PPK was found in Feature 27 along with the brushed miniature vessel. Snyders points are found at both Middle Woodland and early Late Woodland sites but are thought to be mostly associated with terminal Middle Woodland occupations (Reber et al. 2017:190-193). Perhaps F27, an earth oven, was used by a group that expressed a Middle Woodland identity through this Snyders PPK and the brushed vessel. Beyond the chert artifacts associated with Structure 1, a single lip fragment from a pipe made of unknown groundstone was found in a pit (F22) associated with Structure 1 (Figure 7.12). While the source of the pipestone is unknown, its use could express connection to a specific place (or places) on the landscape both as it was being crafted and as it was used.

When viewing the lithic collection from Carter creek as a whole, it is clear that there are connections to areas to the south and west based on chert types (Figure 7.13). For example, in the collection of chert tools provided by Mike Black, which were collected from the surface at Carter Creek, tools were made from many non-local cherts, including Mill Creek, Crescent Hills, Fern Glen, Cobden, St. Genevieve, and St. Louis type cherts. Additionally, two platform pipe fragments and a pendant fragment were identified, all made from ground limestone. Taken together, this lithic assemblage shows places where style assemblages may coalesce, and express particular identities connected to distant locations.

Figure 7.12: A pipe lip fragment of unknown source from F28.

Beyond chert and PPK types, there are also the two clay effigy/figurine fragments mentioned above (see Figure 7.2). One effigy fragment was found associated with each Structure and there is no clear evidence that these two fragments belonged to the same figurine prior to deposition. While we cannot definitively say who made these effigies or what they may have represented or been used for, it is likely that ceramic/clay figurines were produced by females (Murdock and Provost 1973; Driver 1969, Flannery 1946) based on ethnographic and ethnohistoric accounts. It is also likely that these figurines produced connections to the "Middle" world of the cosmos through the interaction of clay and temper in the making of these items (Keller and Carr 2005). Perhaps, if one were to have more effigy fragments, or a complete one, archaeologists could see how female members of the Carter Creek community were expressing an identity through the style assemblages that emerged from the production and use of these items. Keller and Carr (2005) have provided an extensive survey of clay figurines/effigies from the Middle Woodland period, so it would be interesting to see how Weaver figurines differ, possibly offering another point from which style assemblages would have emerged.

If we move beyond just artifact data, we can also examine the circular layout of Carter Creek as a choice where style may have emerged. We must remember that style is specifically an assemblage that expresses identity, and this identity can be something personal like decorations on pots in Structure 2 or something community wide. There are numerous circular or arcuate villages that developed during the early Late Woodland period, ranging from Wisconsin to Tennessee and everywhere in between (Green et al. n.d.); circular/arcuate villages are even found across the world (e.g., Carniero 2017, Means 2007, Peterson and Schelach 2010). Because of this, the circular/arcuate layout of a habitation area does not seem to be expressing any kind of particular local identity, at least not based on the data we currently have. At the same time, the emergence of this kind of site during a tumultuous period may reflect people coming together, not necessarily as a clear expression of sameness, but instead as an expression against Middle Woodland practices and spaces (such as mound centers and the floodplains).

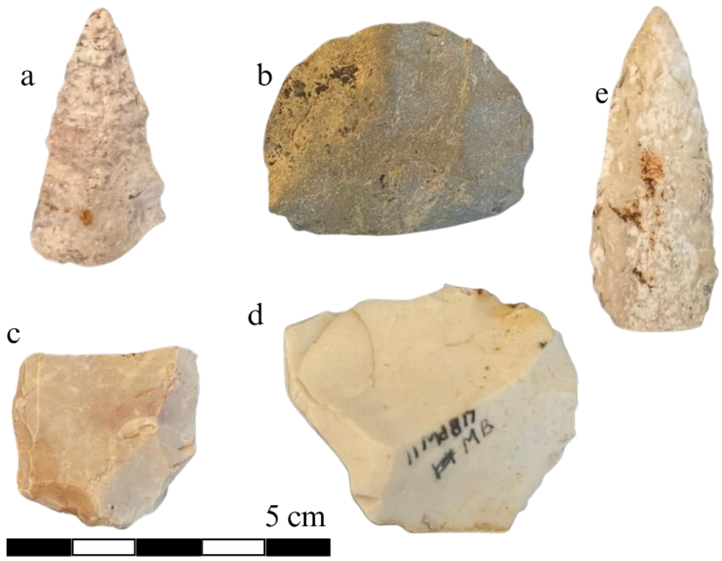

Figure 7.13: A selection of tools from Mike Black's collection. (a) MB6 a drill made from BK chert; (b) MB7 a gouge made from Fern Glen chert; (c) MB8 an Ansell-Mund PPK made from BK chert; (d) MB10 a scraper made from BK chert; (e) MB38 a scraper made from "Crescent Hills?" chert.

Conclusion

Style clearly territorialized at Structure 1 and Structure 2 differently, pointing to the heterogeneity of identities, and the ways they were expressed at Carter Creek. In Structure 2, a family unit or household shared spaces and performed seemingly mundane daily tasks, which, along with uniform ceramic production and use of mostly local cherts, territorialized into a household emblemic style that may have emerged in opposition to the upheaval of the period. This style territorialized as a sameness among a small group that shared a small space on a day-to-day basis. At the same time, a variety of decoration on vessels, and perhaps the use of grit-grog tempering, may represent a window into assertive, meaning personal, styles in this space.

In Structure 1, a wide variety of non-Weaver and non-local ceramic production techniques were used, along with regional and exotic cherts, showing clear connections to non-local places and the past. Through these vessels and lithic tools, numerous styles territorialized in the spaces associated with Structure 1, with no single style dominating. The styles at Structure 1 would have emerged through the production and use of clearly non-local techniques and materials in communal cooking/processing practices.

The difference in the expression of style between Structure 1 and Structure 2 may be related to the power that style holds (Hodder 1990). The impetus to express a clear identity at Structure 1 may have been stronger due to its use as a communal space. It has been argued that during the Middle Woodland period identity was tied to the different kinds of spaces people would interact with and in. This includes hamlets of one or more households usually at a bluff base or on the floodplain (e.g., Apple Creek, Struever 1968), with some of these sites found into tributary valleys (e.g., Farnsworth 1973); bluff top ceremonial cemeteries with small conical mounds (e.g., Elizabeth, Charles et al. 1988) that would have brought three to five hamlets together; and, floodplain mounds/ceremonial sites (e.g., Kamp, Struever 1960) that would bring multiple blufftop groups together. Blufftop centers may have been linked to specific, and exclusive, 12–30 kilometer (km) territories (e.g., Fie 2008) and were places at which relatively local community identities were forged through ceremonial activities (Ruby et al. 2005). Obviously, the structure of early Late Woodland sites is much different, but it is not unreasonable to think of circular/arcuate villages like Carter Creek as similar to both blufftop and floodplain mound groups in the ways that this space afforded interactions.

With the early Late Woodland period lacking burial mounds and mound centers there would be a need for new locations where people could come together and develop group identities. I propose that these new locations were circular/arcuate villages. Ruby et al. (2005) argue that each blufftop mound was a ceremonial center for three to five hamlets, while floodplain mound centers were used by multiple of these blufftop groups. If each hamlet consisted of up to three households, then a blufftop group could have a maximum of 15 households tied to it through a shared identity. Although households and house structures are not to be conflated, the estimate of 25-30 house structures at Carter Creek (Holt 2005) suggests that it could have been inhabited by more households than would typically be tied to a blufftop mound center. At the same time, Carter Creek likely had less inhabitants than would participate in activities at floodplain mound centers. Ruby et al. (2005:137) suggest that up to 500 people may have been tied to a floodplain mound center. With the early Late Woodland period being one of a social and cultural upheaval, competing identities likely emerged out of the vacuum left by the shift away from Middle Woodland practices and spaces. I will expand upon this in later sections, but the argument can be made that Carter Creek, as a circular village that brought numerous smaller groups together in one place, is best thought of as a place at which competing identities territorialized and interacted as people moved into this new space. Communal areas like Structure 1 are the smaller spaces in which the myriad style assemblages directly intermingled, in some cases as constituent parts of larger community assemblages.

Middle Woodland habitations occupied most continuously only included one to three households grouped together in small hamlets. Therefore, the year-round occupation of places like Carter Creek would have been a wholly new experience for people in this region. This type of habitation may have been driven by social upheaval (e.g., Fishel 2013d) and climatological factors (e.g., Van Nest 2006), but the choice to come together into larger-than-usual groups must have expressed some kind of shared identity, although not necessarily a sameness. As Wiessner

(1983) observes, emblemic style is tied to a referent which enables style to express a sameness among a group. The referent being shared in this case consisted of Middle Woodland practices and spaces. When a referent is removed, an apparent sameness disappears, and style must emerge in new ways. In the case of Carter Creek, and other circular/arcuate villages from this period, this detachment afforded the emergence of new style assemblages at all levels of identity.

Based on the artifact and feature data from Structure 1 and 2, we can identify how each space allowed for certain identities to be expressed. At Carter Creek, a community identity was expressed, not through shared ceramic decorations, surface treatments, or chert use as one might expect, but through the active choice to move away from Middle Woodland practices, places, and spaces. At Carter Creek, a style assemblage territorialized that included the upland location of the site, the circular layout of the village, and the newly formed practices of the inhabitants. The heterogeneity of styles territorializing in the space associated with Structure 1 seems to indicate that Carter Creek lacked a shared community identity. Yet, it was exactly this heterogeneity that was an expression of community identity at Carter Creek. Taking this and the discussion of styles in Structure 1 and 2 as a foundation, I will now examine how household and community identity assemblages territorialized at Carter Creek.

Household Identities

Structure 1 and Structure 2 again offer the best places to look for the daily interactions that typically constitute household identity assemblages. In fact, because of the need for a household identity to be tied to a relatively small space (they are spatially emplaced), these two structures are the only places archaeologists can examine households at Carter Creek currently. Structure 1 is clearly a space in which a defined household identity is hard to locate, whereas Structure 2 is a space in which an emblemic style comes from the presence of a simple, yet

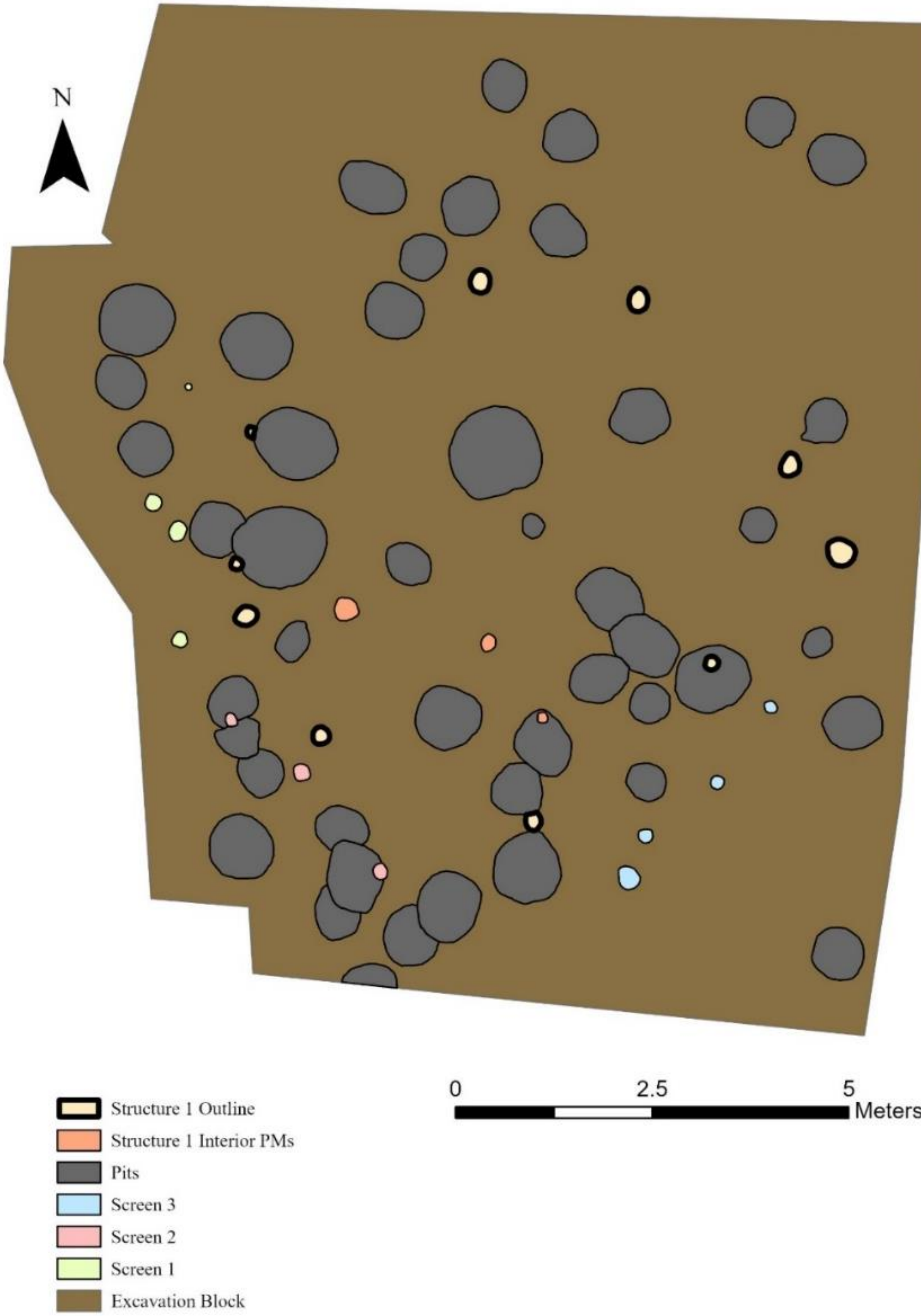

Figure 7.14: A map of Structure 1 with all associated pits, screens, and interior PMs.

affective household identity. Household identity assemblages are more spatially expansive than style assemblages, thus they can be partially constituted by style assemblages and the identities they express. As with style, a household identity does not emerge directly from something like ceramic production techniques, it instead includes lithics, household spaces, community spaces, distant locations/times, and the people who participate in the daily activities that tie these things together. By analyzing the artifacts, features, and space at Carter Creek in previous chapters, I laid out the data that can be used to examine household identities at Carter Creek. In this section, I bring these data together to show what household identity assemblages were territorializing at Carter Creek and the ways that these assemblages were interacting, both existing as part of and creating the transformative nature of this period.

Structure 1 was a communal space used for cooking and processing activities, in which numerous style assemblages territorialized and interacted, creating a dynamic space where the upheaval of the Middle to Late Woodland transition was especially felt (Figure 7.14). This is seen through the use of non-Weaver and non-Local ceramic production techniques, such as net-impressions on the surface of a vessel, and regional or exotic cherts. These myriad expressions of identity through interacting styles would have made Structure 1 a place at which a shared household identity struggled to emerge. While certain parts of a household identity assemblage, such as daily interaction and use of smaller space, are present at Structure 1, this space and the activities that took place within it, did not territorialize into a shared household identity. Instead, as a communal space, many household identity assemblages would have interacted there.

As people interacted through shared cooking and processing activities associated with Structure 1, they likely experienced the same sights, smells, sounds, and tastes. They also literally shared the space, earth ovens, cooking pits, and processing pits. They may have also shared lithic tools or other cooking and processing implements, and possibly excavated, and re-excavated, pits as a group. Taken together, these activities likely afforded the territorialization of a sameness, a shared identity spatially emplaced at Structure 1, among the people using this structure. At the same time, the daily interaction between people and style assemblages within this shared space likely created an atmosphere of competing connections to non-local places, times, and practices. These competing connections serve to highlight the differences, the seemingly unique parts of the competing identities, between the people that used this structure. The constant, daily, friction between the styles and identities sharing space at Structure 1 did not afford the formation of a shared household identity and stands in stark contrast to the clearly emergent household identity at Structure 2 (Figure 7.15).

The people using Structure 2 used relatively uniform ceramic production techniques. They also almost exclusively used locally available BK cherts for lithic tool production and use. Additionally, there is a clear central hearth in this structure that was identified during 1984 excavations, offering a central location for the group living in and using this structure to convene. The interactions that would have territorialized into a household identity assemblage at Structure 2 would have included cooking and processing activities, lithic tool production, ceramic vessel production, and any other daily contact by members of this household. These activities would have tied this group to the local landscape through the use of BK cherts and relatively standard Weaver type ceramics seen at Structure 1 and in the entire site assemblage. At the same time, the use of grit-grog temper in some vessels may have been an intentional tie to non-local locations and practices. Whether connections to these non-local spaces constituted part of the household identity at Structure 2, or whether they displayed an assertive, personal, style not shared by the entire household is unclear. In either case, the use of assertive style within the household does not diminish the territorialization of a household identity emplaced at this structure.

Figure 7.15: A map of Structure 2 with all associated pits.

When discussing a household identity at Structure 2, the emergence of a household identity is likely tied directly to the emergence of an intragroup emblemic style. The household identity assemblage that territorialized at Structure 2 was constituted by the activities I discussed above, along with the constant presence of a shared style and the affective atmosphere it created. The literal performance of these activities created an affective atmosphere that tied members of the household at Structure 2 together through interactions between (the same) people, places, and things on a daily basis. The likely repetitiveness of these interactions is one way that a household identity may have strengthened and formed in this space. On the other hand, at Structure 1, cooking and processing activities would have been repetitive, but the constant flow of new, and unique, styles into that space would not have allowed for a repetition that enabled an identity to become emplaced.

The distinction between these spaces and the territorialization of household identity assemblages within them can be tied back to Hodder's (1990) discussion of style having power, and Harris' (2014, 2016, 2017) argument that assemblages are affective and sticky (Ahmed 2004). In Structure 2, the repetition of daily practices and interactions between the people and things that shared this space would have created an affective atmosphere in which a household identity assemblage, constituted partially by other affective assemblages such as ceramic vessels, could form as people, places, things, and ideas became stuck together, emplaced within the structure itself. The power of this household identity afforded for the formation of an emblemic style within this space and possibly more personal styles as well. At Structure 1, the constant interaction of different styles through daily cooking and processing activities would not have afforded the emergence of a household identity tied to this space. Instead, the power of each emblemic style, both produced and displayed in this space, created a crowded atmosphere where a sameness was unable to develop. With the Middle to Late Woodland transition being a stressful, transformative, period, there may have been a need, or desire, to display strong emblemic styles (Bowser 2000) as a way to cope with this transition at both Structures 1 and 2.

In both cases, different kinds of assemblages came together through daily interactions, both displaying competing identities or affording the emergence of a sameness.

One additional thing to consider is how the dynamics discussed above may have changed if the non-local and non-Weaver ceramic vessels and cherts at Carter Creek were coming to the site via trade or interaction instead of being locally made or brought to the site by its permanent inhabitants. As I argued above, I believe the non-local and non-Weaver ceramic vessels at Carter Creek were made locally (following Fie's (2008) analysis of Lower Illinois Valley ceramics from the Middle Woodland period), possibly by female potters who moved to the site through social, possibly marriage, networks (Fishel 2018). Having said this, if these unique pots, such as V33-1, were not locally made, but were instead brought to Carter Creek as trade items, I do not think my above arguments change. If the grit-grog tempered vessels found associated with Structure 2 are trade vessels, perhaps a connection to a non-local place (through these grit-grog vessels) is also part of the household identity assemblage there, but it does change the nature of that space. At Structure 1, the interaction of myriad styles would still have occurred whether some vessels were made locally or not. Thus, this space would still be best thought of as a communal area in which competing styles created a messy, crowded, atmosphere in which no clear household identity could emerge. Therefore, the arguments above still hold.

How sameness and difference may have been felt at a larger, community, level will be discussed in the following section, but first I want to continue the analogy of circular/arcuate villages and Middle Woodland blufftop mound centers. Each blufftop mound center was a space in which a few smaller hamlets would come together to interact, forming a wider-scale identity through burial ceremonies (Ruby et al. 2005). A circular/arcuate village would have been occupied by more people than a blufftop mound center, but also would have been a similar kind of space where smaller groups came together and developed shared identities. Additionally, these groups were likely tied to specific resource territories (e.g., Styles 2000), as they would have been at blufftop mound centers during the Middle Woodland period (Ruby et al. 2005), thus necessitating some kind of reliance on one another. Therefore, it is useful to think of each household (not necessarily each structure) at Carter Creek, and other circular/arcuate villages that emerged during this period, similarly to a hamlet from the Middle Woodland period. Each of these households could display an identity that would be somewhat unique. At the same time, the assemblages that constituted these identities were likely constantly interacting in the shared spaces of the village (such as Structure 1), unlike the Middle Woodland period where blufftop and floodplain mound ceremonies likely took place at spaced intervals. It is through the constant interactions of unique household identity assemblages and style assemblages that we can begin to trace the connections that territorialized into a community identity at Carter Creek and throughout the wider region during this period.

Community Identities

Carter Creek offers a unique window into the development of community identity during the Middle to Late Woodland transition due to it being the earliest known Weaver site in west-central Illinois, and possibly the wider region (the other earliest sites being Gast Farm and Oak Village from the Gast Phase in southeastern Iowa). It is important to remember that community identity, as an assemblage, can be partially constituted by other assemblages. It should also be reiterated that a community identity is geographically emplaced (Mac Sweeney 2011), meaning it is tied to specific locations on the landscape, at a scale larger than a household and not necessarily emergent from daily interaction, although a community identity assemblage can include daily interactions. The style assemblages and household identity assemblages (including the spaces they are tied to), and their interactions, provide a foundation from which a shared community identity at Carter Creek can be traced.

Although only a singular household identity has been identified at Carter Creek, it is clear that further excavation would reveal numerous household identities, just as there were multiple styles present at Structure 1. Community identity at Carter Creek should not be considered any differently, as there are multiple community identity assemblages that can be identified through the site's artifact and feature assemblages. The purpose of this section is to explore those assemblages and observe places where they interact with other community identity assemblages, smaller household assemblages, and style assemblages. A discussion about how community identities at Carter Creek fit into the wider social landscape of this period is presented towards the end of this chapter.

Before tracing the formation of community identities at Carter Creek specifically, I think it is important to briefly highlight the kinds of communities that were formed during the Middle Woodland period. Ruby et al. (2005), following Smith (1992), argue that there were three major types of community formations during the Middle Woodland period, all tied to the different types of sites that have been discussed throughout this chapter. At the hamlet/household level (they are using household to refer more to what I call a house or house structure), there is a residential community. At blufftop mound centers, we see "symbolic, territorial, political, and economic" communities form, which are tied to exclusive local subsistence areas. At floodplain mound centers, "sustainable" communities were formed, allowing for the maintenance of population, marriage, and sharing of information (Ruby et al. 2005:138). While I do not fully agree with the formulation of community shared by these authors, I think we can see these types of communities, and the connections from which they formed, carry over to the early Late

Woodland period in certain ways. More specifically, Ruby et al. (2005) are not viewing communities as assemblages of people, places, things, ideas, and spaces, but instead as groupings of people tied together through shared lifeways. If we view these Middle Woodland communities as assemblages, we can see the ways that these assemblages changed over time and in the face of a shifting social landscape.

Continuing with the analogy of circular/arcuate villages as similar to blufftop mound centers, Carter Creek is a place at which groups came together and formed "symbolic, territorial, political, and economic" connections, although these connections likely emerged in their own unique ways. Interactions at blufftop mound centers, between separate hamlets, would have been periodic. At Carter Creek, numerous households likely came together and interacted on a daily basis, thus creating a very unique context from which early Late Woodland community assemblages could emerge. During the Middle Woodland, community was formed at blufftop mound centers through burial ceremonies that included status competition between hamlet groups (e.g., Charles 1995), thus creating a feeling of both a sameness among those participating in the ceremonies, and a difference based on this status competition. Structure 1, as a communal space, may have had a similar dynamic.

Without many known burials to highlight possible status differences during the early Late Woodland period, it has long been argued that this period represents a shift to more egalitarian power dynamics (e.g., Green 1987, 1993). I am not exploring the overarching power dynamics of this period or Carter Creek in this dissertation, but even egalitarian societies have some forms of competition and achieved status (Fried 1967; Patton 2000; Roscoe 2009; Service, 1962). Carter Creek sits within a "frontier boundary" where "cross-cutting social networks" interacted and resulted in cultural changes (Green and Nolan 2000:349). Structure 1 was a space in which site-level power dynamics, and wider social and cultural transformations, were experienced as social networks engaged in this liminal frontier space. Newly emergent styles, household identities, and community identities literally gathered in places like Structure 1, as people and the identity assemblages they were part of brushed up against each other. The number of different styles, many directly connecting to non-local spaces and the past, existed within this contested space and time as community identities from the Middle Woodland deterritorialized and reformed at places like Carter Creek. In examining ceramic production techniques associated with Structure 1, it is clear that the formation of symbolic community at Carter Creek was highly contested, thus a fully assembled community identity, shared by all residents of Carter Creek did not emerge from stylistic expression.

If we look at the possibility of territorial and economic communities at Carter Creek, we can begin to see where people living at this site may have shared places on the landscape, certain practices, and a community identity. Styles (1981, 2000) has conducted extensive research into the subsistence catchment areas of early Late Woodland sites. She has found that most sites have relatively small catchment areas that extend roughly five kilometers from the site (Styles 1981). Further, there are general patterns of subsistence strategies, such as procurement of certain seeds or nuts and reliance on fish, which extend to most sites occupied during this period. At Carter Creek, the shared space of the local catchment area, along with shared practices of fishing, plant procurement, hunting, cooking, and processing of these items would have afforded the emergence of a shared territorial and economic community identity among the site's residents. The community identity assemblage that likely emerged from and created this shared identity would include all of the things listed above, along with the tools used for hunting, cooking, and processing, the ceramic vessels used to cook these materials, the pits used for cooking, storage, and refuse of these materials, and the structures and spaces in which these activities occurred. This shared sense of community at Carter Creek is one likely felt at all larger villages from this period as people came together and formed locally emplaced communities. Therefore, a sameness that was tied to subsistence and economic activities emerged at, and was geographically emplaced at, Carter Creek.

Although I have argued above that there does not appear to be a singular shared stylistic community identity at Carter Creek, this does not mean there are no community identity assemblages that can be identified through style at the site. The myriad style assemblages that interacted at Structure 1 were connected to the wider landscape and the past and likely entailed more than just expressing identity within that space. In using a vessel that displays an identity connecting to the Mississippi Valley, for example, a person living at Carter Creek could literally connect to specific places within the wider landscape. This connection, through the use and production of a ceramic vessel, could constitute part of a community identity assemblage for that person, as they expressed their membership in a Mississippi Valley community through the emblemic style of a pot. The same can be said for a person using a vessel that clearly ties a person (or persons) back to the Middle Woodland period. The people producing and using vessels that express non-local and past identities, could experience and participate in a community identity assemblage that was geographically emplaced both at Carter Creek and other locations in the landscape. In the case of the style assemblages expressing a Middle Woodland identity, the experienced community identity could also be temporally emplaced in the past, and likely geographically emplaced at areas used more prominently during the Middle Woodland, such as the floodplain. These spaces, while not in use, would have been part of “imagined” communities (e.g., Anderson 1983) during this period in which individuals and groups were active parts of a reterritorialization of past identity assemblages. This same kind of emergence of a community identity can also be seen through the regional and exotic cherts found at Carter Creek. As a person used these cherts to form tools, they could act as part of a community identity assemblage that was geographically emplaced at the chert source. This may also be the case for people using the pipe fragment found at Structure 1.

Carter Creek appears to be a place at which numerous styles competed through their expression of different community identities as the assemblages that formed these styles and identities came together and broke apart as people, places, spaces, and things interacted on a daily basis. These dynamics left the messy archaeological assemblage that has been excavated from the site. This messiness does not seem to form into a coherent, shared identity among the people living at the site at first glance. However, when we look at the wider context of this time period, a site wide community identity can be traced, through an apparent sameness (Hodder 1990) expressed as a powerful disconnection from the past. Fishel (2013d) has argued that the drabness of early Late Woodland material culture, and especially ceramic vessels, may come from an active choice to disassociate with the Middle Woodland period. He makes this argument by comparing this period to the Arts and Crafts Movements of the late-19th and early-20th centuries in the United States. I do not want to rehash his entire argument, but it essentially boils down to the view that the Middle to Late Woodland transition is best thought of as a "social revolution" (Fishel 2013d:306). This argument will be discussed more later in this chapter, but I think the idea of an active movement away from Middle Woodland practices and spaces is perfectly encapsulated at Carter Creek (and some, although not all, other circular villages from this period).

The most affective sense of a shared community identity at Carter Creek can be seen through the emergence and territorialization of a non-Middle Woodland identity (Figure 7.16). In essence, an active deterritorialization of Middle Woodland identities territorialized into a shared community identity at places like Carter Creek that was directly in opposition to the Middle Woodland past. This does not mean all connections to the Middle Woodland period, and Middle Woodland spaces, cease to exist at Carter Creek. There are still ceramic vessels displaying past

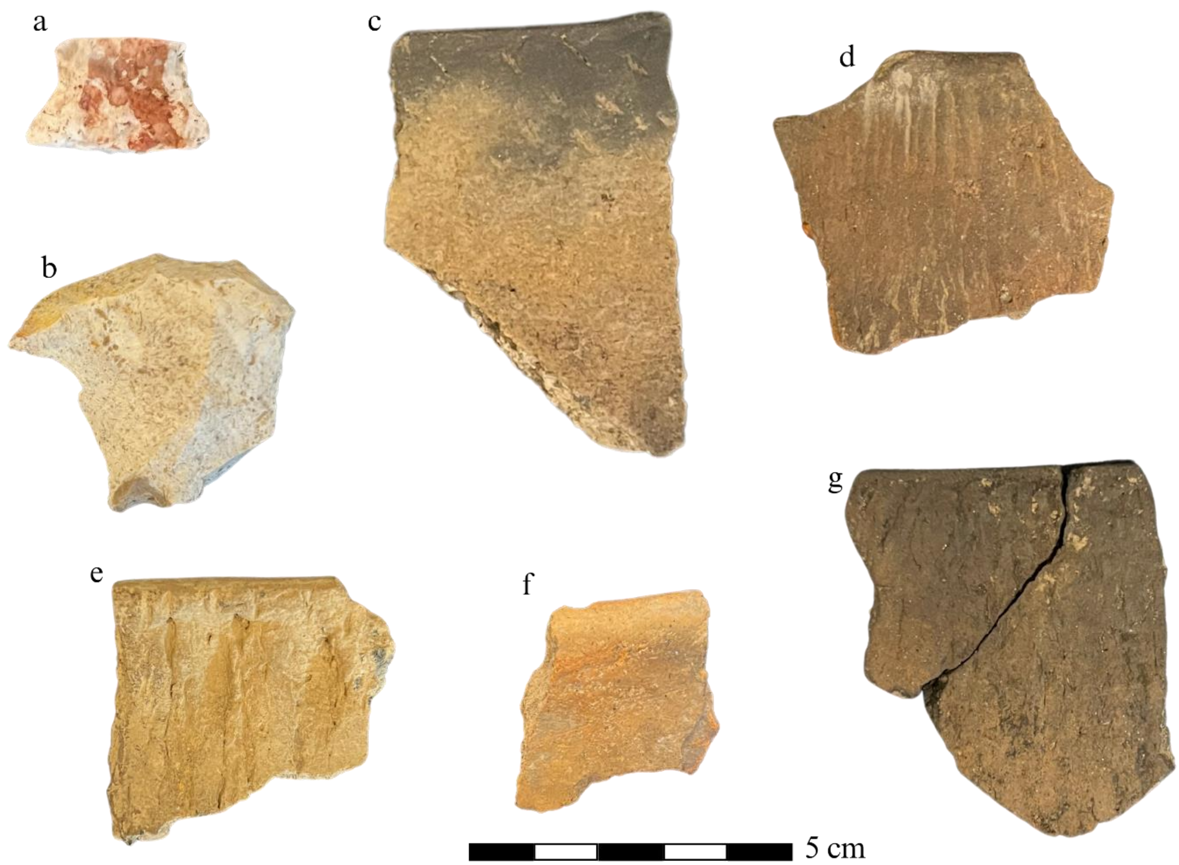

Figure 7.16: A selection of artifacts from Carter Creek showing the “bland” choices made by people living during the early Late Woodland people that deterritorialized Middle Woodland identities and styles. (a) a Steuben PPL made from heat-treated BK chert from F24; (b) MB83, a utilized flake made from low quality BK chert; (c) V46-3; (d) V46-1; (e) V16-11; (f) V900-5; (g) V27-1.

production techniques and cherts from sources predominantly used during the preceding period. At the same time, these vessels and cherts are relatively rare in the total artifact assemblage from the site, showing that connections to the past were sporadic at Carter Creek.

Structure 2 has no vessels with clear ties to Middle Woodland ceramic production techniques, while also having a very limited collection of non-local cherts. In fact, Structure 2 may be seen as a small space in which a disconnection from the past was actively occurring through the formation of a household identity and style. At Structure 1, there were some displays of style and identity that connected to a shared past, but they were limited and may have been drowned out by the larger use of "drab" vessels and local cherts. It has also been shown that regional connections in west-central Illinois shift from locations all across the landscape during the Middle Woodland period, such as mound centers in Ohio to the east (e.g., Nolan and Bainter 20004), to the south and west during the Late Woodland period (Fishel 2013d:323) as external relations become much less extensive. Even the location of Carter Creek, well into the uplands of the region, shows an active choice to disassociate with Middle Woodland spaces (Figure 7.17).

The numerous choices made by individuals and groups at Carter Creek show that Fishel's (2013d) argument for a social revolution has some weight to it. As people came to live at Carter Creek and interact on a daily basis, they expressed identities tied to various locations on the landscape, and even to the past. Unique expressions of identity were mostly confined to communal spaces like Structure 1, where competition was active as numerous style and identity assemblages entangled, with no clear stylistic community identity emerging. At the same time, daily practices, such as those related to subsistence, connected people to both Carter Creek as a space, and to the local catchment area they exploited. These, clearly, not Middle Woodland spaces, practices, materials, and ceramic decorations produced an apparent sameness (Hodder

1990) that was experienced as a shared community identity at Carter Creek. This community identity specifically territorialized through the active choice to disconnect from the past.

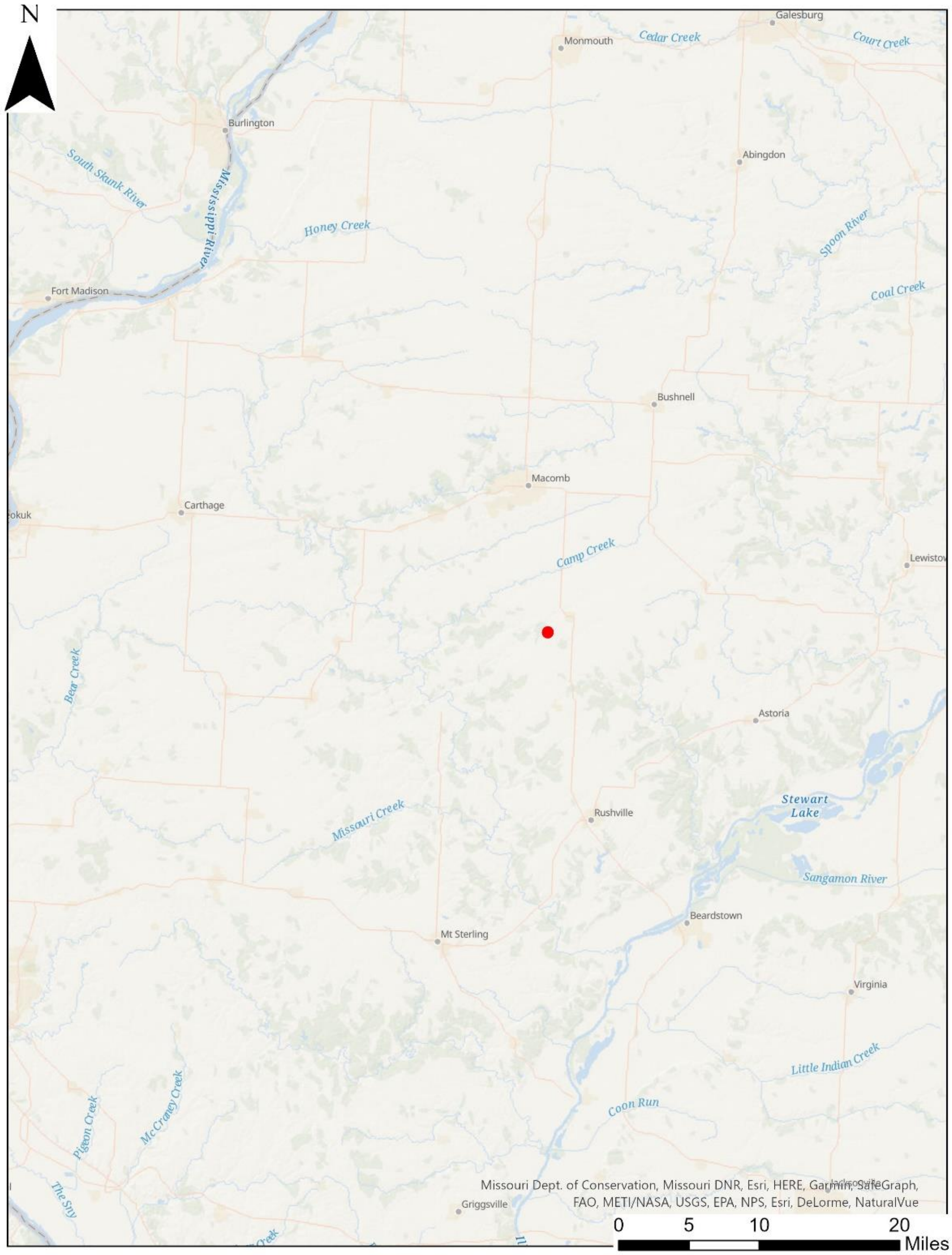

Figure 7.17: Carter Creek (red dot) is located well into the uplands between the Mississippi and Illinois Rivers, only near small secondary streams and tributary valleys.

The reason I argue for an apparent sameness and not an actual, shared, sameness at Carter Creek comes down to the need for a “referent” (Weissner 1983) that ties emblemic styles together, thus expressing membership in specific identity assemblages. The movement away from Middle Woodland practices and spaces is an active disconnection from Middle Woodland referents, such as territorial locations used by blufftop mound groups. As the early Late Woodland period began, the lack of referents afforded for the emergence of myriad identities and styles across the wider landscape. On the other hand, this lack of a clearly defined referent (or referents) did not afford for the emergence of a widely shared emblemic style that would have expressed a community identity. At the same time, the lack of Middle Woodland ceramic production techniques and cherts in a newly inhabited space must have been felt by the people living at Carter Creek. This affective feeling of non-Middle Woodland identity would not have territorialized through the expression of sameness that comes from a shared emblemic style, but instead through an apparent sameness that territorialized through the active and affective movement away from Middle Woodland referents, geographically emplaced deep into the west-central Illinois uplands. People living at Carter Creek were not necessarily choosing to show their membership in this oppositional community, but instead were becoming stuck together through the affective nature of the lifeways they participated in.

This apparent sameness, and the affective nature of a non-Middle Woodland community identity assemblage, is also related to the temporal period in which Carter Creek was occupied. As one of the earliest occupied circular/arcuate villages, located well into the uplands in a location that shows no use (or very minimal use) during the Middle Woodland period, Carter Creek was a space in which the movement (literally and figuratively) away from Middle Woodland lifeways would have been acutely felt. No longer were people periodically coming together at blufftop and floodplain mound groups, expressing shared identities through burial practices in shared spaces. They were also not interacting with these shared spaces in even a peripheral manner as they moved many kilometers away from the major river valleys in the region. They were further distancing themselves from Middle Woodland chert sources, clay sources, and decorative practices. All of this was occurring at the start of a shift in the social and cultural landscape of the region, from participation in the "Hopewell Interaction Sphere" (e.g., Caldwell 1964) to less extensive interaction networks. This relatively abrupt shift in lifeways was likely affective in its own right and felt on a daily basis. In addition to this, movement into the deep uplands (the internal frontier; Green 1987, 1993) likely left the inhabitants at Carter Creek in a space that was devoid of affective connection to Middle Woodland identities and referents. This seemingly empty space afforded the emergence and territorialization of the myriad styles, household identities, and community identities discussed above. Similar kinds of style, household identity, and community identity assemblages territorialized at other early Late Woodland circular/arcuate villages and, as I argue later in this chapter, each of these sites had its own unique internal dynamics that led to a diversity of styles and identities during this period. The unique dynamics of other early Late Woodland sites will be discussed more in the next section.

Styles and Identity Assemblages at Other early Late Woodland Sites

An examination of style, household identity, and community identity at other early Late Woodland sites in the region around Carter Creek necessarily starts from the fact that all people living during this period were experiencing a social and cultural upheaval in their own unique ways. While the data from these sites does not allow for an extensive discussion of assertive style and personal choices (in most cases), it does offer a glimpse into the ways that style, household identity, and community identity were territorializing into real and affective assemblages at each of these sites, both connecting to local places and the wider region. At Carter Creek, a shared movement away from Middle Woodland lifeways and spaces led to the emergence of a multitude of styles that competed in a contested space to express constituency in household and community identity assemblages that were emplaced at the site and in the changing social landscape. Other sites in the region likely experienced similar, albeit unique, territorializations. At earlier circular/arcuate villages, the same kinds of pressures and interactions between Middle Woodland, non-Middle Woodland, local, and non-local styles likely experienced. At later sites, such as Sartorius/Sartorial Splendor and Buffalo Chip, a different context, removed from the immediate upheaval felt at the beginning of the early Late Woodland period, led to a different dynamic. The unique emergence of style, household identity, and community identity at each site will be discussed more below when applicable, with some comparison to Carter Creek. A more detailed comparison of each site and Carter Creek will be explored in the last section of this chapter to show the overarching social and cultural dynamics of this period as seen through assemblage theory.

Gast Farm

Based on the available data from Gast Farm, and following the focus of this dissertation, the ceramic assemblage from this site will be the major focus of this section when examining style, household identity, and community identity. At the same time, the lack of data on potential households and/or house structures at Gast Farm precludes me from providing any discussion on the emergence of household identities at this site. Because of these limiting factors, I will focus on the emergence of style at Gast Farm that expressed a shared community identity, while also examining the larger context in which this emergence occurred.

An emblemic style at Gast Farm can be seen through the relative homogeneity of the ceramic assemblage. Of the vessels that can be attributed a form, all are considered jars, with 14% of these jars being labeled as cups (or small jars) based on orifice diameter. Additionally, almost all of the vessels from Gast Farm have plain exterior surfaces (89%) with grit temper (84%), flat-shaped rims (65%), and some kind tool impression along the lip of the vessel. Almost half of the vessels have exterior tool impressions (48%), while another 20% have interior tool impressions. Of the tool impressions at the lips of vessels in this assemblage, most (60.34%) are oriented in a right-oblique direction. This uniformity suggests that people at Gast Farm were all using similar ceramic production techniques to create very similar looking vessels.

As with the discussion of Structure 2 at Carter Creek, this standardized ceramic production could indicate that there was no clear style at Gast Farm that expressed membership in a larger community identity, but this would also be falling into the same issues noted with Wobst (1977). Rather than this uniformity creating a space with no style, the seeming lack of unique, non-local, and/or non-Weaver decorations or surface treatments points to Gast Farm being an uncontested space in which the emergence of a shared local community identity was afforded, despite its occupation during a tumultuous period. This is further suggested by the general lack of non-local cherts at Gast Farm and other Gast Phase sites in this region (Benn and Green 2000). Both faunal and botanical remains from the site suggest heavy exploitation of local resources (Neverett 2001; Dunne 2002), which is partially related to the large and permanent settlement of a circular/arcuate village at Gast Farm, but which would have also required close working relationships among people at this site. All of these lines of data taken together suggest that there may have been no need for a community-wide emblemic style at Gast Farm, but one emerged here anyways. As people at the site interacted on a daily basis, sharing tasks and spaces that reinforced and territorialized a community identity related to economic and territorial community identities (e.g., Ruby et al. 2005). Similarly, style would have emerged at Gast Farm as a shared way of doing something (e.g., Hegmon 1992:517) that included ceramic production. As with Structure 2, the blandness of style at Gast Farm likely emerged because of active choices made to disassociate with the Middle Woodland period through ceramic production techniques.

Because the space at Gast Farm does not seem to be contested, the uniformity of the ceramic assemblage shows that there was a territorialization of standard ceramic production techniques, that likely emerged as a community identity assemblage, and style, in this space, creating an affective bond between the people living at the site. The community identity assemblage could also relate to mundane tasks in shared spaces. This assemblage likely included the action of performing those tasks, the use of local cherts and resources, the production and use of uniform ceramic vessels, the use of shared spaces, and the style assemblage that expressed membership in this community. This assemblage was likely strongly emplaced at Gast Farm and the surrounding resource area and felt as a sameness among the village inhabitants. Perhaps further excavation at Gast Farm would reveal a less uniform ceramic assemblage or smaller household spaces where style was used to express membership in smaller scale identity assemblages. However, at this time the data is not close-scale enough to show this.

The uniformity of the artifact assemblage at Gast Farm does not mean that other forms of community identity did not territorialize in this space. These emergences are just harder to locate based on the available data. For example, the presence of nodes on vessels at Gast Farm (7.15%) is unique when compared to other Gast Phase villages where nodes are very rare (Benn 2012; Fishel 2018). The use of nodes may suggest connections to places like Carter Creek (e.g., Weitzel 1992). Small portions of the population at Gast Farm may have been expressing their membership in a wider community that was emplaced beyond the local area.

The data from Gast Farm suggest that a site-level style emerged during the early Late Woodland period, expressing membership in a local community identity that territorialized through daily interactions. Once we also consider the geographic context of Gast Farm, it is clear that the emergence and territorialization of style and identity assemblages at this site is much different than at Carter Creek. The circular/arcuate village occupied during the early Late Woodland period at Gast Farm sits on an alluvial fan at the base of the bluffs along the Mississippi River immediately adjacent to a Middle Woodland mound group and its associated habitation. The proximity of this mound group and the Middle Woodland living space means that people at Gast Farm were close to their shared past, creating a much different dynamic at this site than at other early Late Woodland villages. Some data even suggests that the community at Gast Farm was somewhat closed off to the wider region as both the Marseton #2 (Fishel 2018) and Oak Village (Benn 2012) sites show evidence for Levsen style ceramics from northeastern Iowa (e.g., Logan 1976). These kinds of vessels are not in the ceramic assemblage at Gast Farm. Interestingly, there is at least one Levsen style ceramic vessel at Carter Creek, even though that site is located much farther away geographically from the region where Levsen style ceramics emerge.

While the dataset from Middle Woodland occupations at Gast Farm is either sparse or unavailable, there is some evidence that the early Late Woodland occupation in this space directly interacted with the past in ways beyond proximity. Benn and Green (2000) note that there is some galena, mica, and green-gray pipestone identified in the early Late Woodland artifact assemblage from this site, which they suggest are heirlooms rather than evidence of continued long-distance interactions involving these materials. The Middle Woodland habitation is also circular/arcuate shaped, meaning that the early Late Woodland inhabitants at the site were following similar patterns of occupation in the same general space. The use of Middle Woodland cherts and other materials as heirlooms during the early Late Woodland period is not unique to Gast Farm (e.g., Fishel 2015b; Jackson and Fortier 2014). However, when coupled with the proximity to Middle Woodland mounds and the same patterning of occupation, it is clear to see that people at this site were actively choosing to not completely disconnect from the recent past.

With the connections and proximity to Middle Woodland spaces, mounds, and practices at Gast Farm, I contend that this space was not contested like the space at Carter Creek. Because this space was not contested, it did not afford the same possibilities for the emergence of myriad styles or identity assemblages that we see at Carter Creek. Although there has not been a larger study looking into the wider community patterning of the Middle Woodland period in the region around Gast Farm, it seems likely that the relatively small mound group at Gast Farm (Green 2018; n.d) would have functioned similarly to bluff top groups in the Illinois Valley (Ruby et al. 2005). Therefore, while we can view both Carter Creek and Gast Farm as spaces analogous to bluff top mound groups from the Middle Woodland period in the Illinois Valley (albeit more permanent occupations), the active choices made by people at these sites differentiate them. At Carter Creek, people chose to move far away from Middle Woodland spaces and practices, thus creating an atmosphere in which numerous styles and identities converged in an empty space, not allowing for the emergence of a sameness at the site. At Gast Farm, people came together in a space clearly tied to a shared Middle Woodland past, thus creating a sameness among the inhabitants that was further solidified through shared practices on a day-to-day basis. This is not to say that people at Gast Farm were not experiencing the upheaval felt throughout this region during this transitionary period. Instead, they were likely choosing to reconnect to their Middle Woodland past, while people at Carter Creek were choosing to disconnect from it. The same kind of disconnection is apparent at Rosewood as well and will be discussed more below. New and unique style and identity assemblages territorialized in the empty spaces at Carter Creek. In contrast, style and identity assemblages at Gast Farm reterritorialized into familiar, and busy, spaces filled with the affective remnants of a recent Middle Woodland past.

Before moving on to discuss the Rosewood site further, I think it is important to touch on an argument made by Weitzel (1992:67) that a micro-style can be seen through the ceramic assemblages from Gast Farm and Carter Creek. While he is not using the term style in the same way that I am, I think it is important to reiterate here that not only are the ceramic assemblages from these two sites vastly different in many ways (see Table 5.14), the dynamics at each site are also notably different. I make this point to emphasize that the context of each site occupied during the tumultuous transition between the Middle and Late Woodland periods is unique. While the larger social and cultural changes seen during this period are widespread and somewhat shared, how each person and group occupying a site during this period experienced this was distinctive. By tracing the emergence and territorializations of style and identity assemblages at these sites, across geographic and temporal distance, I hope to show this distinctiveness in a way that not only highlights comparison between the sites, but also provides a foundation from which archaeologists can better understand the wider social and cultural dynamics of this period. The remainder of this section, and this overall dissertation, will continue to do this.

Rosewood

As with Gast Farm and Carter Creek, the focus of my discussion on Rosewood will be the ceramic assemblage from the site. This assemblage will be used to examine the emergence of styles at Rosewood, along with the territorialization of larger-scale community identities. Beyond the ceramic assemblage, data from Rosewood offers the ability to look at spatial patterning at the village and structure level. Although there were structures identified at Rosewood during post-excavation analysis, the archaeologists who did this analysis did not feel comfortable associating specific features or artifacts to these structures (Fortier 2014c). Because of this, I will only briefly touch on the potential emergence of household identities at Rosewood. The larger context of the American Bottom region, within which Rosewood was settled, will also be briefly examined.

Available data from Rosewood suggests that the emergence of style in this space was similar to that of Carter Creek in that it was contested, with numerous styles competing within the village. Zelin and Jackson (2014) note that the ceramic assemblage from Rosewood is very heterogenous, with no standard ceramic production techniques developing at the site. There are a few data points that highlight this. For example, at Rosewood, 10.4% of all vessels have nodes (roughly similar to the 7.14% at Carter Creek and 7.15% at Gast Farm), with the average distance of these nodes from the lip of the vessel being 17.1 millimeters (mm). This distance is somewhat in-between what we would expect for a Middle Woodland versus a Late Woodland vessel (e.g., Fishel 2013d). At the same time, the range of distances is quite variable, from 8.0 to 33.9 mm. This is similar to Carter Creek where the range of node distances from the lip was also variable. This suggests that there was no standard place to apply nodes to vessels.

Other ceramic assemblage data also points to this lack of a shared ceramic production technique. Cordmarked/smoothed-over cordmarked vessels make up a majority of the assemblage (71.1%), but there are still quite a few plain surfaced vessels (23.7%). Similarly, grit temper dominates the assemblage (76%), but both grit-grog (6.7%) and grog (11.1%) temper are relatively frequent. This heterogeneity carries over to the upper body shape of vessels where a majority are incurved (51.4%), but a sizeable fraction are outcurved (29.7%). When looking at the orientation of lip impressions on vessels, a majority are left oblique (59.52%), but vertical orientation still makes up 32.14% of the assemblage. Additionally, rounded rims make up 57% of the vessel assemblage, while flat-shaped rims make up 41.5%.

One ceramic vessel attribute that is relatively uniform is exterior tool impressions as 71.4% of all vessels have exterior tool impressions, which is much higher than both Carter Creek (50.27%) and Gast Farm (48%). Additionally, 41.48% of all vessels have cord-wrapped stick impressions, which is not a majority, but is much higher than both Carter Creek (12.91%) and Gast Farm (11%). More specifically, of the vessels with tool impressions, only 25.7% were from cord-wrapped stick at Carter Creek, whereas at Rosewood, this total is 58.3%. While the exterior tool impressions show some amount of regularity, 9.5% of vessels have interior tool impressions and another 19% have superior tool impressions; at Carter Creek, no vessels show superior tool impressions and at Gast Farm this total is only 6%. This points to a lack of standardization for where and how tool impressions should be applied on vessels.

This heterogeneity of the ceramic assemblage is in contrast to the lithic assemblage where most of the chert comes from locally available Burlington-Keokuk (BK) sources (60% by weight). There are other higher quality chert sources in the assemblage, but it is necessary to keep in mind that many of the regional/exotic cherts from Carter Creek are much closer in distance to Rosewood (Koldehoff 1983), so it would not be especially out of the way for people at this site to go to these sources. Another interesting note is that all PPK identified from Rosewood belong to traditionally early Late Woodland types (e.g., Steuben, Mund), with Snyders PPK being absent from the assemblage. Snyders PPK are generally considered to be a terminal Middle Woodland point type that carries over into the first stages of the early Late Woodland period (Reber et al. 2017:190-193). Subsistence practices at the site are similar to other sites from this period as people exploited locally available faunal and botanical resources year-round.

All of these data tell us that Rosewood had similar, albeit unique, internal dynamics when compared to Carter Creek. When examining the heterogeneity of the ceramic assemblage at Rosewood, there are numerous places where style would have emerged. For example, the placement of nodes farther from the lip of a vessel would evoke connections to a Middle Woodland past for both the people producing and using the vessel, as well as the people interacting with the vessel in a less direct way. In placing nodes in this location, people would have been expressing an emblemic style that denoted their identity as connected to the recent past. This style assemblage would contain these vessels, the nodes themselves, the products being cooked or stored in these vessels, and the affective atmosphere created by a connection to the Middle Woodland. There were also vessels (one rim and three body sherds with unique decorations) that had zoned decoration, which is typically associated with the Middle Woodland period and mostly disappears during the early Late Woodland period outside of some very early habitations (e.g., Fishel 2015a). These vessels, with even clearer connections to the past, would have been constituent parts of even more affective style assemblages. On the other hand, the placement of nodes much closer to the lip of a vessel would have expressed a disconnection from the Middle Woodland as newer practices and techniques were being applied and displayed. Other vessel attributes, such as upper body shape or tool impression orientation, would also have been part of other competing style assemblages as people at Rosewood were attempting to define their identities in a new, and empty, space. People at Rosewood were interacting with myriad styles on a daily basis, creating a lack of sameness in similar ways to Carter Creek. Perhaps the communal space at the center of the site was also highly contested like Structure 1 at Carter Creek. At the same time, some kind of community identity would still have formed.

When looking at the chert sources used, PPK types produced, and the local subsistence strategies, we can easily see the emergence of a shared community identity tied to economic and territorial practices. Just as with Gast Farm and Carter Creek, the use of local spaces (both within the village and outside of it) and local resources to perform everyday tasks would have created a shared bond between people at Rosewood that would have emerged as a community identity assemblage. This assemblage would have been territorialized through, and made up of, these shared practices, spaces, and materials. Even the use of pits at Rosewood is similar as 89.8% of the pits show some form of burning, which may indicate shared cooking practices across the site that produced sounds and smells that would further strengthen this affective bond of community identity. Although ceramic vessels are easier to trace style assemblages from, even something as simple as the use of BK chert or the cooking of locally available seeds, could have expressed a membership in this economic and territorial community.

This emergence of myriad styles alongside a shared economic or territorial identity is parallel to what was happening at Carter Creek, but when we consider to dynamic nature of the American Bottom region, the uniqueness of Rosewood emerges. To briefly revisit the history of the American Bottom region, it has been argued by archaeologists (e.g., McElrath et al. 2000) that this region was abandoned towards the end of the Middle Woodland period and left vacant until people began to move back into this region around 400 CE. Rosewood represents the first major population movement back into this area. This abandonment, likely due to major flooding in the Mississippi Valley (e.g., Fortier et al. 2006), created a space (somewhat of an internal frontier) into which the people at Rosewood moved, probably from the Lower and Central Illinois Valleys (McElrath et al. 2000). Additionally, the Rosewood site is located in the uplands of this region, which were seldom used during the Middle Woodland period. This points to the way that this space was likely experienced as empty by the people moving to the village at Rosewood. The inhabitants of this site moved closer to their Middle Woodland past, while also moving farther away from it as they ventured into an abandoned area. In this way, Rosewood can be viewed as a contested space as the past and present came together at this site through both geographic proximity to previously important locations and through practices expressing identities both tied to this past and actively removed from it.

Even though Rosewood was farther removed from the Middle Woodland period temporally than Carter Creek, the inhabitants at this site likely experienced this transitionary period in a similar way. As people came together at this site and interacted on a daily basis with each other, new spaces, and emergent style and identity assemblages, there was likely a push and pull between newly territorializing practices connected to the present and attempts to reterritorialize Middle Woodland identities and practices. This can be seen through the ceramic assemblage and also when looking at the structures at the site. It is noted that Structure 4 looks similar to a Middle Woodland structure from this region (Fortier 1985), which shows that people at Rosewood were still structuring their spaces in a way that carried over from the past. At the same time, Structure 5, the structural compound at Rosewood, may be a precursor to later Patrick

Phase compounds (Kelly et al. 1987:176-178), showing that newly emergent spatial formations were also occurring. Even the physical space of structures at Rosewood is variable as the identified structures range in area from 18 to 58 m^2, whereas at Carter Creek, the structures are very similar at 47 and 49 m^2. These totals roughly fall in line with the expected size of structures during this period (e.g., Smith 1992), although the structural compound (100 m^2) and Structure 2 (58 m^2) are both closer to the expected size of Middle Woodland structures (e.g., Braun 1987, 1988, 1991). Interestingly, if Rosewood is circular/arcuate like some aerial photos suggest (Fortier 2014b), this spatial patterning of the village may represent a connection to other earlier villages in the wider region, such as Carter Creek, Gast Farm, Oak Village, and Millville, which were likely known by the people who migrated to Rosewood.

This unique emergence of styles and identities at Rosewood can further be traced when comparing this site to Carter Creek and Gast Farm, both earlier sites that may have been known to occupants at Rosewood. For example, Rosewood has a higher number of vessels with cordmarking/smoothed-over cordmarking than either of those sites, which may show the connection between this site and the Illinois Valley as cordmarking was especially prevalent at sites in that area (e.g., Studenmund 2000). We also see a much higher prevalence of tool impressions on the lips of vessels at Rosewood. Out of all the vessels, 62.2% have some kind of tool impression on the lip of the vessel, whereas at Carter Creek (51.65%) and Gast Farm (34.12%) that number is lower. Interestingly, at White Bend, which was occupied at roughly the same time as Rosewood, 85.25% of all vessels have some form of tool impression on the lip, which may indicate that tool impressions became more prevalent over time during the early Late Woodland period. At Rosewood, the majority of tool impressions are oriented left oblique (59.52%), whereas at Carter Creek the majority are vertical (80.61%) and at Gast Farm the majority are right oblique (60.34%). These differences of traits that would be clearly visible indicate that the inhabitants at Rosewood were forming their own unique kind of early Late Woodland identity, as they drew from the distant Middle Woodland past and the recent past of the early Late Woodland period to territorialize newly emergent styles and identities that were emplaced at Rosewood.

It is clear from the above discussion that the dynamic nature of Rosewood created a space in which numerous styles competed as people lived in a period and space where the Middle Woodland and early Late Woodland period came together. This competition did not allow for the emergence of a clear sameness at the site tied to newly forming lifeways. At the same time, the migration of groups at Rosewood back into the formerly inhabited and abandoned American Bottom, along with the performance of Middle Woodland ceramic production techniques (e.g., zoned decoration) and spatial patterning suggestive of a connection to the past (Structure 4) did not afford for the emergence of a non-Middle Woodland community identity assemblage like the one at Carter Creek. The affective bonds to the Middle Woodland were stronger at Rosewood through both proximity and practice. Instead, people at Rosewood only formed a shared community identity tied to everyday economic and territorial practices. They lacked a community-level sameness (or even apparent sameness) that could emerge as an assemblage emplaced in that space. This lack of sameness may have even affected the later cultural dynamics in this region.

I do not want to discuss this in depth because I am not an expert on the early Late Woodland period in the American Bottom, but I do think it is important to discuss how the identities that emerged at Rosewood carried over into the later Late Woodland period. It is argued by American Bottom archaeologists that following the Rosewood Phase, two new phases emerged in the American Bottom, the Mund and Cunningham phases. The Cunningham phase shows connections to the Rosewood phase that suggest it developed from these initial reoccupations in this region. The Mund phase is thought to start from other groups migrating to the American Bottom. Eventually, the Mund phase is thought to develop into the Patrick Phase during the middle Late Woodland period, while the Cunningham phase essentially disappears. While this is somewhat speculative, I suggest that the contestation of identity at Rosewood and during the Rosewood phase, did not allow for a strong and affective community identity to build in this region during the earlier parts of this period. The eventual development into the Cunningham phase may have been a strengthening of a Rosewood community identity into something more shared than before, but it still resulted in a material record of heterogenous ceramics (Jackson et al. 2014:163). With the migration of Mund groups into the region, the lack of an affective bond tying Cunningham people together created a space in which Mund lifeways would emerge. This emergence eventually took precedent in this region as people were more affectively tied to a Mund identity, thus leading to the dissolution of Cunningham groups and the disappearance of material traits connected to the Cunningham and Rosewood phases.

I present this speculation at the end of this section to note how assemblage theory can provide archaeologists a unique glance into the cultural dynamics of any period. At both Carter Creek and Rosewood, people chose to move to previously uninhabited or abandoned spaces, resulting in the emergence of contested space that afforded the territorialization of numerous styles. At the same time, the unique context in which these emergences occurred created differing territorializations of community identities. Tracing these emergences and territorializations would not be possible without using assemblage theory as a lens through which to view this period through. Further discussions of cultural and social developments in the

LaMoine Valley are presented in the following sections on White Bend and Sartorius/Sartorial Splendor as I examine the continued emergence of style and identity in that region as we move farther from the Middle Woodland period in time.

White Bend

White Bend, like the other sites already discussed, offers a glimpse into the emergence of style and community identity at an early circular/arcuate village. Like Carter Creek, White Bend is located in the LaMoine Valley and offers a strong point of comparison because of this. White Bend was occupied from roughly 400-550 CE, offering a view of these emergences which are slightly farther removed from the Middle Woodland period temporally. At the same time, White Bend also previously contained a late Middle Woodland occupation, so a comparison of the Middle and early Late Woodland data from the site offers a unique opportunity to look at the Middle to Late Woodland transition in one location. The data from White Bend is extensive, but there was only one potential structure identified during excavations, so household identity will not be examined in this section. Both style and community identity are traceable through the site's assemblage and will be discussed further below.

As a place where Middle and early Late Woodland (Camp Creek Phase) occupations existed in the exact same spaces, White Bend offers a glimpse into the transition between these periods and the ways this transition resulted in the emergence of style and identity assemblages. The best way to view this transition from the data collected at White Bend is through a comparison of the ceramic assemblages of both Middle and early Late Woodland vessels. One obvious, and expected, difference between these assemblages is the lack of formal decoration on early Late Woodland vessels and the distinct decoration on Middle Woodland vessels. Of vessels that were clearly defined as coming from the Middle Woodland occupation, there are examples of incising, circular punctates, hemiconical punctates, and cross-hatching. Both hemiconical punctates and cross-hatching are distinctly Middle Woodland decorative techniques (e.g., Griffin 1952), although the use of hemiconical punctates does carry over into the White Hall phase of the Lower Illinois Valley (e.g., Studenmund 2000). Hemiconical punctates seemingly disappear from the ceramic assemblage in the LaMoine Valley during this period. There are also bowls in the Middle Woodland assemblage (28.39%), which are very rare, or nonexistent (Fishel 2013d, 2015a), in Weaver assemblages. Other expected differences are found in the distance of nodes from the lips of vessels and the average lip thickness of vessels. In the early Late Woodland White Bend assemblage, lip thickness averages 5.02 mm (down from 5.37 mm at Carter Creek) and the average distance of nodes to the lips of vessels is 11.53 mm with no major outliers or variability in these distances. In the Middle Woodland assemblage, the average lip thickness is 6.31 mm and the average distance of nodes to the lips of vessels is 21.2 mm. As I have mentioned before, thinning vessel walls and node placement closer to the lips of vessels are defining features of early Late Woodland ceramic assemblages in the wider west-central Illinois region (Green and Nolan 2000).

Outside of the expected differences, there are other clear changes that show a shift in ceramic production techniques between these two periods. There are clear differences in the kinds of temper and surface treatments applied to vessels. During the Camp Creek phase occupation at White Bend, 75.41% of the vessels have grit temper, along with 24.59% of vessels having grit-grog temper; a majority of the vessels have plain exterior surfaces as well (68.85%). During the late Middle Woodland occupation, a large majority of vessels have grit temper (90.12%), with a very limited amount of grit-grog tempering (1.23%) and some sand temper (2.47%), which is absent from the Camp Creek assemblage; less than half of the vessels have plain surfaces (49.38%). Further distinctions can be seen when looking at the use of tool impressions, where 85.25% of all vessels from the Camp Creek phase occupation of White Bend have some form of exterior tool impression (along with 3.28% having interior tool impressions), whereas the Middle Woodland assemblage has a much lower total with exterior tool impressions (29.63%) and a much higher total with interior tool impressions (18.52%). Lastly, almost all of the tool impressions in the Camp Creek at White Bend assemblage are applied in a vertical orientation (92.31%) with no vessels having a left oblique orientation and a small number having a right oblique orientation (7.69%). In the Middle Woodland assemblage, a smaller majority of tool impressions are vertically oriented (69.23%), while no vessels have a right oblique orientation and almost a third of vessels have a left oblique orientation (30.77%).

One other dataset to consider at White Bend is of the vessels that could not be definitively assigned to either the Middle Woodland or Camp Creek occupations at the site (these vessels were discussed more in Chapter 5). I will not rehash the exact totals from this assemblage (these can be found in Chapter 5), but it is important to note that out of the 285 vessels identified in the White Bend West Block ceramic assemblage (excluding miniature vessels), just over half belong in this undefined category (n=143, 50.18%). This difficultly in establishing a clear boundary between Middle and early Late Woodland vessels is not necessarily unique to White Bend, as the most visible difference between vessels from these two periods is a lack of decoration during the early Late Woodland period. Additionally, the Middle Woodland occupation at White Bend is from later in the period (260-420 CE) and slightly overlaps with the Camp Creek occupation (410-540 CE). Taking this into consideration, it is not surprising that there are so many transitional vessels (and PPK; Nolan 2013a). In fact, the high number of "?" vessels points to the unique site-level dynamics that existed at White Bend.

When tracing the emergence of style and identity at White Bend through the ceramic assemblage, it is clear to see that this space, like Carter Creek and Rosewood, was contested, as style and identity assemblages struggled to territorialize due to the ongoing competition between numerous styles and identities at the site. The Camp Creek occupation at White Bend sits in the exact same location as a Middle Woodland occupation (and may have come from an in-place transition between the periods, Fishel 2013b). Therefore, a unique kind of contested space where we can see the push and pull between the territorialization of newly emergent styles and identities and the reterritorialization of already present Middle Woodland styles and identities. As I will argue below, I believe that we see the clear beginnings of a wider LaMoine Valley community identity and style through the Camp Creek ceramic vessel assemblage, while at the same time a smaller community identity did not necessarily territorialize in the same space.

The push and pull between Middle and early Late Woodland identities is clear from the comparison of ceramic assemblages above. People during the Camp Creek occupation clearly changed their ceramic production techniques. Grit-grog temper became much more prevalent, along with plain surfaces on vessels. We further see a much larger propensity for exterior tool impressions, almost all of which were applied with a vertical orientation. These clear differences between the assemblages show that new styles and identities were emerging in this space. The active choice to use newly popular ceramic production techniques would have expressed an identity tied to the early Late Woodland period as a style assemblage territorialized in this space that included these new techniques. This would have been in contrast to the transitional vessels that did not display a clear connection to either the present or the recent past. If we view the transitional vessels as a part of a style assemblage consisting of both Middle and early Late Woodland ceramic production techniques, while viewing the Camp Creek vessels as part of style assemblage that directly opposed connections to the past, we can see how White Bend would have been a contested space. As these two (or likely more) style assemblages converged in the same space, people would experience a disjuncture that did not afford for the emergence of a shared community identity at the site that could be expressed as a sameness through emblemic style.

This same disjuncture is seen in the PPK assemblage as there are several transitional PPK that show both Middle and early Late Woodland production techniques. Interestingly, of the Snyders PPK in the assemblage, which are generally considered to be a late Middle to early Late Woodland type, most are made from local BK chert or other regionally available chert. These PPK also lack the vibrant color that is seen in Snyders PPK assemblages from other sites in the region (e.g., Fishel 2015b). This shows that people using a PPK form with connection to the Middle Woodland, were also using cherts more connected to local spaces. Of the Steuben PPK in this assemblage (Steuben points are considered a distinct early Late Woodland type, e.g., Reber et al. 2017:206-208), 24% are made from exotic cherts, which indicates that people using this clearly Camp Creek form were also expressing connections to more distant locations and chert sources. This even contrasts to the Ansell/Mund PPK found at White Bend (Ansell/Mund points are also considered a distinct early Late Woodland type, e.g., Reber et al. 2017:208-212), which are all made from locally or regionally available cherts.

Taking the PPK and ceramic assemblages together, style and identity at White Bend are emplaced at seemingly oppositional spaces and times. There are newly emergent ceramic production techniques that exist alongside transitional vessels. At the same time, there are terminal Middle Woodland PPK forms that are tied to local and regional spaces, while some early Late Woodland PPK forms are actively tied to more distant places, all while some people produce transitional forms that show connections to both temporal periods. On top of this, there were three fabric-impressed vessels identified in the ceramic assemblage that show connections to the Sny Bottom region of the Mississippi Valley (Morgan 1985, 1986), further expanding the reach of style and identity assemblages in this space. All of this occurred in a circular/arcuate village that clearly drew inspiration from its predecessors, such as Carter Creek, albeit on a smaller scale than before (the plaza at White Bend is only 14 m across). Interestingly, there is one bell-shaped pit at White Bend, which is generally considered to be a feature of White Hall phase sites in the Lower Illinois Valley (e.g., Studenmund 2000), although the Marlin Miller site in the LaMoine Valley also has a small number of bell-shaped pits (Fishel 2015b).

Even with this messy internal dynamic happening at White Bend, the subsistence practices at the site follow the expectation for this period as locally available faunal and botanical resources are almost exclusively exploited. Although the contested nature of this space would have been very acutely felt by the inhabitants at White Bend, these shared subsistence and other mundane tasks were likely would have been constituent parts of an economic or territorial community identity at this site. This community identity assemblage would have been particularly affective in the shared spaces for cooking and processing, ceramic vessel production, and chert tool production as some form of shared sameness may have emerged through these activities.

Taking all of the above into consideration, the Camp Creek occupation at White Bend is best understood as a messy, turbulent, convergence of both newly emergent and already existing style and identity assemblages which were tied to temporally and geographically diverse locations. In the convergence of these myriad styles and identity assemblages, an economic or territorial community identity likely emerged through shared daily practices. The identities that were being expressed through styles at White Bend, such as a Sny Bottom identity, were not afforded the space to become emplaced at White Bend. A sameness (or even apparent sameness) was likely unable to territorialize because of seemingly contradictory expressions like Snyders PPK made from local cherts or transitional ceramic vessels. This space was too full of competing and oppositional assemblages to afford an emplacement of community identity as connections across space and time were constantly rubbing together, creating a highly contested atmosphere.

The above discussion focused on White Bend at a site level, but as I noted above, I also think White Bend offers glimpses into the emergence of a wider LaMoine Valley identity through its ceramic vessel assemblage. Tracing this emergence requires a brief comparison of the ceramic assemblages from Carter Creek, White Bend, and Sartorius/Sartorial Splendor (these sites are discussed more in-depth in the next section). All of the ceramic assemblages from these sites share certain attributes, including cord-wrapped stick impressions, vertical orientation of lip impressions, interior tool impression frequencies, round versus flat-shaped rims, and node frequency (see Table 5.14). When looking at the prevalence of cord-wrapped stick impressions we see relatively stable frequencies with 12.91% of vessels at Carter Creek, 8.2% of vessels at White Bend, and 14.29% of vessels at Sartorius/Sartorial Splendor having impressions made with this tool. The same stability can be seen with interior tool impression frequency as 1.37% of vessels at Carter Creek, 3.28% of vessels at White Bend, and 1.1% of vessels at Sartorius/Sartorial Splendor have some kind of interior tool impression. Interestingly, no vessels are noted to have superior tool impressions at any of these sites. We also see an increase in the frequency of rounded rims, vessels with nodes, grit-grog temper, and plain surface treatment on vessels across these sites. The stable attributes, along with the attributes that show a clear increase in frequency over time, indicate that a sort of wider LaMoine Valley community identity may have been displayed through certain ceramic vessel characteristics. We must keep in mind that some of these similarities have already been discussed by Fishel (2013d), so they were not unexpected and have already been pointed out. Similarly, some of these attributes are not wholly consistent at Crooked Creek Phase sites, such as grit-grog temper, so there is likely evidence that some of these characteristics may best express a LaMoine Valley community identity, while others may be more expressive of local identities. For example, at Tortured Oak (Fishel 2005), a site occupied towards the middle/end of the Weaver Phase in the LaMoine Valley, the ceramic vessel assemblage (n=14 vessels) is dominated by grit-temper, flat rims, and a relatively high frequency of interior tool impressions (21%), making it clearly different than Sartorius/Sartorial Splendor.

The point of making these comparisons is to look for the emergence of a shared community identity within the LaMoine Valley across the entire early Late Woodland period. As I will argue below, I believe, starting with Carter Creek, we can see the emergence of a large-scale community identity within the LaMoine Valley that was expressed through certain ceramic production techniques. Sites such as Sartorius and Sartorial Splendor are the end points of this development before further cultural and social changes occur as the early Late Woodland period ended. At the same time, we cannot discount the contemporaneous emergence of smaller-scale, local, identities during this same period. In the following section and later in this chapter, I will explore this line of thought further.

Sartorius/Sartorial Splendor

Sartorius and Sartorial Splendor will be treated together as they have been throughout this dissertation and in the report that explored the data from these sites (Fishel 2012f), except where the differences between the sites are notable and may tell us about the emergence of style and identity during the latter portion of the Weaver Phase in the LaMoine Valley. Data from these sites allows for an examination of style, household identity, and community identity both locally at these sites, and within the wider region. Additionally, the evidence for household clusters at these sites offers one of the few opportunities for an exploration of household identity in the LaMoine Valley, although the information this data provides is not as definitive as one might expect.

One important thing to note when tracing the emergence of style and identity at Sartorius/Sartorial Splendor (and Buffalo Chip in the next section) is that the internal and external dynamics are much different at these sites than at the circular/arcuate villages discussed above. As Green (1987, 1993) discusses in his Frontier Model, sites occupied around this time would fall into Stage 2 and would best represent a continued dispersal of people into the uplands as village-level organization broke down and power dynamics shifted to the household level. Both Sartorius and Sartorial Splendor are much shorter-term occupations located along upland ridges near the LaMoine Valley with no clear, widespread, site structure like the earlier villages discussed above. These sites also were likely occupied by a few households at one time, meaning the population at these sites is much smaller than at earlier villages. These differences could create a much different context as people at these sites interacted with a much smaller group in a less structured space. They were also farther removed from the Middle Woodland period temporally, so affective ties to that period may have waned as the early Late Woodland period moved forward.

Starting with style as evidence of identity at these sites, we can see that a clear expression of a local community identity likely existed at Sartorius/Sartorial Splendor through both the ceramic and lithic assemblages. Fishel (2012d) observed that the ceramic assemblage at

Sartorius/Sartorial Splendor is homogenous, with few ceramic vessels serving as outliers. For example, 100% of the vessels from these sites are jars with plain exterior surfaces. The combined vessel assemblage also consists of 94.51% grit-grog tempering with 96% of all vessels having some kind of exterior tool impression, almost exclusively (94.25%) oriented in a vertical direction. Additionally, 78% of all vessels have nodes and of the exterior tool impressions, most are made from plain dowels/sticks (n=73/86, 84.88%) instead of cord-wrapped sticks or other forms of decoration.

Overall, even if we look at the ceramic vessel assemblages from the two sites separately (see Table 5.14) they are remarkably similar in most cases. The only noticeable differences between the two sites come from the frequency of cord-wrapped stick impressions and the shape of rims. At Sartorius, 19% of all vessels have cord-wrapped stick impressions on the exterior lip of the vessels, whereas at Sartorial Splendor, this total is just 6%. Also at Sartorius, 38% of vessels rims are flat-shaped, whereas at Sartorial Splendor, the total is just 9%. One additional difference is in temper, where 12% of the vessels from Sartorial Splendor have grit temper, whereas no vessels from Sartorius have this tempering agent.

There are only three notable ceramic vessels from these sites, all of which come from the Sartorius assemblage. One vessel has sand temper with no decoration and may represent a vessel either from, or made similar to, others from the Mississippi Valley to the west (Meinkoth 2000). The other two vessels both have rows of circular punctates below exterior tool impressions and also show connections to west in the Mississippi Valley (O'Gorman and Hassen 2000). Similar to the ceramic assemblage, the lithic assemblage is quite homogenous as almost all of the chert from the site comes from local/regional BK sources, except for two flakes of Warsaw chert that would have come from Southeast Missouri (Morrow 1994).

Taken together, the homogeneity of the vessel assemblage and lithic assemblage at these sites suggests that some form of stylistic identity was present through an assemblage that included exterior tool impressions, plain vessel surfaces, grit-grog temper, and rounded rims. These vessel attributes would have been part of a style assemblage that was expressed both in the production and use of these similar looking vessels which would have expressed a community identity emplaced at Sartorius/Sartorial Splendor. In fact, Household cluster 6 (HH6) shows strong evidence for being a communal ceramic production facility based on the number of vessels (n=22) and the numerous firing failures noted in the cluster's assemblage (Fishel 2012d). This shows that the practice of creating and firing almost identical vessels would have been an affective activity through which a community identity territorialized at these sites, especially at HH6. Household cluster 10 (HH10) is noted for having a large volume of ochre (mostly unworked) in its assemblage, so it seems possible that ritual activities involving ochre may have further strengthened the sense of community at these sites, but there is very limited evidence that this ochre was worked (Fishel 2012c). This community identity was also strengthened through the exploitation of local faunal and botanical resources, creating a local community identity forged through economic, territorial, and stylistic practices.

If we consider the minor differences between the sites as places where other styles may have emerged, we can see why Sartorius was likely a space in which these outlier styles would exist. Based on the high volume of nut meat remains at Sartorius, this site may represent a locus for processing nuts and other subsistence resources. Because of this, it seems that this space may have been used for more communal purposes than Sartorial Splendor, which was likely just a short-term encampment used by family groups for mundane tasks. Although the space at Sartorius would have been much less contested than that at Carter Creek, the communal nature of this site would have brought groups from the surrounding region together, affording the opportunity for different identities to be expressed such as those connected to the Mississippi Valley, through different ceramic production techniques. For example, Household cluster 4 (HH4) had both punctated vessels in its assemblage so it is possible that the group who occupied this space either had connections to the Mississippi Valley or felt the need to express connections to that area through the use of these vessels in an otherwise homogenous space. Unlike Carter Creek or Rosewood, where numerous styles competed, never fully territorializing in those spaces, the outlier vessels (or even cherts) at Sartorius/Sartorial Splendor were likely perceived as minor incursions into a relatively stable community atmosphere. The presence of non-local styles and identities would not have been especially affective in these spaces. If we think of Sartorius/Sartorial Splendor like a Middle Woodland hamlet (Ruby et al. 2005) consisting of just a few households, it furthers the argument that this was likely an uncontested space. The people who shared this space were far enough removed from the upheaval of the Middle to Late Woodland transition, and also did not interact with such large and heterogeneous groups on a daily basis, thus affording the space for this community identity assemblage to emerge and territorialize.

A site level community identity is clear from the archaeological assemblages at Sartorius/Sartorial Splendor. Yet, despite the presence of household clusters at these sites, it is difficult to trace the emergence of any clear household identities. As noted above, HH4 has both punctated vessels in its assemblage, but it is hard to say that these represent a glimpse into the household identity associated with this space because other, non-Mississippi Valley vessels are also in this assemblage. In fact, HH4 may have been a communal processing area based on the number of cobble tools in its assemblage and the high artifact volumes from its pits (Fishel

2012b). If this is the case, HH4 may be best thought of as a communal space where the expression of non-local identity may have been more prevalent than in the overall hamlet space. In general, the clearest difference between household clusters at these sites, other than those that exhibit evidence for special uses, is the area of the spaces associated with each cluster (these range from 16-82 m^2), but even this does not tell us about a household identity without other lines of evidence.

Vessel Data	**Dobey**	**Tortured Oak**
Number of Vessels	69	14
Surface Treatment		
Cordmarked/Smoothed-over cordmarked	14%	-
Plain	77%	100%
Temper		
Grit	84%	100%
Grit-Grog	13%	-
Sand	3%	-
Grog	-	-
Rim Shape		
Flat	22%	64%
Round	77%	36%
Lip Modifications		
Exterior Tool Impression	75%	79%
Interior Tool Impression	7%	21%
Cord-wrapped Stick	-	-
Other Attributes		
Vessels with Nodes	35%	36%
Node distance from lip (average) (cm)	12.32	7.16
Lip Thickness (average) (mm)	5.09	5.33

Table 7.4: Vessel Data from the Dobey and Tortured Oak sites in the LaMoine Valley (taken from Fishel 2013d:319, Table 12.3).

This difficulty in defining household identity at a site with clearly demarcated spaces shows that a discussion about households in the LaMoine Valley is difficult because there is so much nuance involved. Even at Carter Creek where the outlines of structures can be identified, the presence of a household identity is not always clear. One of the two excavated structures has been defined as a communal space, so there is not even a household identity to define in that area. What all of this tells us is that archaeologists working in the LaMoine Valley should continue to look for household structures, spaces, and pit clusters. Once enough of this data has been collected and analyzed, a more detailed comparison of these spaces may offer glimpses into the ways that fine-tuned data, and a theoretical foundation in the form of assemblage theory, can begin to trace the emergence, territorialization, and deterritorialization of household identities in the LaMoine Valley throughout both the Camp and Crooked Creek phases.

I briefly discussed the idea above that a local community identity (or likely multiple identities) may have been present in the LaMoine Valley by the Crooked Creek phase as evidenced by ceramic assemblage attributes. It seems clear that the White Bend and Sartorius/Sartorial Splendor ceramic assemblages share many traits in common, such as high levels of grit-grog temper, plain exterior surfaces, low frequency of interior tool impressions, and high frequencies of non-cord-wrapped stick exterior tool impressions. These traits may have been expressive of a shared local community identity assemblage that was emplaced in this general area and territorialized through consistent interactions. Additionally, these traits may have partially developed from practices at Carter Creek, although this link is somewhat more tenuous. This argument is strengthened by the fact that White Bend is located very close geographically to Sartorius/Sartorial Splendor (Figure 7.18), although Carter Creek is located much farther away in the far uplands of the LaMoine Valley, not especially close to any other LaMoine Valley sites (Friendly Neighbor is the closest at 15 kilometers away; Fishel 2013d:317).

To extend this, I further argue that these traits represent both a geographic and temporal community identity in the LaMoine Valley that first began to territorialize during the end of the Camp Creek Phase, before fully assembling during the early stages of the Crooked Creek phase at Sartorius/Sartorial Splendor. As the Crooked Creek phase wore on, these shared ceramic vessel traits somewhat waned as people inhabited other areas of the larger LaMoine Valley. At Dobey (Fishel 2010), a Crooked Creek site inhabited after Sartorius/Sartorial Splendor and to the south and east, the ceramic vessel assemblage exhibits only some connection to this vessel form

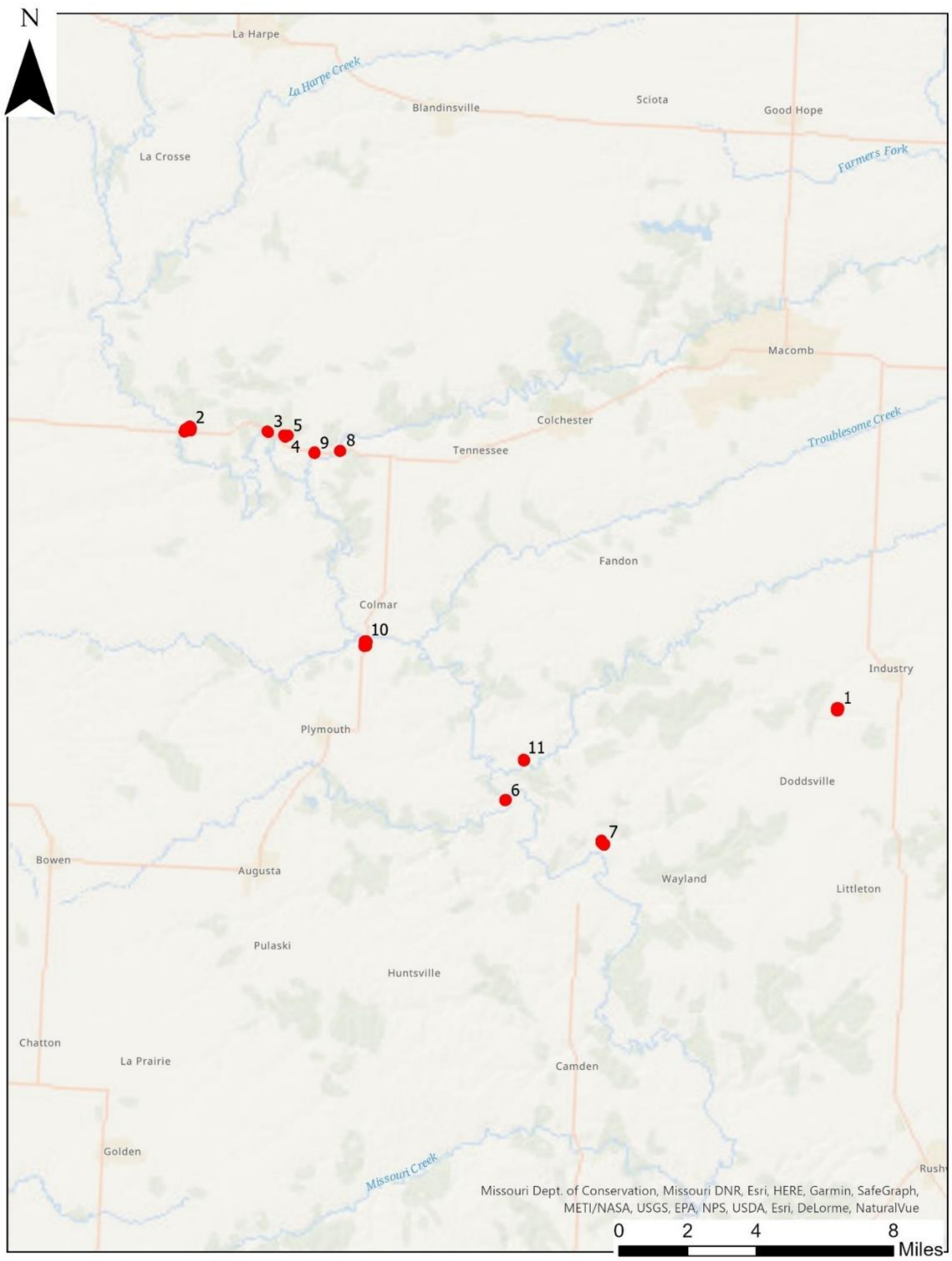

Figure 7.18: A Map of all LaMoine Valley Weaver sites discussed in this dissertation. 1) Carter Creek, 2) Marlin Miller #2, 3) White Bend, 4) Sartorius, 5) Sartorial Splendor, 6) Dobey, 7) Tortured Oak, 8) Kost#3, 9) Cooper #3, 10) Bell's Terrace, 11) Friendly Neighbor.

(see Table 7.4). At the Tortured Oak site (Fishel 2005), occupied at the same time and in the same general geographic area as Dobey, the ceramic vessel assemblage is completely different, with 100% of the vessels having grit temper and a majority having flat-shaped rims (64%). At Tortured Oak even the nodes are placed much closer to the lips of vessels (7.16 mm on average) than at other LaMoine Valley Weaver sites. Interestingly, even during the later occupation at White Bend East Block (occupied around 660-850 CE) some of these widespread traits began to shift, such as a majority of vessels having grit temper (see Table 7.4). What this suggests is that the middle of the Weaver Phase in the LaMoine Valley (at least in some geographic areas) saw the emergence of widespread ceramic production techniques that may have expressed membership in a wider shared identity that both developed in, and was emplaced in, this area. This community identity assemblage eventually deterritorialized, affording the space for newly emergent identities and styles to develop later during the Crooked Creek Phase. This internal LaMoine Valley dynamism started from the first large occupation in the region at Carter Creek. Further excavations in the LaMoine Valley are needed to explore this idea more as an understanding of the internal dynamics of this region can help to provide further context for how people living there experienced and negotiated the Middle to Late Woodland transition through style and identity.

Buffalo Chip

The Buffalo Chip site, like Sartorius/Sartorial Splendor has clearly identifiable household clusters of pits that give archaeologists a better view on how people were using space. Also similar to Sartorius/Sartorial Splendor, these spaces, and the artifacts and features associated with them, do not show any clear differentiation that suggests household identities were expressed at Buffalo Chip through either ceramic or lithic artifacts. Having said this, we can still trace the emergence of style and community identity assemblages through the data recovered from extensive excavation at this site. These emergences occurred in a different kind of contested space than at places like Carter Creek and Buffalo Chip, offering a unique view on how style and identity territorialized during this period. As with Sartorius and Sartorial Splendor, Buffalo Chip was inhabited after Carter Creek (in the 600s CE), so it is temporally removed from the immediate upheaval of the Middle to Late Woodland transition. It should be noted that one household cluster at Buffalo Chip was inhabited during the Middle Woodland period, but due to the small amount of data from this cluster and its likely use as a short-term encampment, it will not be considered for this discussion.

Style at Buffalo Chip emerged in a relatively calm atmosphere, with little opportunity for multiple styles to emerge in the same space. The ceramic vessel assemblage at Buffalo Chip consists of 100% jars, with mostly cordmarked/smoothed-over cordmarked surfaces (78.26%), grit temper (78.81%), and flat-shaped rims (63.77%). Interestingly, only 7.25% of all vessels have exterior tool impressions on the lip of the vessel, with an additional 2.9% having superior tool impressions. Only five vessels have any kind of decoration below the lip, all having nodes. The relative uniformity of the ceramic assemblage matches with that of the lithic assemblage, where most of the chert comes from local BK sources, or occasionally from exotic sources in southern Illinois (Nolan 2013b). Similarly, the subsistence remains from the site follow patterns seen at other early Late Woodland sites (e.g., Styles 1981), relying on locally available resources. All of this together suggests that a community identity was likely shared at Buffalo Chip, emerging through mundane tasks and shared ceramic production techniques. When we look further into the ceramic assemblage, there is some nuance to this.

Emerson (2013c) observed that of the vessels with exterior or superior tool impressions (n=7), almost all have impressions made using different tools and methods. These tools and methods include cordmarking, cord-wrapped stick, notching, notching with a stick, smoothed-over cordmarking, and punctates. Cordmarking orientation in the ceramic assemblage is somewhat split with 21 vessels having cordmarking in a right oblique direction and 22 vessels having cordmarking in a left oblique direction. The different use of exterior tool impression techniques and the variability of cordmarking orientation suggests that a singular community identity at Buffalo Chip may not have been expressed through ceramic vessels.

Of the pits clusters identified at Buffalo Chip, three show evidence for use by a single family group, two show clear communal use, and three show evidence for either family group or communal use. This suggests that multiple households shared this site and participated in communal cooking and processing activities, which would have helped to form a shared economic or territorial community identity emplaced at this site and in the surrounding resource areas. At the same time, the variability of cordmarking orientation suggests there may have been competing household styles at the site, although just this difference does not necessarily warrant classification as a style in its own right. Beyond the cordmarking, the use of numerous different kinds of exterior tool impression techniques, on very few vessels with these impressions, suggests that these choices may best reflect the emergence of assertive style (Weissner 1983) in this space. The use of assertive style for an expression of personal identity may have been related to the geographic location of Buffalo Chip.

Buffalo Chip sits at the boundary of the Lower and Central Illinois Valleys (Emerson and Nolan 2013), high on an upland ridge, essentially in the middle of nowhere. This location necessarily places people living at this site in a space that is not connected directly to either

White Hall or Weaver Phase practices, with the only clear connection to either of these geographic areas being the heavy use of bell-shaped pits (n=46/112) at this site, which is a distinctly Lower Illinois Valley trait during this period (e.g., Studenmund 2000). Because of this, Buffalo Chip would have been a contested space, not because it was full of competing styles and identities, but because it was devoid of them. This emptiness afforded the emergence of assertive style as expressed through exterior tool impressions. The overarching local community identity that emerged from mundane tasks and in local spaces also contributed to a seemingly empty space where style was barely expressed on mostly undecorated ceramic vessels, or through the use of mostly locally available BK cherts. In this way, Buffalo Chip offers a glimpse into the emergence of style in empty spaces that are removed from the Middle to Late Woodland transition. On top of this, the use of this space by only a few households at a time would be more akin to a Middle Woodland hamlet (Ruby et al. 2005) than a mound group (or circular/arcuate village), so the interactions were likely less intense and frequent thus creating a less turbulent space.

The lack of an ability to define a clear household identity at either Buffalo Chip or Sartorius/Sartorial Splendor warrants a brief aside. One thing that must be considered when tracing the emergence of household identity assemblages through the archaeological record is that they are facilitated by relatively small spaces and daily interactions. Such spaces and daily interactions were assuredly present at these two sites. What is missing then is either fine-tuned data, which does not necessarily seem to be the case based on the extensive reports published on both of these sites, or a deeper understanding of the dynamics of this period. Green (1987, 1993) argues that during Stage 2 of his Frontier Model, during which both Buffalo Chip and Sartorius/Sartorial Splendor were inhabited, decision-making and settlement patterns likely shifted from the village to the household. This shift, I argue, would lead to less contested spaces due to more infrequent and less intense interactions farther removed from the Middle to Late woodland transition. If we couple this argument with that from Fishel (2013d:305-308) regarding the social revolution of the early Late Woodland period, one can see why expressions of identity through style, as seen through ceramic vessel production, became more homogenous during this period. The combination of less turbulent spaces and the active choice to lessen decorative practices on ceramic vessels would lead to an archaeological record with more homogenous evidence for style. This suggests that archaeologists have no real avenue for tracing household identity assemblages at later early Late Woodland hamlets or other smaller-scale sites, and I would agree with this suggestion. But this does not mean that we cannot use this lack of style/household identity as evidence in and of itself. A lack of identity expression through style shows that this expression may have been deemed unnecessary because daily interactions through mundane tasks affectively bonded groups together without the need for an outward expression of a sameness. Additionally, an apparent sameness like the one experienced at Carter Creek would not emerge because these spaces were not contested in the same ways. As the early late Woodland period moved forward, spaces became less densely inhabited and less contested, leading to a calmer cultural and social atmosphere that afforded the emergence of local and pan-local community identities that were not necessarily present earlier in the period. I will explore this pattern of style and identity emergence throughout the early Late Woodland period in the wider west-central Illinois region, especially through the lens of Carter Creek, in the following section.

Shifting Identities and Assemblages During the early Late Woodland Period

I have already explored the emergence of style, household identity, and community identity assemblages at numerous early Late Woodland sites throughout the wider west-central Illinois region. I have further offered some brief commentary on how these sites compare and how they fit within the wider region. Additionally, I have looked at the ways that these assemblages may have territorialized, deterritorialized, and reterritorialized temporally across this period. I have mostly used the ceramic vessel assemblages from these sites to trace the dynamic nature of these emergences, as this analytical tool is both heavily studied in this region and especially pertinent for a discussion of style and the ways it expresses identity. The goal of this section is to bring all of this information together to provide a coherent narrative of this period, especially as it was experienced at Carter Creek. By tracing the relationships that form into style and identity assemblages starting at Carter Creek and working to both the wider region and the latter portions of this period, I will show how style and identity shifted in these spaces and across time. This exploration will highlight how the Middle to Late Woodland transition is not representative of a "collapse" (e.g., Tainter 1988) which lead to a "Balkanization" in the region (McElrath et al. 2000). Rather, a comparison of style and identity assemblages at multiple scales reveals the ways that the turbulent atmosphere at the beginning of the early Late Woodland period, partially created by the active choice to revolt against Middle Woodland practices, afforded spaces in which myriad styles and identities competed, never fully territorializing into a sameness across the region. During the latter part of this period, a less turbulent atmosphere did allow for the emergence of localized community identities, especially in the LaMoine Valley but, by this point, many interaction networks in the region were diminished.

Carter Creek encapsulates the turbulent atmosphere that defines the beginning of the early Late Woodland period, not only because it is one of the earliest inhabited villages from this period, but also because of its location deep into the uplands. This can be seen at both the calm household space associated with Structure 2 and at the chaotic communal space associated with Structure 1. At Structure 2, we have one of the only identifiable examples of a true household identity during this early portion of the period, as people using this space were tied together through shared daily interactions involving mundane tasks and a shared emblemic style. Through these tasks and the affective connections they afforded, a household identity emerged. The lack of contention in this space could have also afforded the emergence of possible assertive styles (Wiessner 1983).

At Structure 1, a contested space emerged that did not afford the territorialization of a single (or few) shared identities and their associated style expressions. People using this communal cooking and processing space likely interacted with myriad style and identity assemblages that created a discordant atmosphere filled with connections to the Mississippi Valley, Northeast Iowa, and the recent Middle Woodland past. Although daily interactions within this communal space, and in the associated resource spaces near Carter Creek, likely territorialized into a shared political or territorial community identity, this identity was not expressed through ceramic production techniques and did not emerge as an assemblage that showed a sameness amongst people living there. Instead, the lack of shared style in the Carter Creek ceramic assemblage, along with the location of Carter Creek well into the uplands of the LaMoine Valley, tells us is that people using this village instead shared an apparent sameness that was exemplified through non-Middle Woodland practices. This community identity assemblage was constituted by seemingly opposing parts, in a contested space, where an affective connection was not expressed through style, but felt through an active disconnection from Middle Woodland practices and spaces. This is not just seen in the messy space associated with Structure 1, but also in the lack of Middle Woodland connections in the artifact assemblage from Structure 2, where no vessels show clear Middle Woodland traits and there is very little non-local chert.

The affective territorialization of a non-Middle Woodland community identity at Carter Creek would have been afforded by both the emptiness of this space (its distance from Middle Woodland spaces was drastic) and the way the space was structured. Like other early Late Woodland habitations (e.g., Rench, Gast Farm, Oak Village, Millville), Carter Creek was a circular/arcuate village with an open central plaza. At its peak, Carter Creek may have had up to 175 inhabitants (Holt 2005) sharing space in a way that was not done during the Middle Woodland period. Ruby et al. (2005) argue that people living in the Lower Illinois Valley during the Middle Woodland period formed community at three different locations: local hamlets with a few households, bluff top mound groups where multiple hamlets came together to perform burial ceremonies, and floodplain mound centers where multiple bluff top mound groups came together for burial ceremonies. As I have argued, Carter Creek and other early circular/arcuate villages, likely functioned similar to blufftop mound groups in that they brought numerous households together in a space where identities would compete. At the same time, interaction within a circular/arcuate village was likely much more frequent and intense as these spaces were used daily, whereas blufftop mound centers were used in a cyclical manner. These daily interactions were likely especially affective because of the emptiness of Carter Creek. Thus, the apparent non-Middle Woodland sameness that territorialized at, but was not necessarily emplaced at, Carter Creek, emerged from the daily interactions of people, ceramic vessels, lithic tools, things, sounds, and smells that all occurred in the newly inhabited internal frontier (Green 1993), far from the region's major river valleys.

An important distinction can be further made here between the Middle and early Late Woodland periods, which comes from the external (and internal) influences felt during these periods. During the Middle Woodland period, people likely experienced external influences on both a local and regional scale. At mounds, both blufftop and floodplain, groups likely came together to express a sameness through burial ceremonies. While this was certainly a unifying practice, it could also result in competition between these groups as they attempted to gain prestige during this period. This can be seen by the distinct placement of burials within mounds, either in a central log chamber or outside of it, possibly revealing differing levels of "power" at these mound centers (e.g., Brown 1979, 1981; Buikstra 1976; Carr 2005; Tainter 1975, 1977). Through these ceremonial interactions, people likely experienced external influences in the form of this power as certain styles and identities were more affective than others. At the same time, exotic prestige goods, such as obsidian from the Rocky Mountains (e.g., Hatch 1990), could also exert influence on the emergence of style and identity among Middle Woodland groups. These kinds of items were likely directly tied to some of the power dynamics at these mound centers (e.g., Charles 1995).

Another aspect of power and influence felt during the Middle Woodland period was in the form of cosmological connections created by the construction of mounds. Sunderhaus and Blosser (2006) and Van Ness (2006) have argued that the construction of floodplain mounds intentionally recreated the Earth-Diver myth through a World Renewal Ritual (also see Hall 1997). This was done by using newly flood-deposited soils to recreate the formation of land seen in the Earth-Diver myth. As these mounds were constructed, people experienced the renewal of earth after a flood. This was likely reinforced by the cyclical flooding at floodplain mound groups that may have inundated these spaces in a ritualistic fashion. Taken together with more tangible external influences, we can see that mounds and their internal structure, people, exotic items, elaborately decorated ceramic vessels, and the greater cosmos were likely constituent parts of larger Middle Woodland community identity assemblages that were emplaced at mound centers.

These kinds of external influences mostly disappeared during the early Late Woodland period, which further emphasizes the empty nature of spaces like Carter Creek, where these constituent parts were no longer present. At the same time, Carter Creek probably felt messy to those living at it because internal influences, in the form of greater daily interactions among larger (and more diverse stylistically) groups of people, were being felt in more acute and intense ways. This changing dynamic of external and internal influence is at the center of the chaotic upheaval that was experienced at earlier circular/arcuate villages. With the removal of a larger, and powerful, shared identity emplaced at mounds, and expressed through exotic items, ceremonial practices, and elaborately decorated ceramic vessels, more space was afforded for the emergence of new and unique style and identity assemblages, that, in the case of Carter Creek, never materialized into a sameness, but instead into a shared movement away from the Middle Woodland period. Having said this, I do not want to discount the ways that cosmological influences may have been affective during the early Late Woodland period just as they were during the Middle Woodland.

A brief aside will show the ways that some external influence, in the form of the cosmos, was felt at Carter Creek and other early circular/arcuate villages. Benn (2017, 2018) argues that ceramic vessels can be seen as cosmograms, expressing a belief system in symbolic form.

Through the production and use of these “alive” vessels, people would have been actively connected to the wider cosmos (Benn 2018:120), thus experiencing this ethereal space and its influence on a daily basis. Benn (2017) has further argued that cordmarking on vessels may have been a representation of the underworld, whereas decorations below the lip of the vessel, often on smoothed bands during the Middle Woodland period (e.g., Griffin 1952) would connect to the middle world (Earth), and decoration at the lip of the vessels connects to the upper world. One of the markers of early Late Woodland ceramics is the lack of an elaborately decorated smoothed band, although cordmarking and decoration around the lip of a vessel are maintained in differing frequencies. Hall (1997) has persuasively argued that Native American ceremonial practices have carried on in differing forms throughout history, so it is not a leap to argue that the cosmological connections experienced through the mundane ceremony of producing a ceramic vessel would have been similar throughout the Woodland period in this region.

If we apply Benn’s (2017, 2018) argument to Carter Creek, we can see how connections to the under and upperworlds would have been constituent parts of the style and identity assemblages that emerged at this site through ceramic vessel production. Tool impressions along the lip of vessels and cordmarking are found on just over 50% of all vessels, indicating that these connections were affectively experienced through the production and use of most vessels at Carter Creek. At the same time, the choice to not use cordmarking (or another surface treatment) or tool impressions along the lip is an active choice to not connect to cosmological spaces. In some cases (n=35, 35.7% of all vessels) vessels have some kind of surface treatment but no lip impressions, lip impressions with no surface treatment (n=13, 13.3% of all vessels), or no lip impressions or surface treatments (n=12, 12.2% of all vessels). This shows that in many cases, the person making and using as vessel was actively choosing to connect to only one (or no) cosmological spaces. Overall, I do not think these numbers present any clear pattern that suggests people at Carter Creek were especially prone to producing certain kinds of cosmological connections. Instead, this lack of a pattern continues to reinforce the messiness of style and identity at Carter Creek. As style and identity assemblages emerged in this space, they connected to differing cosmological spaces, once again creating competition and the lack of affordance for a sameness to be territorialized. We should keep Benn's arguments in mind as we discuss the other sites used in this dissertation.

The unique context within which Caret Creek was formed and inhabited makes it perhaps the most turbulent space in which the Middle to Late Woodland transition was lived. Other early circular/arcuate villages would have also experienced this same upheaval, albeit in their own unique ways. Although not all circular/arcuate villages appear to have been messy like Carter Creek, they all show how the earlier portions of the early Late Woodland period were highly contested, or at least busy, leading to dynamic developments across the region. At Gast Farm, we see a space that is mostly uncontested as people produced and used relatively homogenous ceramic vessels with plain surfaces, grit temper, and tool impression on the lip. The homogeneity in the ceramic assemblage was also seen in the lithic, faunal, and botanical assemblages, suggesting that a community identity assemblage territorialized at Gast Farm through everyday activities, including the production of homogenous ceramic vessels that expressed this identity. The emblemic style that emerged at Gast Farm was a "way of doing something" that was a "choice among various alternatives" (Hegmon 1992:517) which was especially traceable through the ceramic vessel assemblage. Even though the atmosphere at Gast Farm appears to have been relatively uncontested, affording the development of a shared community identity, this space was still very busy.

As I have noted throughout the dissertation, the Gast Phase circular/arcuate village at Gast Farm was located adjacent to a Middle Woodland circular/arcuate village and an associated mound group. Additionally, some long-distance items associated with the Middle Woodland period have been noted in the Gast Farm assemblage, such as galena, mica, and green-gray pipestone (Benn and Green 2000). Because of this close proximity to a shared Middle Woodland space, practices, and items, the atmosphere at the Gast Phase village would have been filled with the affective remnants of this shared past as it was encountered on a daily basis. So, while we see the emergence and territorialization of unique and new style and identity assemblages at Carter Creek, we see something different at Gast Farm. At Gast Farm, there is clearly a deterritorialization of Middle Woodland styles and identities as the Middle Woodland living space, elaborately decorated ceramics, non-local cherts, and prestige items are mostly abandoned. Concurrently with this, there is a reterritorialization of an emblemic community style and identity that draws from this shared past, incorporating this proximity to Middle Woodland spaces and items, along with newly emergent ceramic production techniques and local chert sources. The style and community identity assemblages traceable through the artifact assemblage at Gast Farm are literally constituted by both Middle and early Late Woodland elements.

Considering Benn's (2017, 2018) argument regarding ceramic vessels as cosmograms, it is interesting that the large majority of vessels at Gast Farm have plain surfaces. This suggests that there is an active choice being made by ceramic vessel producers at this site to not connect with the underworld. At the same time, the proximity of inhabitants at this site to Middle Woodland mounds that may have produced connections to World Renewal, and thus the underworld, could be the reason for the number of plain vessels. If people living at Gast Farm were experiencing the cosmological underworld through their daily proximity to mounds, they may not have needed to also experience this space through ceramic vessel production and use. At the same time, if flooding was prevalent in the Mississippi Valley (e.g., Munoz et al. 2015), the choice to not interact with the underworld through ceramic vessels may have also been related to the location of Gast Farm near the (potentially flooded) Mississippi Valley. Thus, the cosmological underworld may have been a constituent part of a community identity at Gast Farm not through ceramic vessel production, but through proximity to Middle Woodland mounds and a flooded river valley. While Gast Farm shows that the early Late Woodland period can be complex even without contested space, Rosewood reemphasizes how movement into empty spaces can lead to the unique emergence of style and identity assemblages.

Rosewood, like Carter Creek, was located in the uplands, in a space that had been previously uninhabited, although in this case, the American Bottom was abandoned towards the end of the Middle Woodland and then reoccupied with the movement of people into the region at Rosewood, so the internal dynamics of this region were unique (McElrath et al. 2000). Also like Carter Creek, the ceramic vessel assemblage at Rosewood is heterogenous (Zelin and Jackson 2014) with no clear vessel style emerging as dominant. Additionally, there are some vessels that have Middle Woodland traits, such as zoned decoration or nodes placed far from the lip of the vessel (up to 33.9 mm). Even the lithic assemblage is less homogenous than other sites discussed in this dissertation, although the proximity of Rosewood to higher quality, regional chert sources makes their presence at the site somewhat expected. This is further shown through the structuring of space. Structure 4 at Rosewood has clear parallels to a Middle Woodland structure in the American Bottom (Fortier 1985), while Structure 5 shows similarities to a later Patrick Phase structure in the area (Kelly et al. 1987). Rosewood may have also been a circular/arcuate village based on aerial photos taken before the site was excavated (Fortier 2014b), which may indicate that the structuring of this space copied earlier villages like Carter Creek, Gast Farm, or Oak Village.

Taken with the ceramic and lithic assemblages from the site, it seems that at Rosewood a Middle Woodland past was being reterritorialized, while at the same time, a newly emergent early Late Woodland identity was being territorialized in an empty, formerly abandoned, space. People at Rosewood likely experienced Middle Woodland-like ceramic vessels and spaces (Structure 4), all while new and unique styles and identities emerged through minimally decorated ceramic vessels, a potentially circular village, and new structures (Structure 5). These opposing things likely created a discordant and turbulent atmosphere experienced on a daily basis at Rosewood. As with Carter Creek, the chaotic nature of daily interaction created a contested space in which a shared style and identity could not territorialize or become emplaced at Rosewood. This is also seen in the cosmological connections that may have been created through the production and use of ceramic vessels, as the heterogenous ceramic assemblage would not have created a consistent interaction with a specific space in the cosmos that may have allowed for that cosmological space to become a part of a community identity at the site. At White Bend, we see the same kind of reterritorialization that we see at Gast Farm and Rosewood, all while a newly emergent and unique LaMoine Valley community identity begins to territorialize.

White Bend, similar to Gast Farm, presents an interesting case study in which we can trace the emergence of early Late Woodland identities and styles in a formerly Middle Woodland space. But unlike Gast Farm, there is extensive data on this Middle Woodland habitation and the ceramic vessel assemblage associated with it. Based on the ceramic assemblage, lithic assemblage, and radiocarbon dates from White Bend, it has been argued that the transition between the Middle and Late Woodland periods happened in-place at this site (Fishel 2013d), meaning that we can see how the same group/lineages changed ceramic and lithic production techniques throughout this transitionary period. Because of this history associated with White Bend, it can be seen as a contested space where the struggle between the past and present was actively lived.

	Carter Creek	**Marlin Miller #2**	**White Bend West Block**	**Sartorius and Sartorial Splendor**	**White Bend East Block**	**Dobey**	**Tortured Oak**
Occupation Dates	300-400s CE	Late 300s-400s CE	400-500s CE	600s CE	Late 600s-700s CE	700-800 CE	700-late 800s CE
Region of LaMoine Valley	Southern	Northern	Northern	Northern	Northern	Southern	Southern
Surface Treatment							
Cordmarked/Smoothed-over cordmarked	58.79%	44%	27.87%	-	3%	14%	-
Plain	32.42%	55%	68.85%	100%	97%	77%	100%
Temper							
Grit	93.41%	96%	75.41%	4.4%	61%	84%	100%
Grit-Grog	1.10%	-	24.59%	94.51%	36%	13%	-
Sand	3.57%	-	-	1.1%	3%	3%	-
Grog	-	-	-	-	-	-	-
Rim Shape							
Flat	45.60%		37.70%	27.47%	33%	22%	64%
Round	51.37%	81%	60.66%	71.43%	64%	77%	36%
Lip Modifications							
Exterior Tool Impression	50.27%	68%	85.25%	96%	94%	75%	79%
Interior Tool Impression	1.37%	8%	3.28%	1.10%	-	7%	21%
Cord-wrapped Stick	12.91%	2%	8.20%	14.29%	18%	-	-
Other Attributes							
Vessels with Nodes	7.14%	30%	55.74%	78%	70%	35%	36%
Node distance from lip (average) (cm)	15.23	17.71	11.53	11.53	13.27	12.32	7.16
Lip Thickness (average) (mm)	5.37	5.29	5.02	4.42	5.13	5.09	5.33

Table 7.5: Ceramic Vessel Data from most LaMoine Valley sites. Much of the data is taken from Fishel (2013d:319, Table 12.3).

As I noted above, there are clear distinctions between the Middle and early Late Woodland ceramic vessel assemblages at White Bend, along with numerous (over half of the assemblage) transitional vessels that are not identifiable as definitively a Middle Woodland or Weaver type. On top of this, the early Late Woodland assemblage was not homogenous outside of the use of exterior tool impressions on most vessels (85.25%), almost all of which were vertically oriented (92.31%). This ceramic vessel trait may have been used as an identity marker for people living at White Bend or, as I have argued above, it may better reflect the emergence of a wider LaMoine Valley style that expressed a community identity. There are also fabric-impressed sherds from this assemblage, showing continued connections to the Sny Bottom region of the Mississippi Valley here (Morgan 1985, 1986). Beyond the lack of homogeneity in the ceramic assemblage, the PPK assemblage also shows a conflict between newly emergent practices and ties to the past. Snyders points(a terminal Middle Woodland PPK type) were made mostly from locally available cherts lacking in the usual vibrant colors that these points often have (e.g., Fishel 2015b), whereas Steuben points (a distinctive early Late Woodland PPK type) were made from exotic cherts in many cases (24%). Additionally, there were PPK that were identified as transitional, having both Snyders and Steuben-like production patterns.

Taken together, the ceramic and PPK assemblages show that not only was the presence of the Middle Woodland past felt in this space because of the long occupation history at this site, it was also felt because people were actively connecting to the past through ceramic and lithic production techniques. Additionally, this space was structured as a circular/arcuate village, which likely drew from the nearby occupation at Carter Creek for inspiration. These oppositional expressions of style and identity emerged in a highly chaotic space where past and present rubbed against one another on a daily basis, while also sticking together in the form of transitional vessels and PPK. The same kinds of messiness were likely also experienced through cosmological connections created in the production and use of these heterogenous vessels. The emergence of an affective, shared, sameness was not afforded for in this space due to these competing, and sometimes contradictory, styles and identities. Looking at this all together, the early Late Woodland village at White Bend emerged through the confluence of reterritorializing

Middle Woodland style and identity assemblages, alongside newly emergent early Late Woodland style and identity assemblages, in a space that connected to both this shared past and the nearby present (the circular village at Carter Creek), often connecting to both at the same time. Because these competing expressions of identity were so prevalent at White Bend, a site-level community identity was unable to become emplaced at the site. At the same time that this turbulent atmosphere was being felt at White Bend, a wider LaMoine Valley community style was beginning to emerge.

	Marlin Miller #2	**White Bend West Block**	**Sartorius and Sartorial Splendor**	**White Bend East Block**
Occupation Dates	Late 300s-400s CE	400-500s CE	600s CE	Late 600s-700s CE
Surface Treatment				
Cordmarked/Smoothed-over cordmarked	44%	27.87%	-	3%
Plain	55%	68.85%	100%	97%
Temper				
Grit	96%	75.41%	4.4%	61%
Grit-Grog	-	24.59%	94.51%	36%
Sand	-	-	1.1%	3%
Grog	-	-	-	-
Rim Shape				
Flat		37.70%	27.47%	33%
Round	81%	60.66%	71.43%	64%
Lip Modifications				
Exterior Tool Impression	68%	85.25%	96%	94%
Interior Tool Impression	8%	3.28%	1.10%	-
Cord-wrapped Stick	2%	8.20%	14.29%	18%
Other Attributes				
Vessels with Nodes	30%	55.74%	78%	70%
Node distance from lip (average) (cm)	17.71	11.53	11.53	13.27
Lip Thickness (average) (mm)	5.29	5.02	4.42	5.13

Table 7.6: Ceramic Vessel Data from Northern LaMoine Valley sites discussed in this dissertation. Most of the data is taken from Fishel (2013d:319, Table 12.3).

As I have argued earlier in this chapter using ceramic data from the LaMoine Valley, an emblemic ceramic vessel style appears to have emerged across the LaMoine Valley starting at either Carter Creek or White Bend and seen in later assemblages at Sartorius/Sartorial Splendor.

This is shown through certain ceramic vessel attributes being similar in frequency over time, while other attributes show a linear progression in popularity across this period (Table 7.5). The "climax" of this is seen at Sartorius/Sartorial Splendor where the ceramic vessel assemblage is almost exclusively plain, grot-grog tempered vessels, with exterior tool impressions along the lip of the vessel, applied in a vertical direction (Fishel 2012d). There are also continuous connections to the Mississippi Valley at these sites, as seen through ceramic vessels (e.g., the sand-tempered jar at Sartorius).

Interestingly, this pattern of ceramic vessel production is especially prevalent at more northern LaMoine Valley sites, including White Bend West Block and Sartorius/Sartorial Splendor. This includes Marlin Miller (Fishel 2015a) at which the ceramic vessel assemblage is very similar to White Bend, with the exception of a large majority of vessels having grit temper (Table 7.6). In fact, at Marlin Miller, there are also clear connections to the Mississippi Valley, along with transitional vessels suggesting similar site dynamics as White Bend. Some of this pattern fades during the latter portions of this period, as grit temper dominates the ceramic assemblage from White Bend East Block, although the more visible elements of plain surfaces (97%) and exterior tool impressions (94%) are still dominant. Kost #3 (Fishel 2007) and Cooper #1 (Fishel and Nolan 2007) are other northern LaMoine sites, but both have limited ceramic data that is available.

More southern LaMoine Valley sites do not share in this community identity expression, although there is missing chunk of time in this area where no extensively studied Weaver sites have been located. As discussed, at Carter Creek, there was never an emergence of a clear sameness, as instead a non-Middle Woodland identity emerged in the face of the changing social and cultural landscape of this period. Even at later sites in the southern LaMoine Valley, including Dobey (Fishel 2012g) and Tortured Oak (Fishel 2005), there are no obvious connections to the ceramic vessel production pattern further north, nor are there any clear similarities across these sites. Friendly Neighbor (Atwell 1995; Atwell and Gloatley 1994) and Bell's Terrace (Fishel 2013h) are two other southern LaMoine sites, but each has only limited ceramic data.As the earliest circular/arcuate village in the LaMoine Valley (followed by Marlin Miller, which was inhabited in the late 300s to early 400s CE), Carter Creek would still have had a large influence on the emergence of style and identity in the LaMoine Valley at-large. Most specifically, vertically oriented exterior tool impressions dominate the vessel assemblage at Carter Creek, which may have been an identity marker to those living in this region throughout the early Late Woodland period.

What these patterns of ceramic vessel production show is the development and emplacement of a (mostly northern) LaMoine Valley community identity that was expressed through plain vessels with exterior tool impressions in a vertical direction. This choice to make mostly plain vessels (in the case of Sartorius/Sartorial Splendor it is 100% of the vessels), suggests that there was an active disconnection from the cosmological space of the underworld (Benn 2017, 2018) that was part of this community identity assemblage. Through the production and use of these vessels, a LaMoine Valley community identity emerged that included the people in these spaces, the clays they were using, the ceramic vessels, the foods cooked and stored in these vessels, and the spaces in which this identity was expressed. This affective community territorialized in this region as the highly contested and turbulent beginnings of this period had faded, with the calmer atmosphere of this region affording for this emergence. At Buffalo Chip, the calmer atmosphere of the latter part of the early Late Woodland period afforded for a dearth of visible styles and identities, even in a contested space. This LaMoine Valley pattern is suggested by the available data, but as more sites are excavated, more nuance can be added to this discussion, possibly pointing to connections between sites or the emergence of other LaMoine Valley community identities.

This understanding of both Carter Creek and the wider early Late Woodland period is driven by an understanding of the relational nature of the assemblages that emerged and, in some cases, territorialized at these sites. Carter Creek, as a case study, shows how the upheaval caused by the Middle to Late Woodland transition was felt along the empty internal frontier (Green 1993) of west-central Illinois in a newly emergent structuring of space (circular/arcuate villages), resulting in a turbulent atmosphere of competing and oppositional expressions. This turbulence did not afford for the emergence and territorialization of a shared sameness among the inhabitants at this site. Instead, active choices to move away from Middle Woodland spaces and practices came together to form a non-Middle Woodland community that was expressed through myriad styles, household identities, and community identities. This same turbulence could be felt throughout the wider region during the early portions of this period, but the unique context in which other circular/arcuate villages formed resulted in a mosaic of competing deterritorializations, reterritorializations, and territorializations as people moved away from a shared Middle Woodland past, while also reconnecting to it in unique ways. This overarching chaos during this period is especially seen through the heterogeneity of ceramic vessels. As this turbulence subsided, both from the temporal distance from the Middle Woodland and from the restructuring of occupations from villages to hamlets (Green 1987, 1993), localized community identities began to emerge and territorialize in these formerly messy spaces, as seen in the northern LaMoine Valley (and possibly the American Bottom; Jackson et al. 2014). This region-wide restructuring and reformation of the social and cultural landscape was experienced on a daily basis as people, places, spaces, and things all converged in new and old spaces, creating the dynamic early Late Woodland world that archaeologists are just beginning to truly trace.

CHAPTER 8: CONCLUSION

Identity is inherently relational, ever emerging from the relationships between people, places, spaces, and things that constitute identity at multiple scales (Beck 2018; Harris 2016; Salazar et al. 2022). Identity is not just a thing that sits outside of people, instead it has direct effects on the way that individuals and groups negotiate their experiences in the world (Pierce 2016). One way that archaeologists can discern identity through the artifacts we find is the concept of style, which can be best understood as a way of doing something that expresses either a personal (assertive) identity or a shared (emblemic) group identity (e.g., Hegmon 1992; Hodder 1990; Wiessner 1984). By understanding identity and style as assemblages, following Harris (2014, 2016, 2017, 2018) and others (e.g., Marsh 2016), we are better able to capture the dynamic and fluid nature of the past. By tracing the relationships that form assemblages, archaeologists can provide a nuanced and vibrant (*sensu* Bennett 2010) understanding of the past that both decenters humans and highlights the myriad relationships of which they were a part, by returning our focus to the non-human things that we study. We are further able to highlight the ways in which style and identity assemblages overlap and interact by treating each scale of assemblages using the same "rules," thus allowing for more detailed interpretations of the archaeological record (Harris 2017; Marsh 2016).

In tracing the emergences and territorializations of assemblages through the archaeological record, one should start with the artifacts and features we excavate by recording detailed analytical descriptions of these things. From these data, we can locate the relationships that necessarily constitute assemblages and trace these gatherings across time and space, recognizing the ways in which they have real effects on the world (e.g., Harris 2016). In doing this, one should not focus on the representational nature of things, and instead take a beyond-the-representational approach that both recognizes the metaphors and similes that are real in the world, while also understanding that they are just small parts of the lived reality of people (e.g., Harris 2018). This is especially pertinent when tracing the emergence of style assemblages. In recognizing the multitude of parts that constitute an assemblage, we are necessarily shifting our focus from humans to other actors in the world, but, as Harris (2016:31) points out, as archaeologists and anthropologists, “our discipline focuses on worlds that include humans,” so we are always studying humans through the tracing of assemblages.

In using Carter Creek as a case study throughout this dissertation, my goal was to explore how assemblage theory grants archaeologists a perspective that can allow for a more vigorous understanding of a relatively understudied period. In doing this, I was able to locate spaces where styles and identities emerged in the face of a changing social and cultural landscape. These style and identity assemblages were constituted by people, spaces, lithic tools, ceramic decorations, daily activities, and non-local places emerging from the unique circumstances at each site discussed. In tracing and defining these assemblages, I was able to show how the Middle to Late Woodland transition, and the resulting early Late Woodland period, cannot be defined by the loss of burial mounds, exotic prestige items, or long-distance interaction. Instead, this period is complex in its own right, consisting of a mosaic of territorializations, deterritorializations, and reterritorializations, as people negotiated the cultural vacuum left by this transition, often actively choosing to move away from shared Middle Woodland spaces and practices. In this way, assemblage theory provided a lens through which this complexity was visible and vibrant.

To summarize, towards the end of the Middle Woodland period, previously dominant interaction networks and regional identities began to wane in the face of climatological and social pressures (e.g., Byers 2015). As these networks broke down and shared ideas about identity and style shifted, a cultural vacuum emerged, in which groups had to find their place in the world. In west-central Illinois, and nearby regions, this upheaval created a turbulent atmosphere in which both newly emergent identities and styles, and reconfigured Middle Woodland identities and styles, attempted to territorialize, often in the same spaces and sometimes geographically removed from the Middle Woodland past. This turbulence was especially felt at circular/arcuate villages that began to dot the landscape around 300 CE (Green et al. n.d.). In these spaces, the upheaval of this period was acutely felt and negotiated on a daily basis. As the early Late Woodland period wore on, the immediate disruption felt during the Middle to Late Woodland period waned, group structure shifted from the village-level to the household (e.g., Green 1993), and a calmer atmosphere set in. This calmer atmosphere afforded for the emergence of local and regional identities that were expressed through shared lifeways and ceramic production techniques.

By taking the perspective that traces the emergence, territorialization, deterritorialization, and reterritorialization of style and identity during this period, we are better able to see that the Middle to Late Woodland transition cannot be described using blanket terms like collapse (Tainter 1988) or Balkanization (McElrath et al. 2000). Instead, to truly understand this period as more than a placeholder between the Middle Woodland and Mississippian periods, we must explore each region and site, tracing the dynamic relationships that emerged. Through these relationships, we can show that the complexity of this period is not tied to drab pottery or lessened long-distance interaction, but instead arises out of a cultural vacuum that resulted in a messy, chaotic, and competitive landscape in which groups were actively choosing to disassociate with their recent past in order to define and emplace newly emergent identities and styles. West-central Illinois during the early Late Woodland period was not a place devoid of interaction or complexity. Instead, it was a space in which a reconfiguration of power, people, and identity occurred in new and contested spaces that lacked the overarching community connection that defined the preceding period.

Concluding Thoughts

As research on the early Late Woodland period continues, it will be important to consider the longer culture history of west-central Illinois. Pottery is not found in west-central Illinois until the Early Woodland period (600-100 BCE) and is considered one of the defining features of this period (Farnsworth and Emerson 1986). These early ceramics share some traits with later Middle and early Late Woodland vessels, such as cordmarking and decoration on the neck/shoulder of vessels (e.g., Griffin 1952), but also have traits that do not continue, such as cordmarking on the interior of vessels (e.g., Harn 1986:266). Additionally, Early Woodland vessels have similar kinds of decoration, such as incising or punctates (e.g., Munson 1986), with a variety of tempering agents (e.g., Farnsworth and Asch 1986), although grit-temper dominates assemblages in this region as it does throughout the Middle Woodland and most of the early Late Woodland periods. Early Woodland groups inhabited spaces mostly situated around the major river valleys, but also used the uplands more extensively than did Middle Woodland groups (e.g., Farnsworth and Asch 1986).

The continuance of some general ceramic traits into the Middle Woodland period is combined with a marked increase in long-distance interactions and elaborately decorated ceramic vessels (e.g., Griffin 1952; Martin 2013). Archaeologists have further noted the presence of many “exotic” cherts and other artifacts during the Middle Woodland period, such as Flint Ridge flint (e.g., Lepper 2006; Nolan and Bainter 2004) from Ohio, as the wider Midwest (and Mid-South) interacted through increased interactions and mortuary ceremonialism, known as the Hopewell Interaction Sphere (e.g., Caldwell 1964). Middle Woodland groups almost exclusively inhabited spaces within or near the major river valleys, most often in locations near prominent mound centers (e.g., Farnsworth and Atwell 2015; Ruby et al. 2005). As I discussed in Chapter 3, the widespread interaction networks that emerged during the Middle Woodland period eventually diminished, leading to the start of the early Late Woodland period and the dominance of "good gray cultures" (Williams 1963:297), which archaeologists considered notable for a lack of elaborately decorated ceramics and exotic items. People also began to use the uplands more extensively during this period.

The shift from widespread interaction during the Middle Woodland period to more localized and intra-regional interaction during the early Late Woodland period was likely driven by multiple factors. This includes flooding in the major river valleys (e.g., Van Nest 2006), along with an active social revolution (Fishel 2013d) that moved away from the more extravagant displays of identity and style that defined the Middle Woodland period. With this move away from more fanciful decoration and long-distance prestige items, we see a return to prominence by ceramic production techniques that are found in the first ceramic assemblages in this region (e.g., cordmarking). At the same time, some Middle Woodland production techniques also continue into this period.

At first glance, when examining Carter Creek and the early Late Woodland period as a whole, one may argue that people during this transitionary period were returning to their Early Woodland past through choices to move into the uplands, cease long-distance interaction networks, and adopt less elaborate ceramic production techniques. Making this argument simplifies the culture history of this region and misses the nuance provided by assemblage theory, but may be a place to start in examining the longer culture history of the Woodland period. Data from the Early Woodland period is somewhat lacking the fine-grained scale that may be needed for some applications of assemblage theory (e.g., Marsh 2016), so making a more detailed argument about the long culture history of this period is not necessarily feasible at this time, nor has it been my intent to examine this. Instead, my point in highlighting the general ceramic vessel, and habitation, history of west-central Illinois is to observe that people at early Late Woodland villages were not just experiencing connection/disconnection from the recent Middle Woodland past, they may have also been (continuing to) connect to their deeper Early Woodland past.

This same kind of process may even be seen at Moorehead Phase (1200-1300 CE) Cahokian sites during what Baltus (2014, 2015) describes as a revitalization of religious-politics during the Mississippian Period. Baltus (2014) notes that this revitalization can be seen through changing (everyday) interactions with materials and spaces, some of which recreates connections to pre-Cahokian practices in the American Bottom. Additionally, there are new uses of space that include the abandonment of Cahokian-like structures. In these changes, Baltus (2014:335) sees an “intentional disengagement” with some Cahokian practices, along with a “re-entanglement” with the pre-Cahokian past. She also notes that these shifts are not uniform throughout the entire American Bottom.

While the complexities involving Cahokia and the Mississippian period as a whole are much different than those surrounding the Middle to Late Woodland transition, there are some distinct similarities in how these processes play out. This includes the intentional disengagement with past practices (elaborately decorated vessels) and spaces (Middle Woodland ceremonial mound centers). These changes are seen through everyday artifacts that I discussed in this dissertation. Additionally, these shifts in relation to a shared Middle Woodland past were unique at each site that I discussed, pointing to a lack of uniformity in the experience of the Middle to Late Woodland transition. Perhaps, this kind of reaction, active disengagement to past materials and spaces, is something that can be highlighted across the longer culture history of the grater Midwest, although, a significant amount of work will need to be done to better compare and discuss similarities between periods.

At the same time that continued research into the wider cultural trajectories of this region takes place (e.g., Emerson et al. 2000), archaeologists should also consider more local understandings of this period. Emerson et al. (2000) argue that their volume on the Late Woodland period is meant to be the foundation for future work in this period, as they mostly present the data that had been gathered up to that point. They do this specifically in a regional manner, thus revealing the regional dynamics during the Late Woodland, but lacking more local specificity. Just as Henry and Miller (2020), and others (e.g., Baires 2020), have done using situation theory (e.g., Zigon 2015) to look at local realities during the Middle Woodland period, early Late Woodland archaeologists can use assemblage theory to do the same. The unique emergence and territorialization of style and identity at each of the early circular/arcuate villages discussed in this dissertation shows that further exploration of local or sub-regional geographic areas is needed to better understand the dynamics of the early Late Woodland period as a whole as each local "situation" was unique.

In all, assemblage theory provides a way for archaeologists to view the vibrancy of the past in new ways. My focus has been on smaller scales of identification, like the household and local community, but as more data is gathered, explorations into the longer culture history of the region and the larger significance of this period can be better broached. It is my hope that this dissertation is a productive foray into this. By tracing the relationships at Carter Creek and other early Late Woodland sites and highlighting the assemblages they constituted, I have worked to show how archaeologists can better understand the complexity of this period despite its seemingly drab material culture. While exotic artifacts, long-distance interaction, and widespread burial traditions are the shiny things archaeologists have long sought and examined, assemblages are the messy and dirty domains of study that provide a holistic understanding of the past. At Carter Creek, this holistic understanding revealed the dynamic ways people negotiated a disruptive and widespread tradition through everyday interactions.

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APPENDIX A: CERAMIC ARTIFACT DATA

Table A.1: Carter Creek Ceramic Data by bag number. PZ- plow zone, MSS- machine scraped surface, CM- cordmarked, SCM- smoothed-over cordmarked, G- grit, GG- grit-grog.

Bag #	**Provenience (half, zone)**	**Temper**	**Decoration/Type**	**Count**	**Weight**
14-1	E, Zone All	-	Burned Clay	8	3.12
		-	Sherdlettes	33	21.76
		G	Plain	3	23.48
		G	CM	7	43.48
14-2	W, Zone A	-	Burned Clay	14	5.71
		-	Sherdlettes	21	16.22
		GG	CM	4	68.83
		G	Plain	7	42.45
		G	CM	20	99.47
15-1	S, Zone All	-	Burned Clay	5	1.57
		-	Sherdlettes	7	3.11
		G	Potter's Clay	4	9.49
		G	CM	2	4.87
15-3	N, Zone A	-	Burned Clay	11	5.94
		-	Sherdlettes	6	4.96
		-	Potter's Clay	1	1.42
		GG	Plain	1	2.01
		GG	CM	1	3.49
16-1	E, Zone All	-	Burned Clay	28	11.13
		-	Sherdlettes	50	33.86
		GG	CM	12	256.45
		G	Plain	27	101.36
		G	SCM	5	24.84
		G	CM	91	671.56
16-2	W, Zone A	-	Burned Clay	9	7.33
		-	Sherdlettes	29	18.74
		G	Plain	1	2.93
		G	Plain, basal	6	108.91
		G	CM	52	634.94
16-4	W, Zone B	-	Sherdlettes	9	6.89
		G	CM	11	79
		G	CM, Basal	2	133.58
17-1	E, Zone All	-	Burned Clay	9	6.57
		-	Sherdlettes	7	4.98
		G	Plain	2	11.87
		G	SCM	1	4.08
		G	CM	13	80.37
		GG	SCM	1	10.08
17-3	W, Zone A	-	Sherdlettes	7	4.23

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	Plain	3	22.91
		G	SCM	3	16.73
17-3	W, Zone A	G	CM	2	4.48
17-5	W, Zone B	-	Burned Clay	4	1.37
		-	Sherdlettes	3	2.28
		G	Plain	1	2.53
		G	CM	2	14.75
18-1	N, Zone All	-	Burned Clay	54	33.16
		-	Sherdlettes	40	25.83
		G	Plain	4	13.52
		G	Plain, basal	2	30.72
		G	CM	10	44.68
18-3	S, Zone A	-	Burned Clay	37	19.65
		-	Sherdlettes	24	14.92
		G	Potter's Clay	5	8.94
		G	Plain	2	14.27
		G	CM	10	63.21
19-1	S, Zone All	-	Burned Clay	13	14.62
		-	Sherdlettes	50	35.3
		-	Potter's Clay	1	2.43
		G	Plain	2	5.56
		G	CM	61	649.88
19-2	N, Zone A	-	Burned Clay	9	5.43
		-	Sherdlettes	45	28.57
		-	Potter's Clay	2	12.12
		G	Plain	15	71.9
		G	CM	79	605.82
20-1	SE, Zone All	G	Potter's Clay	5	11.3
		G	CM	6	32.81
20-3	NW, Zone A	-	Sherdlettes	2	1.32
		G	Potter's Clay	10	12.17
		G	CM	8	49.41
20-4	NW, Slump	GG	Plain	2	4.7
20-5	NW, Zone A1	-	Sherdlettes	1	1.31
21-1	N, Zone All Upper	-	Sherdlettes	8	7.46
		G	Plain	3	25.96

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	CM	5	11.4
21-3	S, Zone A	-	Potter's Clay	3	4.1
		G	Plain	3	9.89
		G	CM	4	9.78
21-5	S, Zone B	-	Sherdlettes	5	4.11
21-5	S, Zone B	G	CM	1	2.66
22-1	N, Zone All Upper	-	Burned Clay	31	10.22
		-	Sherdlettes	18	13.89
		G	Potter's Clay	8	7.27
		G	Plain	1	1.82
		G	CM	7	45.54
22-2	N, Zone All Lower	-	Sherdlettes	2	0.56
		G	Potter's Clay	2	4.68
		G	Plain	1	9.8
		G	CM	2	5.81
22-3	N, Zone All Lower	-	Sherdlettes	34	11.79
		-	Potter's Clay	2	6.19
		G	CM	5	15.41
22-4	N, Zone All (wall scrapings)	-	Burned Clay	3	1.26
		-	Sherdlettes	4	1.85
		G	CM	1	3.26
22-5	S, Zone A	-	Burned Clay	55	19.76
		-	Sherdlettes	14	8.11
		G	Potter's Clay	9	33.16
		GG	SCM	4	30.57
		G	Plain	1	16.62
		G	CM	8	33.56
22-7	S, Zone B	-	Burned Clay	15	7.48
		G	CM	3	7.93
22-9	S, Zone C	-	Burned Clay	16	7.98
		-	Sherdlettes	7	4.17
		G	CM	13	145.3
23-1	SE, Zone Alll Upper	-	Burned Clay	7	3.4
		-	Sherdlettes	23	20.44
		G	CM	9	19.68
23-2	SE, Zone All Lower	-	Burned Clay	26	24.58
		-	Sherdlettes	6	4.42
		G	Plain	2	15.67

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	CM	5	16.46
23-3	NW, Zone A	-	Burned Clay	2	0.82
		-	Sherdlettes	13	11.37
		G	Plain	1	3.04
		G	CM	6	18.67
23-5	NW, Zone B	G	Potter's Clay	1	3.53
		G	CM	2	12.15
24-1	N, Zone All Upper	-	Burned Clay	3	1.61
24-1	N, Zone All Upper	-	Sherdlettes	8	7.93
		G	Potter's Clay	3	18.55
		G	Plain	1	2.48
		G	CM	4	7.54
24-2	N, Zone All Mid and Lower	-	Burned Clay	3	1.34
		-	Sherdlettes	10	9.79
		G	Potter's Clay	3	6.43
24-3	N, Zone All Lower	G	Potter's Clay	3	4.06
		G	Plain	2	5.79
		G	CM	1	4.53
24-4	N, Zone All (wall scrapings)	Grog	CM	1	3.3
		G	CM	3	10.29
24-6	S, Zone A	-	Burned Clay	20	9.28
		-	Sherdlettes	14	10.95
		G	Plain	2	14.51
		G	CM	12	46.68
24-8	S, Zone B/B1	-	Sherdlettes	5	4.11
		G	Plain	6	12.49
		G	CM	2	5.85
25-1	N, Zone All	-	Sherdlettes	11	7.76
		Sand	CM	7	12.94
		G	CM	8	22.07
25-3	S, Zone A	G	CM	3	46.02
26-1	N, Zone All	-	Burned Clay	25	12.15
		-	Sherdlettes	21	9.43
		G	Plain	1	3.05
		G	SCM	2	5.97
		G	CM	24	84.41
26-2	S, Zone All	-	Burned Clay	6	0.97
		-	Sherdlettes	4	3.01

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	CM	1	2.02
26-4	S, Zone A	-	Burned Clay	63	23.46
		-	Sherdlettes	11	6.54
		Grog	CM	1	3.51
		G	CM	24	55.84
26-6	S, Zone B	-	Burned Clay	9	9.4
		-	Sherdlettes	5	3.42
		G	Potter's Clay	5	5.24
		G	Plain	4	14.16
		G	CM	11	35.42
27-1	N, Zone All Upper	-	Burned Clay	50	20.27
27-1	N, Zone All Upper	-	Sherdlettes	35	19.58
		-	Potter's Clay	11	16.82
		G	Plain	3	9.85
		G	CM	24	179.85
27-2	N, Zone All Mid	-	Burned Clay	65	22.37
		-	Sherdlettes	14	5.48
		G	Potter's Clay	6	9.45
		G	Plain	2	7.28
		G	CM	3	17.42
27-3	N, Zone All (35 cmbd)	-	Burned Clay	23	13.35
		-	Sherdlettes	12	10.47
27-4	S, Zone A	-	Burned Clay	41	19.74
		-	Sherdlettes	20	13.02
		G	Plain	3	12.18
		G	CM	16	101.47
27-6	S, Zone B	-	Burned Clay	7	6.57
		-	Sherdlettes	4	3.65
27-8	S, Zone C	-	Burned Clay	44	18.09
		-	Sherdlettes	24	13.03
		G	Potter's Clay	11	30.68
		G	Plain	5	13.56
		G	CM	4	38.51
28-1	N, Zone All	-	Burned Clay	38	17.25
		-	Sherdlettes	15	14.11
		-	Potter's Clay	4	12.19
		G	Plain	5	13.31
		G	CM	17	80.6

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
28-2	S, Zone A	-	Burned Clay	35	16.89
		-	Sherdlettes	17	11.15
		G?	Potter's Clay	9	48.82
		GG	CM	2	17.64
		G	Plain	1	8.77
		G	CM	10	40.71
29-1	W, Zone All	-	Burned Clay	14	5.57
		-	Sherdlettes	12	8.67
29-2	E, Zone A	-	Burned Clay	12	5.84
		-	Sherdlettes	10	6.57
		G?	Potter's Clay	4	8.71
		G	CM	1	5.93
30-1	W, Zone All	-	Burned Clay	43	21.44
		-	Sherdlettes	51	31.98
30-1	W, Zone All	G	Potter's Clay	4	14.22
		G	Plain	13	31.81
		G	CM	26	150.22
30-2	W, Zone All	-	Burned Clay	6	2.02
		-	Sherdlettes	8	4.15
30-4	E, Zone A	-	Burned Clay	27	12.18
		-	Sherdlettes	76	10.89
		G	Plain	1	1.69
		G	CM	16	59.39
30-5	E, Slump	-	Sherdlettes	5	1.18
		G	CM	1	4.17
30-6	E, Zone B	-	Burned Clay	1	0.36
		-	Sherdlettes	1	1.04
31-1	W, Zone All	-	Burned Clay	12	18.09
		-	Sherdlettes	17	9.14
		G	Plain	1	14.66
		G	SCM	2	11.31
		G	CM, Basal	1	13.08
		G	CM	8	38.19
31-3	E, Zone A	-	Burned Clay	16	6.16
		-	Sherdlettes	17	8.71
		G	Potter's Clay	2	8.28
		G	Plain	9	21.51
		G	CM	13	38.66

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
32-1	S, Zone All	-	Burned Clay	18	10.15
		-	Sherdlettes	20	9.73
		G	SCM	4	21.72
		G	CM	12	41.99
32-3	N, Zone A	-	Burned Clay	11	7.19
		-	Sherdlettes	17	8.06
		G	Plain	3	7.49
		G	CM	6	14.96
33-1	N, Zone All	-	Burned Clay	38	10.64
		-	Sherdlettes	11	7.81
		G	Plain	2	23.7
		G	CM	7	84.62
33-3	S, Zone A	-	Burned Clay	21	11.37
		-	Sherdlettes	11	6
		G	Plain	2	7.11
		G	CM	16	71.19
35-1	W, Zone All	-	Burned Clay	2	2.2
35-1	W, Zone All	-	Sherdlettes	3	1.08
		G	Potter's Clay	1	2.02
		G	CM	3	5.39
36-2	W, Zone All	-	Burned Clay	25	13.67
		-	Sherdlettes	1	0.5
		GG?	Potter's Clay	3	14.32
		G	CM	3	9.19
36-4	E, Zone A	-	Burned Clay	13	5.1
		-	Sherdlettes	13	7.17
		-	Potter's Clay	8	10.43
		G	CM	9	47.18
37-1	N, Zone All	-	Burned Clay	78	39.3
		-	Potter's Clay	1	2.99
		GG	CM	1	25.94
		G	Plain	3	9.33
		G	CM	3	20.87
37-3	S, Zone A	-	Burned Clay	23	8.43
		-	Sherdlettes	4	1.9
		G	CM	2	24.86
37-5	S, Zone B	-	Burned Clay	28	12.59
		-	Sherdlettes	11	6.09

Table A.1 (cont.).

Bag #	**Provenience (half, zone)**	**Temper**	**Decoration/Type**	**Count**	**Weight**
		-	Potter's Clay	8	10.13
		G	Plain	3	10
		G	CM	1	10.28
37-6	S, Slump	-	Burned Clay	3	2.48
38-1	N, Zone All	-	Burned Clay	2	0.47
		-	Sherdlettes	2	1.36
39-1	N, Zone All	-	Burned Clay	2	0.94
40-1	S, Zone All	-	Burned Clay	4	1.62
		-	Sherdlettes	28	20.08
		G	Potter's Clay	3	8.97
		G	Plain	1	3.38
		G	CM	13	60.29
40-2	S, Zone All Lower	-	Sherdlettes	4	3.09
		G	Potter's Clay	3	3.26
		G	CM	3	8.99
40-3	N, Zone A	-	Burned Clay	4	4.17
		-	Sherdlettes	49	30.02
		G	CM	18	56.7
40-5	N, Zone B	G	CM	3	11.11
40-7	N, Zone C	-	Burned Clay	10	6.31
40-7	N, Zone C	-	Sherdlettes	7	6.9
		G	Plain	3	6.82
		G	CM	8	28.4
41-1	W, Zone All	-	Burned Clay	18	7.42
		-	Sherdlettes	52	24.21
		-	Potter's Clay	4	10.78
		G	Plain	10	33.33
		G	CM	8	17.43
41-2	E, Zone A	-	Burned Clay	6	4.7
		-	Sherdlettes	14	10.41
		GG	CM	1	1.69
		G	Plain	1	1.57
		G	CM	11	130.2
42-1	W, Zone All	G	CM	1	5.41
42-2	E, Zone All	G	Potter's Clay	1	1.46
43-1	W, Zone All	-	Burned Clay	27	9.04
		-	Sherdlettes	18	9.32
		G	Potter's Clay	2	2.59

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	Plain	1	1.65
		G	CM	3	6.08
43-2	E, Zone A	-	Burned Clay	9	3.49
		-	Sherdlettes	3	2.08
		G	Potter's Clay	4	20.29
		G	CM	1	10.71
43-4	E. Zone B	-	Burned Clay	2	0.7
		-	Sherdlettes	2	1.42
		G	Plain	1	3.59
		G	CM	1	3.86
44-1	N, Zone All	-	Sherdlettes	4	2.98
		G	CM	1	6.84
44-2	S, Zone A	G	CM	1	1.17
45-1	S, Zone All	-	Burned Clay	22	13.63
		-	Sherdlettes	34	35.44
		G	Plain	8	30.99
		G	SCM	3	30.61
		G	CM	13	117.23
45-2	S, Zone All	-	Burned Clay	4	1.81
		-	Sherdlettes	3	1.41
		G	Plain	2	8.62
45-3	N, Zone A	-	Burned Clay	7	1.32
		-	Sherdlettes	19	9.94
45-3	N, Zone A	G	Plain	2	11.2
		G	CM	6	80.03
45-5	N, Zone B	-	Burned Clay	5	3.22
		-	Sherdlettes	4	2.53
		G	CM	4	26.93
46-1	S, Zone All	-	Burned Clay	25	9.49
		-	Sherdlettes	12	6.98
		G	Plain	10	39.01
		G	SCM	3	8.56
		G	CM	19	62.47
46-2	N, Zone A	-	Burned Clay	24	12.33
		-	Sherdlettes	38	20.28
		G	Potter's Clay	1	3.34
		GG	CM	1	23.99
		G	Plain	10	33.31

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	CM	26	139.69
46-4	N, Zone A (Pottery Concentration)	G	Plain	1	10.36
		G	CM	10	178.5
47-1	NW, Zone All	-	Burned Clay	56	24.41
		-	Sherdlettes	26	16.89
		G	Potter's Clay	5	9.02
		G	Plain	10	44.5
		G	CM	9	27.63
47-2	SE, Smear/PZ/A-AB	-	Burned Clay	4	1.23
		-	Sherdlettes	6	3.08
		G	Potter's Clay	4	7.92
		G	Plain	2	5.85
		G	CM	3	24.76
47-3	SE, Zone A	-	Burned Clay	7	3.59
		-	Sherdlettes	6	4.14
		GG	CM	1	4.74
		G	CM	3	10.03
48-1	N, Zone All	-	Burned Clay	42	23.9
		-	Sherdlettes	26	13.7
		G	Plain	5	22.28
		G	CM	12	60.21
48-2	S, Zone All (48/49 Intersection)	-	Burned Clay	5	1.39
		-	Sherdlettes	7	5.01
48-3	E (NE1/4), Zone A	-	Burned Clay	3	1.54
48-3	E (NE 1/4), Zone A	-	Sherdlettes	7	4.46
		G?	Potter's Clay	3	5.14
		G	CM	3	8.13
48-4	E, PZ/A-AB	-	Burned Clay	12	5.42
		-	Sherdlettes	12	5
		G	Plain	3	6.23
		G	CM	3	14.38
48-5	E, Zone A	-	Burned Clay	12	4.03
		G?	Potter's Clay	2	4.97
		G	CM	4	9.89
49-1	S, Zone All	-	Burned Clay	67	24.66
		-	Sherdlettes	36	23.65

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G?	Potter's Clay	7	21.03
		G	Plain	6	18.9
		G	CM	17	95.47
49-2	N, Zone A	-	Burned Clay	56	36.89
		-	Sherdlettes	41	27.05
		G	Brushed	2	17.83
		G	Plain	7	21.89
		G	CM	19	71.01
49-4	N, Zone B	-	Burned Clay	55	22.9
		-	Sherdlettes	18	10.67
		G?	Potter's Clay	4	6
		G	Plain	1	4.96
		G	CM	4	25.12
49-6	N(NE1/4), Zone A	-	Burned Clay	13	11.24
		-	Sherdlettes	15	7.28
		G	Plain	1	2.46
		G	CM	4	7.77
49-7	N, Smear (intersection of 48/49/PM14)	-	Burned Clay	1	1.41
		-	Sherdlettes	2	1.02
49-8	N(NE1/4), Zone B	-	Burned Clay	7	4.54
50-1	W, Zone All	-	Burned Clay	6	2.38
		-	Sherdlettes	4	1.76
		G	CM	4	30.32
50-3	E, Zone A	-	Burned Clay	6	2.25
		-	Sherdlettes	1	0.51
		G	CM	5	52.61
50-4	E, Zone B	G	Plain	1	15.63
		G	CM	1	7.84
51-1	W, Zone All Upper	-	Burned Clay	14	6.85
51-1	W, Zone All Upper	-	Sherdlettes	14	9.36
		GG	Plain	2	26.39
		G	CM	6	27.62
51-2	W, Zone All Lower	-	Burned Clay	24	11.09
		-	Sherdlettes	9	6.45
		G	Plain	5	47.17
		G	CM	2	9.29
51-3	E, Zone A	-	Burned Clay	7	2.09
		-	Sherdlettes	2	1.48

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	Plain	4	21.93
		G	CM	2	16.82
51-5	E, Zone B	-	Burned Clay	1	1.05
		-	Sherdlettes	14	6.37
		G	Plain	3	8.95
		G	CM	6	27.44
52-1	W, Zone All	-	Sherdlettes	1	0.88
		G	CM	4	29.8
53-1	SW, Zone All	-	Sherdlettes	8	7.22
		G	Potter's Clay	1	4.92
		G	CM	7	25.25
53-2	SW (all PM 11), Zone All (53/54/PM 11 transition)	-	Burned Clay	1	0.43
		-	Sherdlettes	5	3.44
		G	Plain	2	5.9
		G	CM	3	17.58
53-3	NE, Zone A	-	Sherdlettes	5	3.03
		G	Plain	1	3.56
		G	CM	4	23.19
54-1	SW, Zone All	-	Sherdlettes	4	4.86
		-	Potter's Clay	2	1.95
		GG	CM	2	16
		G	SCM	1	9.26
		G	CM	7	23.97
54-2	NE, Zone A	-	Burned Clay	3	1.52
		-	Sherdlettes	4	2.51
		G	Plain	2	3.47
		G	CM	6	27.15
55-1	SW, Zone All	-	Sherdlettes	2	1.56
		G?	Potter's Clay	2	3.67
		G	Plain	2	49.69
		G	CM, Basal	2	6.21
55-1	SW, Zone All	G	CM	22	99.6
55-2 (F55/54)	SW, Zone All (55/54 Transition)	-	Sherdlettes	5	3.14
		G	CM	3	10.85
55-3	NE, Zone A	-	Burned Clay	9	5.32
		-	Sherdlettes	10	5.92
		G	Plain	1	3.09

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	CM, Basal	1	22.17
		G	CM	10	53.61
55-6	NE, Zone B	-	Burned Clay	1	5.6
		G	CM	6	41.88
56-1	W, Zone All	-	Burned Clay	3	1.11
		-	Sherdlettes	10	4.52
		G	CM	2	18.16
		G	CWS	1	8.19
57-1	S, Zone All	-	Sherdlettes	10	4.49
		G	Potter's Clay	4	4.23
		G	CM	2	7.84
57-2	N, Zone A	G?	Potter's Clay	1	2.36
		G	CM	2	19.06
57-4	N, Zone B	GG	CM	1	2.5
58-1	S, Zone All	-	Burned Clay	24	8.53
		-	Sherdlettes	16	11.21
		-	Coil	1	1.61
		G	Potter's Clay	3	10.99
		G	Plain	2	5.88
		G	CM	13	88.28
58-2	N, Zone A	-	Burned Clay	4	2.1
		-	Sherdlettes	9	6.48
		G?	Potter's Clay	1	4.28
		G	SCM	1	1.39
		G	CM	6	21.6
58-5	N, Zone B	-	Burned Clay	3	0.99
		G	SCM	1	6.97
59-1	S, Zone All	-	Burned Clay	3	1.86
		-	Sherdlettes	4	2.28
		G	CM	6	27.45
59-2	N, Zone A	-	Burned Clay	3	1.43
		-	Sherdlettes	6	3.08
		G	Plain	2	12.68
60-1	E, Zone All	-	Burned Clay	53	22.05
60-1	E, Zone All	-	Sherdlettes	28	17.72
		-	Potter's Clay	1	4.61
		G	Plain	5	12.87

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
		G	SCM	1	5.38
		G	CM	14	72.24
60-2	W, Zone A	-	Burned Clay	16	5.3
		-	Sherdlettes	10	5.7
		G	CM	8	33.13
60-4	W, Zone B	-	Burned Clay	17	5.02
		-	Sherdlettes	23	11.82
		G	Plain	2	13.27
		G	CM	8	54.91
61-1	E, Zone All	-	Burned Clay	9	4.09
		-	Sherdlettes	11	6.3
		-	Potter's Clay	2	4.95
		G	CM	11	65.76
61-2	W, Zone A	-	Burned Clay	17	9.93
		-	Sherdlettes	4	1.15
		-	Daub	1	1.13
		G	Plain	3	8.36
		G	CM	2	18.55
62-1	W, Zone All	-	Burned Clay	32	16.08
		-	Sherdlettes	12	9.17
		G	Plain	8	49.26
		G	CM	8	72.57
62-2	E, Zone A	-	Burned Clay	22	10.22
		-	Sherdlettes	13	6.88
		G	Plain	4	25.73
		G	SCM	1	5.9
		G	CM	13	76.53
62-4	E, Zone B	-	Burned Clay	28	15.83
		-	Sherdlettes	19	9.33
		G	Potter's Clay	9	17.93
		G	Plain	3	12.08
		G	CM	10	40.69
63-1	N, Zone All	-	Burned Clay	18	7.94
		-	Sherdlettes	12	5.42
		G	CM	5	25.75
63-2	E, Zone A	-	Burned Clay	4	1.98
		G	Potter's Clay	4	24.23
		G	CM	1	9.62

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
63-4	E, Zone B	-	Sherdlettes	1	0.53
		G	Potter's Clay	2	5.38
		G	CM	1	2.1
64-2	N, Zone All	-	Burned Clay	8	9.29
		-	Sherdlettes	11	10.95
		G	Plain	4	8.23
		G	CM	15	131.3
		G	Fabric	1	14.79
64-3	S, Zone A	-	Burned Clay	3	0.97
		G	Potter's Clay	1	4.31
		G	CM	11	97.73
65-1	E, Zone All	-	Burned Clay	16	10.78
		-	Sherdlettes	14	11.82
		-	Daub	14	1.25
		G	Plain	2	6.42
		G	CM	14	37.34
65-2 (F65/66)	W/S, Zone A	-	Burned Clay	4	2.05
		-	Sherdlettes	4	4.28
		-	Potter's Clay	2	4.48
		G	CM	6	26.64
65-2 (F65/66)	E, Zone All (65/66 Transition)	Sand	CM	1	5.43
65-3	W, Zone A	-	Burned Clay	6	2.74
		-	Sherdlettes	7	4.17
65-4	W, Zone B	-	Burned Clay	2	9.46
		G	CM	1	4.98
65-5	W, Zone A	-	Burned Clay	6	4.99
		G	SCM	1	6.47
		G	CM	10	69.03
65-7	W, Zone B	-	Burned Clay	1	0.4
		G	Plain	1	14.28
		G	CM	2	15.54
		G	SCM	2	4.83
66-1	E, Zone All	-	Burned Clay	2	0.75
		-	Sherdlettes	5	4.06
		Grog?	Potter's Clay	2	4.14
		G	Plain	1	1.6
		G	CM	3	11.11

Table A.1 (cont.).

Bag #	Provenience (half, zone)	Temper	Decoration/Type	Count	Weight
66-3	W, Zone A	-	Sherdlettes	6	3.71
		G	CM	2	5.86
PM 10-1	N, Zone All	-	Burned Clay	2	0.49
PM 12-1	E, Zone All	G	CM	5	21.26
PM 20-1	S, Zone All	G	CM	1	2.1
PM 24-1	W, Zone All	G	CM	1	2.33
PM 29-1	S, Zone All	G	SCM	1	3.76
PM33-1	W, Zone All	-	Sherdlettes	1	0.57
		G	CM	1	2.07
PM35-1	N, Zone All	GG	CM	1	5.17
PM38-1	E, Zone All	G	Plain	1	2.73
PM 39-1	E, Zone All	-	Burned Clay	1	0.23
ST4-1 (#1)	PZ/Midden, 0-35 cm	G	Plain	3	6.43
		G	CM	4	56.15
ST5-1	PZ/Midden, 0-35 cm	G	Plain	1	2.3
		G	CM	2	7.34
700-2	EB1, Above 57/58/59	-	Burned Clay	6	3.02
		-	Sherdlettes	16	12.63
		G	CM	5	24.54
700-3	Scraping, F60/61	-	Burned Clay	5	1.8
		-	Sherdlettes	11	6.97
		G	Plain	1	2.47
		G	CM	11	48.18
700-4	Midden remnant (64/65/66)	-	Burned Clay	2	0.36
		G	CM	3	12.42
900-1	EB1, PZ	-	Sherdlettes	5	7.22
		G	Potter's Clay	4	17.53
		G	CM	6	27.25
900-2	EB1, PZ	-	Burned Clay	4	9.52
		-	Sherdlettes	5	6.22
		G	Plain	2	25.48
		G	CM	2	6.78
900-3	EB1, PZ	-	Sherdlettes	2	1.94
		G	Plain	6	20.06
		G	CM	4	12.21
900-4	EB1, PZ	-	Burned Clay	5	2.37
		-	Sherdlettes	3	3.03

Table A.1 (cont.).

Bag #	**Provenience (half, zone)**	**Temper**	**Decoration/Type**	**Count**	**Weight**
		G	Potter's Clay	8	75.47
		G	Plain	5	36.32
		G	CM	5	31.21
900-5	EB1, PZ	-	Burned Clay	1	4.56
		-	Sherdlettes	4	3.84
		G	Plain	1	2.67
900-5	EB1, PZ	G	CM	13	76.08
900-6	EB1, PZ	-	Burned Clay	2	0.79
		-	Sherdlettes	6	4.02
		-	Potter's Clay	5	128.18
		G	Plain	6	56.69
		G	CM	7	34.01
900-7	EB2, PZ	G	Plain	1	13.48
		G	CM	5	19.17
900-8	EB2, Backdirt	G	Potter's Clay	1	20.57
		GG	CM	2	35.97
		G	Plain	9	57.21
		G	CM	6	33.81
900-8	EB1, MSS (F53)	-	Burned Clay	1	0.37
		-	Sherdlettes	3	2.57
		G	SCM	1	20.56
		G	CM	1	7.74

Table A.2: Carter Creek Ceramic Vessel Data. W- Weaver, W?- Weaver?, MW-LW- Middle to Late Woodland Transition, MP- Miniature Pot, PP- Pinch Pot, SB- Sny Bottom, LL- Lima Lake; J- Jar, J? Jar?, I- Indeterminate, B- Bowl; G- Grit, GG- Grit-grog, S- Sand; CM- cordmarked, SCM- smoothed-over cordmarked, P- Plain, FI- Fabric-impressed, NI- Net-impressed.

Vessel Number	**Type**	**Form**	**Temper**	**Rim Shape**	**Lip Modification**	**Exterior Surface Treatment**	**Decoration**	**Node Below Rim (cm)**
14-1	W	B	GG	Flat	-	P	-	-
14-2	W	J	GG	Round	Stick	P	Node	15.23
15-1	Ind	I	G	Round	-	CM	-	-
15-2	W	J	G	Flat	Stick	CM	-	-
15-3	Ind	I	G	Flat	Stick	CM	-	-
16-1	Ind	J?	G	Round	CWS	-	-	-
16-2	W?	I	G	Round	Dowel	-	Punctates	-
16-3	W	J	G	Flat	-	CM	-	-
16-4	W?	J	G	Round	CM	SCM	-	-
16-5	W?	J	G	Flat	Oval Dentate	CM	Oval Dentate	-
16-6	W?	J	G	F/IB	-	SCM	-	-
16-7	W	J	G	Round	-	Single Cord	-	-
16-8	W	J	G	Flat	-	CM	Node	-
16-9	W	J	G	Flat	-	SCM	-	-
16-10	W	J	G	Flat	-	CM	-	-
16-11	W	J	G	Flat	Stick	CM	Oval Dentate	-
16-12	W	J	G	Round	-	CM	-	-
16-13	W	J	S	Round	Dowel	SCM	-	-
17-1	W	J	GG	Flat	CWS	P	-	-
17-2	W	J	G	Flat	CWS	CM	-	-
18-1	W?	I	G	Round	Stick	-	-	-
19-1	W	J	G	Flat	Stick	CM	-	-
22-1	W	J	G	Round	-	P	-	-
22-2	W	J	S	Flat	-	CM	-	-

Table A.2 (cont.).

Vessel Number	**Type**	**Form**	**Temper**	**Rim Shape**	**Lip Modification**	**Exterior Surface Treatment**	**Decoration**	**Node Below Rim (cm)**
22-3	W	J	S	Flat	-	CM	-	-
22-4	Ind	I	G	Flat	-	CM	-	-
23-1	W	J	G	Flat	Stick	CM	-	-
24-1	W	J	G	F/IB	-	Single Cord	-	-
24-2	MP	J	G	Round	-	P	Punctates	-
27-1	W	J	S	Round	-	CM	-	-
27-2	W?	J?	G	Flat	-	P	Incisions	-
27-3	LL	J	G	Flat	Stick	Net-Impressed	-	-
27-4	MP	I	GG	Round	-	Brushed	-	-
27-5	W	J?	G	Flat	CWS	P	-	-
28-1	MW-LW	J	G	Round	Channeled	P	-	-
28-2	W	I	G	Flat	Stick	CM	-	-
28-3	Ind	I	G	Round	-	-	-	-
28-4	Ind	I	G	Flat	-	P	-	-
28-5	W	J	S	Flat	CWS	CM	-	-
28-6	MP	I	-	Round	-	P	-	-
30-1	Ind	I	I	Flat	Stick	-	-	-
30-2	W?	J	G	Flat	Stick	P	Incisions	-
30-3	W	I	G	Flat	-	CM	-	-
30-4	W	J	G	Flat	Channeled	SCM	-	-
30-5	W	J	G	Flat	CWS	CM	-	-
30-6	W?	I	G	Flat	Stick	P	-	-
30-7	W	J	G	Round	-	SCM	-	-
30-8	W	J	G	Flat	-	CM	-	-
30-9	W	J	G	Flat	-	P	-	-

Table A.2 (cont.).

Vessel Number	Type	Form	Temper	Rim Shape	Lip Modification	Exterior Surface Treatment	Decoration	Node Below Rim (cm)
30-10	W	J	G	Flat	-	SCM	-	-
31-1	W	I	G	Flat	Notched	P	-	-
32-1	W	J	G	Flat	-	P	-	-
32-2	SB	J	G	Flat	-	FI	-	-
33-1	MW-LW	J	G	Flat	-	CM/SCM	Node	28.17
33-2	W	I	G	Ind	-	CM	-	-
40-1	W	J	G	Flat	CWS	CM	-	-
41-1	W	J	G	Flat	-	SCM	-	-
41-2	W?	J	G	EB	Stick	-	-	-
41-3	W	I	G	Flat	-	P	-	-
43-1	MW-LW	J	G	IB	CM	CM	-	-
44-1	MW-LW	B	G	Round	Stick	P	-	-
44-2	MW-LW	J	G	Flat	Notched	CM	-	-
45-1	W	J	G	Round	Stick	CM	-	-
46-1	W	J	G	Flat	-	CM	-	-
46-2	W?	B	S	Round	-	CM	-	-
46-3	W	J	G	Flat	-	CM	Notches	-
47-1	W	J?	S	Flat	CWS	-	-	-
47-2	W	J	G	Flat	CWS	CM	-	-
48-1	W?	I	G	Flat	-	CM	-	-
48-2	PP	PP	-	Round	-	P	-	-
48-3	W	I	G	Flat	Stick	CM	-	-
48-4	Ind	I	G	Flat	CWS	CM	-	-

Table A.2 (cont.).

Vessel Number	Type	Form	Temper	Rim Shape	Lip Modification	Exterior Surface Treatment	Decoration	Node Below Rim (cm)
48-5	MP	B	-	Round	-	-	-	-
49-1	W	J	G	Flat	Stick	P	-	-
49-2	W	J	G	Flat	Stick	P	-	-
49-3	W	J	G	Flat	Stick	CM	Node	8.22
51-1	W	J	G	Flat	-	CM	-	-
51-2	W?	I	G	Flat	-	SCM	-	-
52-1	W	J	G	Flat	Stick	P	Node	-
53-1	W	J	G	Round	CM	CM	-	-
55-1	W	J	G	Flat	-	CM	-	-
55-2	W	J	G	Round	-	CM	-	-
59-1	W	J?	G	Flat	CM	CM	-	-
60-1	MP	MP	-	Round	-	-	-	-
60-2	W?	I	S	Flat	Dowel	-	-	-
61-1	W	J	G	Flat	Channeled	CM	-	-
63-1	Ind	I	G	F/EB	Stick	P	-	-
64-1	W	B	G	IB	-	CM	-	-
64-2	MW-LW	J	G	Flat	Dowel	Single Cord	Node, Notches	9.28
65-1	W	J	G	Flat	Stick	CM	-	-
65-2	W	B	G	Round	-	CM	-	-
66-1	Ind	I	G	Round	-	P	-	-
PM40-1	W?	J	G	Flat	Dowel	P	-	-
900-1	W	J	G	Flat	-	CM	-	-
900-2	W	I	G	Round	Stick	CM	-	-
900-3	W	J	G	EB	-	CM	-	-
900-4	W	J	GG	Round	-	CM	-	-

Table A.2 (cont.).

Vessel Number	**Type**	**Form**	**Temper**	**Rim Shape**	**Lip Modification**	**Exterior Surface Treatment**	**Decoration**	**Node Below Rim (cm)**
900-5	W	J	G	Round	-	P	-	-

APPENDIX B: LITHIC ARTIFACT DATA

Table B.1a: Carter Creek Lithic Data by Feature and Production Stage.

Feature #	Stage 1 Artifacts	Stage 1 Weight	Stage 2 Artifacts	Stage 2 Weight	Stage 3 Artifacts	Stage 3 Weight	Stage 4 Artifacts	Stage 4 Weight	Misc. Chert
14	3	26.22	1	5.3	3	6.7	6	1.58	0
15	1	2.08	0	0	1	1.67	1	0.08	0
16	6	26.25	1	22.14	0	0	11	3.1	5
17	1	1.62	0	0	3	2.97	5	2.59	0
18	6	13.83	0	0	1	0.48	4	1.27	0
19	3	2.63	0	0	1	6.65	1	0.03	0
20	3	5.16	0	0	0	0	0	0	0
21	3	45.17	0	0	0	0	4	1.11	1
22	5	101.52	0	0	2	9.65	8	1.94	3
23	4	10.56	0	0	0	0	8	1.5	1
24	7	196.79	0	0	0	0	1	0.08	0
25	2	8.46	0	0	0	0	0	0	0
26	2	12.66	0	0	1	1.64	2	0.28	3
27	11	83.91	0	0	1	3	18	2.69	17
28	7	24.31	2	49.45	0	0	4	0.7	6
29	0	0	0	0	0	0	6	1.87	0
30	11	55.03	0	0	0	0	13	2.94	14
31	2	1.2	0	0	0	0	4	0.24	2
32	5	118.2	0	0	0	0	1	0.06	0
33	3	11.52	0	0	1	2.49	2	0.54	5
34	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	2	0.09	1
37	4	30.63	1	5.87	0	0	4	1.33	1
38	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
40	6	56.54	0	0	1	1.86	6	3.21	0

Table B.1a (cont.)

Feature #	Stage 1 Artifacts	Stage 1 Weight	Stage 2 Artifacts	Stage 2 Weight	Stage 3 Artifacts	Stage 3 Weight	Stage 4 Artifacts	Stage 4 Weight	Misc. Chert
41	3	12.12	0	0	2	1.49	10	3.8	0
42	0	0	0	0	0	0	0	0	0
43	0	0	1	19.55	0	0	3	0.87	0
44	1	2.06	0	0	0	0	0	0	1
45	5	4.09	0	0	0	0	3	0.52	3
46	5	6.48	0	0	0	0	8	5.25	4
47	8	10.81	1	33.88	0	0	4	0.84	1
48	7	24.84	0	0	0	0	6	5.1	0
49	6	156.43	0	0	2	2.24	14	3.81	6
50	3	6.6	0	0	0	0	0	0	3
51	4	101.9	0	0	0	0	3	0.86	4
52	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	3	1.09	1
54	1	4.86	0	0	0	0	1	0.32	3
55	4	15.3	0	0	1	1.19	3	1.2	6
56	0	0	0	0	0	0	0	0	0
57	1	45.01	0	0	0	0	2	1.23	0
58	2	33	0	0	0	0	3	1.01	1
59	2	1.12	0	0	0	0	0	0	2
60	5	73.81	1	1.54	2	16.51	6	1.08	3
61	2	1.27	0	0	3	7.7	6	0.88	1
62	18	211.62	0	0	1	1.35	8	1.65	8
63	4	15.13	0	0	2	7.72	15	2.04	0
64	2	6.14	0	0	0	0	1	1.35	0
65	8	26.04	0	0	1	4.58	2	0.24	1
66	2	15.61	0	0	1	4.14	0	0	0
PM10-1	0	0	0	0	0	0	0	0	2

Table B.1a (cont.).

Feature #	**Stage 1 Artifacts**	**Stage 1 Weight**	**Stage 2 Artifacts**	**Stage 2 Weight**	**Stage 3 Artifacts**	**Stage 3 Weight**	**Stage 4 Artifacts**	**Stage 4 Weight**	**Misc. Chert**
PM11	0	0	0	0	0	0	0	0	0
PM12-1	2	2.56	0	0	0	0	2	0.37	1
PM13	0	0	0	0	0	0	0	0	0
PM20-1	0	0	0	0	0	0	0	0	0
PM23	1	0.21	0	0	0	0	0	0	0
PM24-1	0	0	0	0	0	0	0	0	0
PM26	0	0	0	0	0	0	0	0	0
PM27	1	1.42	0	0	0	0	0	0	0
PM29-1	0	0	0	0	0	0	0	0	0
PM33-1	0	0	0	0	0	0	0	0	0
PM35-1	0	0	0	0	0	0	0	0	0
PM38-1	0	0	0	0	0	0	0	0	0
PM39-1	1	23.1	0	0	0	0	0	0	0
PM40	1	0.75	0	0	1	4.77	0	0	0
PM41	0	0	0	0	0	0	0	0	0
ST1	0	0	0	0	0	0	1	0.36	0
ST2	0	0	0	0	0	0	2	0.25	0
ST3	2	6.35	0	0	0	0	0	0	0
ST4-1	4	19.11	0	0	0	0	1	1.16	2
ST5-1	1	14	0	0	1	2.34	1	0.69	0
700s	0	0	0	0	1	2.11	1	0.82	3
900 EB1	39	936.7	6	369.93	5	11.98	7	6.31	7
900 EB2	7	250.9	0	0	2	6.86	1	0.22	0

Table B.1b: Carter Creek Lithic Data by Feature and Production Stage.

Feature #	Misc Weight	Chert Tool Weight	Other Rough	Other Rough Weight	Debris Weight	Non-Chert Tools	Non-C Tool Weight
14	0	1.31	4	344.63	9.29	0	0
15	0	0	0	0	10.29	0	0
16	513.02	0.44	2	20.11	59.87	2	654.92
17	0	0	3	278.91	5.88	0	0
18	0	0	23	554.1	151.04	0	0
19	0	0	10	288.53	55.39	0	0
20	0	0	6	142.49	0	0	0
21	0.32	0	5	360.59	16.04	2	566.05
22	53.38	3.39	12	372.26	63.09	0	0
23	9.51	32.64	4	616.7	46.72	1	265.47
24	0	3.45	0	0	54.85	2	305.16
25	0	0	0	0	2.68	0	0
26	2.83	0	3	34.39	93.62	0	0
27	54.23	7.25	5	431.13	139.32	0	0
28	12.57	6.7	3	243.66	70.01	1	43.72
29	0	0	1	7.04	24.27	0	0
30	20.24	2.28	4	251.3	115.59	0	0
31	128.5	0	2	68.86	40.45	0	0
32	0	0	4	452.44	28.21	1	323.47
33	9.22	0	2	19.06	55.49	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0.98	0	1	13.79	28.28	0	0
37	12.67	0	0	0	48.73	0	0
38	0	0	0	0	0	0	0
39	0	0	1	129.45	0	0	0
40	0	0	4	41.14	25.88	1	276.28

Table B.1b (cont.).

Feature #	Misc Weight	Chert Tool Weight	Other Rough	Other Rough Weight	Debris Weight	Non-Chert Tools	Non-C Tool Weight
41	0	3.01	3	53.79	108.27	1	234.26
42	0	0	1	138.25	0.33	0	0
43	0	0	2	345.16	24.78	0	0
44	0.47	0	0	0	6.85	0	0
45	1.3	0.54	2	47.23	69.71	1	334.87
46	1.82	0	4	272.29	99.32	0	0
47	49.73	0	0	0	78.42	0	0
48	0	0	2	31.3	42.85	0	0
49	5.93	0	11	1049.13	213.64	0	0
50	2.7	0	0	0	27.34	0	0
51	3.31	0	0	0	37.38	0	0
52	0	0	0	0	0	0	0
53	1.66	0	2	37.85	6.06	0	0
54	17.04	18.99	4	157.07	7.24	0	0
55	10.94	0	13	505.55	13.05	0	0
56	0	0	1	4.35	3.41	0	0
57	0	0	5	203.28	0	0	0
58	45.18	36.89	2	10.83	50.9	0	0
59	0.89	3.4	2	98.12	152.18	0	0
60	0.82	0	14	543.44	171.34	0	0
61	0.39	0	0	0	23.24	0	0
62	38.64	44.35	1	5.24	155.15	0	0
63	0	0	0	0	61.84	0	0
64	0	10.14	2	43.88	5.05	0	0
65	2.51	87.13	43	1070.1	76.21	1	115.83
66	0	6.7	3	224.23	0	0	0
PM10-1	1.63	0	1	6.22	0	0	0

Table B.1b (cont.).

Feature #	**Misc Weight**	**Chert Tool Weight**	**Other Rough**	**Other Rough Weight**	**Debris Weight**	**Non-Chert Tools**	**Non-C Tool Weight**
PM11	0	5.95	0	0	0	0	0
PM12-1	0.25	0	1	8.62	0.87	0	0
PM13	0	3.03	0	0	0	0	0
PM20-1	0	0	0	0	0	0	0
PM23	0	0	0	0	0	0	0
PM24-1	0	0	0	0	0	0	0
PM26	0	0	0	0	0	0	0
PM27	0	0	0	0	0.24	0	0
PM29-1	0	26.01	0	0	0	0	0
PM33-1	0	0	0	0	0	0	0
PM35-1	0	0	0	0	0	0	0
PM38-1	0	0	0	0	0	0	0
PM39-1	0	0	0	0	0	0	0
PM40	0	0	0	0	0	1	326.52
PM41	0	0	0	0	0	0	0
ST1	0	0	0	0	0	0	0
ST2	0	0	0	0	0	0	0
ST3	0	15.04	0	0	0	0	0
ST4-1	10.89	0	20	1101.28	0	0	0
ST5-1	0	0	1	319.02	0	0	0
700s	3.34	0	4	76.56	26.62	0	0
900 EB1	64.32	76.24	131	10942.5	0	2	360.98
900 EB2	0	14.72	2	1016.33	0	2	721.61

Table B.1c: Carter Creek Lithic Data by Feature and Production Stage.

Feature #	Burned Limestone/FCR	Burned Limestone/FCR Weight	Other Lithic Objects	Other Weight
14	24	758.43	0	0
15	22	574.22	0	0
16	91	9691.54	0	0
17	36	3592.04	0	0
18	76	2605.84	0	0
19	36	1719.13	0	0
20	35	1066.98	0	0
21	44	1584.3	0	0
22	76	2118.78	1	1.01
23	41	1761.57	0	0
24	114	4696.51	0	0
25	10	754.65	0	0
26	112	3794.91	0	0
27	148	6809.55	0	0
28	52	1802.32	0	0
29	14	662.9	0	0
30	48	1840.25	0	0
31	49	1928.03	0	0
32	51	3299.73	0	0
33	21	1115.36	0	0
34	0	0	0	0
35	9	296.66	0	0
36	27	725.68	0	0
37	39	1653.27	0	0
38	1	12.67	0	0
39	7	457.18	0	0
40	66	2676.6	0	0

Table B.1c (cont.).

Feature #	Burned Limestone/FCR	Burned Limestone/FCR Weight	Other Lithic Objects	Other Weight
41	73	3032	0	0
42	1	24.51	0	0
43	31	880.63	0	0
44	10	234.88	0	0
45	38	1421.34	0	0
46	59	2317.83	0	0
47	70	2815.96	0	0
48	31	660.71	0	0
49	124	5730.51	0	0
50	36	26.19.75	0	0
51	32	1304.19	0	0
52	5	132.99	0	0
53	26	1179.84	0	0
54	20	483.72	0	0
55	63	1787.22	0	0
56	6	437.31	0	0
57	26	1052.39	0	0
58	37	1954.32	0	0
59	96	2848.85	0	0
60	48	2627.03	0	0
61	18	1035.33	0	0
62	101	3166.7	0	0
63	29	1118.11	0	0
64	18	261.03	0	0
65	85	2414.03	0	0
66	43	1441.9	0	0
PM10-1	0	0	0	0

Table B.1c (cont.).

Feature #	Burned Limestone/FCR	Burned Limestone/FCR Weight	Other Lithic Objects	Other Weight
PM11	1	14.96	0	0
PM12-1	0	0	0	0
PM13	0	0	0	0
PM20-1	0	0	0	0
PM23	3	18.65	0	0
PM24-1	0	0	0	0
PM26	4	199.97	0	0
PM27	0	0	0	0
PM29-1	2	93.9	0	0
PM33-1	1	4.62	0	0
PM35-1	0	0	0	0
PM38-1	0	0	0	0
PM39-1	3	131.9	0	0
PM40	1	8.7	0	0
PM41	2	48.47	0	0
ST1	0	0	0	0
ST2	2	35.07	0	0
ST3	10	426.58	0	0
ST4-1	30	1026	0	0
ST5-1	8	464.24	0	0
700s	28	750.97	0	0
900 EB1	460	27071.3	0	0
900 EB2	12	6108.79	0	0

Table B.2: Carter Creek Selected PPK Data. BK- Burlington/Keokuk, FG- Gern Glen, MC- Mill Creek, CH?- Crescent Hills?, SG- St. Genevieve, CD- Cobden Dongola. MB- Artifacts from Mike Black's Collection.

Feature	**PPK Type**	**Chert Type**	**Reworking**	**Usewear**
24	Steuben	BK	N	-
27	Snyder's	BK	Y	Cutting
28	Ind	BK	Y	Cutting
30	Ind	BK	Y	-
41	Ind	BK	N	-
58	Contracting Stem	BK	Y	-
59	Ind	BK	Y	Cutting
62	Ind	BK	N	-
62	Steuben	BK	N	Cutting/Smashed Tip
64	Ind	BK	N	-
EB1, plowzone	Ind	BK	N	-
EB1, plowzone	Steuben	BK	N	-
EB1, plowzone	Ind	BK	Y	Cutting
EB1, MSS	Ind	CD	N	-
EB1, subsoil	Ind	BK	Y	Cutting
EB1, PP4501	Steuben	BK	Y	Cutting
PP4001	Ind	BK	Y	-
MB2	Ind	BK	N	-
MB8	Ansell/Mund	BK	Y	Cutting
MB9	Ind	BK	Y	Cutting
MB16	Ind	BK	Y	Cutting/Scraping
MB17	Ind	BK	Y	Cutting
MB18	Ind	BK	Y	Cutting
MB19	Ind	BK	N	Cutting
MB20	Ind	BK	N	Smashed edges
MB21	Ind	BK	Y	Cutting
MB22	Ind	BK	N	Smashed edges
MB24	Ind	CD	N	-
MB26	LW Type Ind	SG	N	Cutting
MB27	Ansell/Mund	BK	N	Cutting/Smashed Tip
MB28	Ind	FG	N	-
MB29	Snyder's	BK	N	-
MB30	Ind	BK	N	Cutting

Table B.2 (cont.).

Feature	PPK Type	Chert Type	Reworking	Usewear
MB31	Ind	BK	N	-
MB32	MW-LW	BK	Y	Cutting
MB33	Ind, Stemless	BK	Y	Cutting/Smashed Tip
MB34	Snyder's	BK	Y	Smashed edges
MB35	Ansell/Mund	BK	N	Cutting
MB39	Steuben	BK	N	-
MB40	Steuben	BK	N	-
MB41	Steuben	BK	N	Cutting
MB42	Steuben	BK	Y	Cutting
MB43	Steuben	BK	N	-
MB44	Ind	FG	N	-
MB45	Ind	BK	N	-
MB46	Steuben	FG	N	-
MB47	Steuben	BK	Y	Cutting
MB48	Snyder's	BK	N	-
MB49	Contracting Stem	BK	Y	Cutting
MB50	Steuben	FG	N	Cutting
MB51	Steuben	BK	Y	Cutting
MB52	Ansell/Mund	BK	N	-
MB53	Ind	BK	Y	Cutting
MB54	Snyder's	BK	Y	Cutting
MB55	Snyder's	BK	Y	-
MB56	Steuben	CH?	N	Cutting
MB57	Steuben	BK	N	-
MB58	Steuben	BK	N	Smashed edges
MB59	Snyder's	CH?	Y	Cutting
MB60	Steuben	BK	N	-
MB61	Steuben	BK	N	Smashed edges
MB62	Ind	BK	N	Smashed edges
MB63	Ind	BK	N	-
MB64	Snyder's	CD	Y	Cutting/Smashed Tip
MB65	Ind	BK	Y	Cutting
MB66	Steuben	BK	N	-
MB67	Steuben	BK	Y	Cutting
MB68	Ind	CH?	N	Cutting
MB69	Snyder's	MC	N	Smashed edges

Table B.2 (cont.).

Feature	**PPK Type**	**Chert Type**	**Reworking**	**Usewear**
MB70	Contracting Stem	BK	N	Cutting
MB71	Ind	BK	N	-
MB77	Ind	BK	Y	Smashed edges
MB78	Snyder's	BK	Y	Cutting
MB81	Snyder's	BK	Y	Scraping
MB84	Ind	BK	N	-
MB85	Snyder's	FG	N	-
MB86	Ind	BK	N	-
MB87	Contracting Stem	BK	N	-
MB88	Ind	BK	N	-

Table B.3: Carter Creek Selected Lithic Tool Data, excluding PPK. BK- Burlington/Keokuk, FG- Gern Glen, MC- Mill Creek, CH?- Crescent Hills?, SG- St. Genevieve, CD- Cobden Dongola. UF- Utilized Flake, UB- Utilized Blade. MB- Artifacts from Mike Black's Collection.

Feature	**Tool Type**	**Chert/Rock Type**	**Reworking**	**Usewear**	**Heat Treated?**
14	Biface Frag	BK	Y	Cutting	Y
16	UB	BK	Y	Cutting	N
22	UF	BK	N	Cutting	Y
22	Pipe Lip Frag	Ind	N	-	N
23	Gouge	MC	N	Cutting/Smashed Edge	N
28	UF	MC	N	Cutting	N
45	UF	BK	N	Cutting	Y
46	UF/Scraper	BK	Y	Cutting/Scraping	Y
54	Scraper	BK	N	Scraping	N
58	Scraper	BK	Y	Scraping	N
62	UF	BK	Y	Cutting	N
62	UF	BK	N	Cutting	Y
64	UF	BK	N	Cutting	Y
65	Biface Frag	BK	Y	Cutting	Y
65	Scraper	BK	N	Scraping	N
65	UF	BK	N	Cutting	N
65	UF	CH?	N	Cutting	N
65	Scraper	BK	N	Scraping	N
66	UF	BK	N	Cutting	N
PM11	UF	BK	N	Cutting	N
PM13	UF	BK	N	Cutting	N
PM29	UF	SG	N	Cutting	N
ST3	Scraper	BK	Y	Scraping	N
EB1, plowzone	Scraper	BK	N	Scraping	N
EB1, plowzone	UB	BK	N	Cutting	N
EB1, plowzone	UF	BK	N	Cutting/Scraping	N
EB1, plowzone	UF	CH?	N	Cutting	Y
EB1, plowzone	UB	BK	N	Cutting	Y
EB1, plowzone	Scraper	BK	N	Scraping	Y
EB1, plowzone	UB	BK	N	Cutting	Y
EB2, backdirt	Scraper	BK	Y	Scraping	N

Table B.3 (cont.).

Feature	**Tool Type**	**Chert/Rock Type**	**Reworking**	**Usewear**	**Heat Treated?**
EB2, backdirt	Biface Frag	BK	N	-	Y
EB2, backdirt	Scraper	BK	Y	Scraping	N
MB1	Biface Frag	BK	Y	-	N
MB3	UF	MC	N	Cutting	Y
MB4	UB	FG	N	Cutting	N
MB5	Biface Frag	BK	N	-	N
MB6	Drill	BK	N	Drilling	Y
MB7	Gouge	FG	N	Smashed Edge	N
MB10	Scraper	BK	Y	Cutting/Scraping	Y
MB11	Scraper	BK	N	Cutting/Scraping	N
MB12	Scraper	BK	N	Scraping	Y
MB13	Scraper	BK	N	Scraping	N
MB14	Scraper	BK	N	Cutting/Scraping	N
MB15	Biface Frag	BK	Y	-	Y
MB23	Biface Frag	BK	N	-	N
MB25	Gouge	BK	N	Smashed Edge	N
MB36	Needle	Bone	N	Scraping	N
MB37	Scraper	BK	Y	Scraping	N
MB38	Scraper	CH?	N	Scraping	N
MB72	Scraper	CD	Y	Scraping	N
MB73	UB	Stl	Y	Cutting	N
MB74	Pendant/Gorget	Groundstone	N	-	N
MB75	UF	BK	Y	Cutting	N
MB76	UB	BK	Y	Cutting	N
MB79	Drill	CD	Y	Drilling	Y
MB80	Scraper	BK	Y	Scraping	N
MB82	Scraper	BK	N	Scraping	N
MB83	UF	BK	Y	Cutting	N
MB Pipe 1	Pipe Frag	Groundstone	-	-	N
MB Pipe 2	Pipe Platform	Groundstone	-	-	N

APPENDIX C: FEATURE DATA AND MUNSELL DESCRIPTIONS

Table C.1: Carter Creek Feature (pit) Data.

Feature #	**Plan Length**	**Plan Width**	**Max Depth**	**Profile Shape**	**Fill Zones**	**Pit Use/Function**	**Burning?**	**Ash?**	**Grease?**	**Slump?**
14	45	68	27	Basin	2	Cooking/Processing	Y	-	Y	-
15	68	65	11	Basin	1	Ind/Refuse	-	-	-	-
16	70	68	25	Basin	2	Cooking/Processing	Y	-	-	-
17	75	71	21	Basin	2	Cooking/Processing	Y	-	-	-
18	97	84	22	Basin	1	Cooking/Processing	Y	-	-	-
19	86	87	23	Basin	1	Cooking/Processing	Y	-	-	-
20	66	69	43	Cylinder	2	Storage/Refuse	Y	Y	Y	Y
21	65	55	33	Cylinder	2	Earth Oven/Storage	Y	Y	-	Y
22	69	63	47	Cylinder	3	Storage/Refuse	Y	Y	-	Y
23	73	73	43	Cylinder	2	Storage/Refuse	Y	Y	-	-
24	74	74	46	Cylinder	3	Storage/Refuse	Y	Y	-	-
25	61	49	18	Basin	1	Cooking/Processing	Y	-	Y	-
26	89	63	42	Cylinder	3	Earth Oven	Y	Y	Y	-
27	85	85	52	Cylinder	3	Earth Oven	Y	Y	-	-
28	96	88	20	Basin	1	Cooking/Processing	Y	-	-	-
29	67	68	17	Basin	1	Open-basin cooking	Y	-	Y	-
30	91	94	38	Basin	2	Open-basin cooking	Y	Y	-	Y
31	63	65	25	Basin	1	Cooking/Processing	Y	-	-	-
32	86	79	19	Basin	1	Cooking/Processing	Y	-	Y	-
33	86	79	18	Basin	1	Cooking/Processing	Y	-	-	-
35	52	48	10	Cylinder	1	Storage	Y	-	-	-
36	66	64	11	Basin	1	Cooking/Processing	Y	-	-	-
37	74	69	28	Basin	2	Cooking/Processing	Y	-	-	?
38	43	36	8	Cylinder	1	Storage	Y	-	-	-
39	47	45	9	Cylinder	1	Storage	Y	-	-	-
40	70	-	48	Cone	3	Jar Holder/Earth Oven	Y	Y	-	Y
41	121	124	34	Basin	1	Cooking/Processing	Y	-	-	-

Table C.1 (cont.).

Feature #	Plan Length	Plan Width	Max Depth	Profile Shape	Fill Zones	Pit Use/Function	Burning?	Ash?	Grease?	Slump?
42	30	30	11	Basin	1	Ind/Refuse	-	-	-	-
43	75	71	25	Basin	2	Cooking/Processing	Y	-	-	-
44	72	50	12	Basin	1	Ind/Refuse	Y	-	-	-
45	70	-	37	Cylinder	2	Earth Oven/Storage	Y	Y	Y	Y
46	114	107	20	Basin	1	Cooking/Processing	Y	-	-	Y
47	83	73	20	Basin	1	Cooking/Processing	Y	Y	-	-
48	66	64	23	Basin	1	Cooking/Processing	Y	-	-	-
49	94	87	39	Basin	2	Cooking/Processing	Y	-	-	-
50	60	57	23	Basin	2	Cooking/Processing	Y	Y	-	-
51	57	-	40	Cylinder	3	Storage/Refuse	Y	Y	-	-
52	52	39	12	Basin	1	Ind/Refuse	-	-	-	-
53	64	51	13	Basin	1	Cooking/Processing	-	-	-	-
54	58	49	33	Basin	1	Cooking/Processing	Y	Y	-	-
55	54	57	27	Basin	2	Cooking/Processing	Y	Y	-	-
57	52	52	21	Basin	2	Cooking/Processing	Y	-	Y	Y
58	97	81	21	Basin	2	Open-basin cooking	Y	-	Y	Y
59	76	62	20	Basin	1	Cooking/Processing	Y	-	-	-
60	91	70	22	Basin	2	Open-basin cooking	Y	Y	-	-
61	73	71	15	Basin	1	Cooking/Processing	Y	-	-	-
62	88	81	30	Basin	2	Open-basin cooking	Y	Y	-	-
63	72	55	21	Basin	2	Cooking/Processing	Y	Y	Y	-
64	79	57	22	Basin	1	Cooking/Processing	Y	Y	-	-
65	83	72	22	Basin	2	Open-basin cooking	Y	Y	-	-
66	58	59	16	Basin	1	Cooking/Processing	Y	-	-	-

Table C.2: Carter Creek Feature (postmold) Data.

Feature #	Plan Length	Plan Width	Max Depth	Fill Zones	Postmold Base Shape	Burning?	Ash?	Grease?	Slump?	Pulled?	Questionable?
PM10	25	24	31	1	Rounded	Y	-	-	Y	Y	-
PM11	14	-	29	1	Pointed	Y	-	-	-	-	-
PM12	24	22	17	1	Flat	-	-	-	-	-	-
PM13	30	27	27	2	Rounded	Y	Y	-	-	-	-
PM14	24	19	21	1	Rounded	Y	-	-	-	-	-
PM15	18	18	14	-	Ind	Y	-	-	-	-	-
PM16	32	29	20	1	Rounded	-	-	-	-	-	Y
PM17	27	25	19	1	Rounded	-	-	-	-	-	Y
PM18	13	-	30	2	Flat	-	-	-	-	-	-
PM19	14	13	32	1	Flat	-	-	-	-	-	-
PM20	21	19	20	1	Flat	Y	-	-	-	-	-
PM21	26	24	16	1	Flat	Y	-	-	-	Y	-
PM22	30	23	17	1	Rounded	Y	-	-	-	-	Y
PM23	29	25	24	1	Rounded	-	-	-	-	Y	Y
PM24	23	22	15	1	Pointed	Y	-	-	-	-	-
PM25	22	22	27	1	Flat	Y	-	-	-	Y	-
PM26	29	26	23	1	Flat	Y	-	-	-	-	-
PM27	29	29	58	2	Flat	Y	Y	-	-	Y	-
PM28	23	19	17	1	Rounded	-	-	-	-	-	Y
PM29	27	24	33	2	Pointed	Y	Y	-	-	Y	-
PM30	20	20	15	1	Pointed	-	-	-	-	-	-
PM31	17	15	18	1	Rounded	Y	-	-	-	-	-
PM32	16	15	9	1	Rounded	Y	-	-	-	-	-
PM33	24	18	24	1	Flat	-	-	-	-	-	-
PM34	22	22	30	1	Flat	-	-	-	-	-	-
PM35	18	18	12	1	Rounded	Y	-	-	-	-	-
PM36	18	17	14	1	Rounded	Y	-	-	-	-	-

Table C.2 (cont.).

Feature #	**Plan Length**	**Plan Width**	**Max Depth**	**Fill Zones**	**Postmold Base Shape**	**Burning?**	**Ash?**	**Grease?**	**Slump?**	**Pulled?**	**Questionable?**
PM37	13	13	-	1	Ind	-	-	-	-	-	-
PM38	30	24	9	1	Rounded	Y	-	-		-	-
PM39	28	21	45	2	Flat	Y	Y	-	-	Y	-
PM40	30	30	46	3	Flat	Y	-	-	-	Y	-
PM41	26	22	38	1	Flat	Y	-	-	-	Y	Y
PM42	35	34	27	1	Rounded	Y	-	-	-	Y	-

Table C.3: Carter Creek Feature, Shovel Test Pit, and Excavation Block Munsell Data.

Feature #	Munsell Descriptions
14	Zone A- 10YR 4/2, dark grayish brown, slightly greasy fine silt loam with light amounts of charcoal Zone B- 10YR 5/2, grayish brown, fine silt loam mottled with 10YR 5/3, borwn, silt loam
15	Zone A- 10YR 3/2, very dark grayish brown, slightly greasy silt
16	Zone A- 10YR 3/3, dark brown, very slightly clayey silt loam with light amounts of charcoal Zone B- 10YR 3/3, dark brown with mottles of 10YR 5/4 yellowish brown, clayey silt loam
17	Zone A- 10YR 4/3, brown, fine silt loam with mottles of 10YR 5/4, yellowish brown, some charcoal and burned earth present Zone B- 10YR 4/4, dark yellowish brown, silty clay loam with light mottles of 10YR 5/4 yellowish brown and some charcoal and burned earth
18	Zone A- 10YR 4/3, brown, fine silt with mottles of 10YR 5/4 yellowish brown
19	Zone A- 10YR 3/3, dark brown, silty clay loam
20	Zone A- 10YR 3/2, very dark grayish brown, greasy silt loam Zone A1- 10YR 3/2 very drak grayish brown, ashy silt (washed in?) Slump- 10YR 4/3, brown, silty clay loam
21	Zone A- 10YR3/2, very dark grayish brown, silty clay loam Zone B- 10YR 3/2, very dark grayish brown, ashy silt Slump- 10YR 4/3, brown, silty clay loam
22	Zone A- 10YR 3/1, very dark gray, slightly clayey silt loam with lots of charcoal and burned earth Zone B- 10YR 5/2, grayish brown mottled with 10YR 3/1, very dark gray, wet ashy silt loam with lots of carcoal and burned earth Zone C- 10YR 3/1, very dark gray, very wet, slightly clayey ashy silt loam with heavy amounts of charcoal and burned earth
23	Zone A- 10YR 4/2, dark grayish brown, silty loam Zone B- 10YR 3/2, very dark grayish brown, ashy silt with heavy amounts of charcoal, burned clay and some burned bone
24	Zone A- 10YR 3/3, dark brown, silt loam Zone B- 10YR 4/2, dark grayish brown, very ashy silt with heavy amounts of charcoal and burned bones Zone B1- 10YR 2/2, very dark brown, very ashy silt
25	Zone A- 10YR 2/2, very dark brown, greasy silt with small amount of charcoal flecks

Table C.3 (cont.).

Feature #	Munsell Descriptions
26	Zone A- 10YR 2/2, very dark brown, ashy silt loam with some clay and lots of burned earth Zone A1- 10 YR 3/2, very dark grayish brown, slightly clayey silt loam with some subsoil mottles Zone B- 10YR 3/1, very dark gray, wet ashy silt loam with lots of charcoal flecks
27	Zone A- 10YR 2/1 to 2/2, black to very dark brown, clayey silt loam with minimal charcoal Zone B- 10YR 3/1, very dark gray, silty clay loam with minimal ash Zone C- 10YR 3/2, very dark grayish brown, silty ash with lighter colored pockets of 10YR 4/1, dark gray, ash with common charcoal flecking
28	Zone A- 10YR 3/3, dark borwn, slightly clayey silt loam
29	Zone A- 10YR 2/2, very dark brown with some subsoil mottles and light amounts of charcoal and burned bone, greasy clayey silt loam
30	Zone A- 10YR 3/1, very dark gray, slightly clayey silt loam with mottles of 10YR 4/1, dark gray Zone B- 10YR 3/2, very dark grayish brown, ashy silt loam with light amounts of charcoal and burned earth Slump- 10YR 4/2, dark graysih brown, slightly clayey silt loam
31	Zone A- 10YR 2/2, very dark brown, greasy slightly clayey silt loam with miniml charcoal and burned earth
32	Zone A- 10YR 3/2, very dark grayish brown, slightly clayey, greasy silt loam with moderate amounts of charcoal and burned earth
33	Zone A- 10YR 3/2, very dark grayish brown, friable silt loam lightly mottled with 10YR 5/4 yellowish brown
35	Zone A- 10YR 4/3, brown, silty clay loam
36	Zone A- 10YR 3/2, very dark grayish brown, friable silt loam mottled with 10YR 5/4 yellowish brown, with small flecks of charcoal
37	Zone A- 10YR 3/3, dark brown, friable silt loam with heavy amounts of snimal bone and some mussel shell Zone B- 10YR 3/3, dark brown, friable silt loam lightly mottled with 10YR 5/4 yellowish brown, charcoal flecks, and bone Slump- 10YR 5/4 yellowish borwn mottled with 10YR 3/3 dark brown, silt loam.
38	Zone A- 10YR 4/2, dark grayish brown, silt loam highly mottled with 10YR 5/3 brown.
39	Zone A- 10YR 3/1, very dark gray, friable silt loam mottled with 10YR 5/4 yellowish brown.
40	Zone A- 10YR 4/2, dark grayish brown, silty loam Zone B- 10YR 3/2, very dark grayish borwn, ashy silt loam Zone C- 10YR 3/3, dark brown, ashy silt

Table C.3 (cont.).

Feature #	Munsell Descriptions
41	Zone A- 10YR 4/2, dark grayish brown, silt loam
42	Zone A- 10YR 4/3, brown, silty loam with mottles of 10YR 5/4, yellowish brown
43	Zone A- 10YR 4/2, dark grayish brown, slightly gummy silt loam with some burned earth and charcoal Zone B- 10YR 4/2, dark grayish brown, clayey silt loam mottled with 10YR 5/4, yellowish brown.
44	Zone A- 10YR 3/2, very dark grayish brown, silt loam with mottles of 10YR 5/4, yelowish brown
45	Zone A- 10YR 3/1, very dark gray, silty clay loam Zone B- 10YR 2/2, very dark brown, greasy silt loam with some ash Slump- 10YR 3/1 mixed with 10YR 4/3, clay loam
46	Zone A- 10YR 3/2-2/2, very dark grayish borwn to very dark brown, clayey silt loam with sporadic subsoil mottles
47	Zone A- 10YR 4/2, dark grayish brown. Gummy ashy silt loam with some burned earth and charcoal
48	Zone A- 10YR 3/1, very dark gray, clayey silt loam with some charcoal
49	Zone A- 10YR 3/1, very dark gray, silt loam with some ash Zone B- 10YR 3/1, very dark gray, gummy silt loam with mottles of 10YR 5/4, yellowish brown
50	Zone A- 10YR 2/2, black to very dark brown, clayeyr silt loam mottled with 10 YR 4/4 subsoil Zone B- 10YR 2/2, very dark borwn, ashy silt loam
51	Zone A- 10YR 2/2, very dark brown, slightly clayey silt loam Zone B- 10YR 3/2, very dark grayish brown, clayey silt loam Zone C- 10YR 2/2, very dark brown, ashy silt loam with some clay
52	Zone A- 10YR 4/3, brown with mottles of 10YR 4/6, dark yellowish brown, clay loam
53	Zone A- 10YR 3/2, very dark grayish brown, silty loam with some mottles of 10YR 4/4, dark yellowish brown
54	Zone A- 10YR 3/2, very dark grayish brown, silt loam with heavy amounts of charcoal
55	Zone A- 10YR 3/2, very drak grayish brown, ashy silt loam with some charcoal Zone B- 10YR 2/2, very dark brown, ashy silt loam with some charcoal
56	See PM42
57	Zone A- 10YR 4/2, dark grayish brown, wet silt loam with some charcoal Zone B- 10YR 4/2, dark grayish brown, greasy silt loam with some subsoil mottling Slump- 10YR 5/4 to 5/6, yellowish brown, silty clay loam

Table C.3 (cont.).

Feature #	**Munsell Descriptions**
58	Zone A- 10YR 3/3, dark brown, silt loam Zone B- 10YR 3/2, very dark grayish brown, slightly greasy silt loam Slump- 10YR 5/4 to 5/6, yellowish brown, silty clay loam
59	Zone A- 10YR 4/2, dark grayish brown, silt loam with common mottles of 10YR 5/4 to 5/6 yellowish brown
60	Zone A- 10YR 3/2, very dark grayish brown, very slightly clayey silt loam with some charcoal Zone B- 10YR 3/1, very dark gray, slightly ashy wet silt loam with some charcoal and burned earth
61	Zone A- 10YR 4/2, dark grayish brown, silt loam with mottles of 10YR 5/4 yellowish brown
62	Zone A- 10YR 2/2, very dark brown, silty clay loam Zone B- 10YR 3/2, very dark grayish brown, ashy silt
63	Zone A- 10YR 2/2, very dark brown, ashy silt loam with minimal clay Zone B- 10YR 3/3 to 3/2, dark brown to very dark grayish brown, greasy silt loam with ash
64	Zone A- 10YR 3/2, very dark grayish brown, ashy silt loam with some charcoal and burned clay, some mottles of 10YR 4/6 dark yellowish brown
65	Zone A- 10YR 3/2, very dark grayish brown, ashy silt loam Zone B- 10YR 3/2, very dark grayish brown with heavy deposits of charcoal, very ashy silt
66	Zone A- 10YR 3/3, dark brown, silty loam
PM10	Zone A- 10YR 3/2 very dark grayish brown, silty clay loam with dispersed charcoal mottling Slump- 10YR 3/3, dark brown, slightly silty clay loam
PM11	Zone A- 10YR 3/2, very dark grayish brown, minimal mottles of 10YR 4/6 dark yellowish brown with some charcoal, silt loam
PM12	Zone A- 10YR 4/2, dark grayish brown with mottles of 10YR 4/6 dark yellowish brown, silty clay
PM13	Zone A- 10YR 3/3, dark brown, ashy silt with minimal charcoal Zone B- 10YR 3/2, very drak grayish brown, ashy silt with more charcoal than A
PM14	Zone A- 10YR 5/2 grayish brown, silt loam with charcoal concentration at bottom of post
PM15	Zone A- 10YR 4/2, dark grayish brown, greasy silt loam with some charcoal and subsoil mottling
PM16	Zone A- 10YR 4/3, brown, silty clay mottled with 10YR 4/6 dark yellowish brown
PM17	Zone A- 10YR 4/3, brown, silty clay with some mottles of 10YR 4/6 dark yellowish brown
PM18	Zone A- 10YR 3/2, very dark grayish brown mottled with 10YR 4/4 dark yellowish brown, clayey silt loam Zone B- 10YR 4/2 dark grayish brown mottled with 10YR 4/3 brown, slightly silty clay

Table C.3 (cont.).

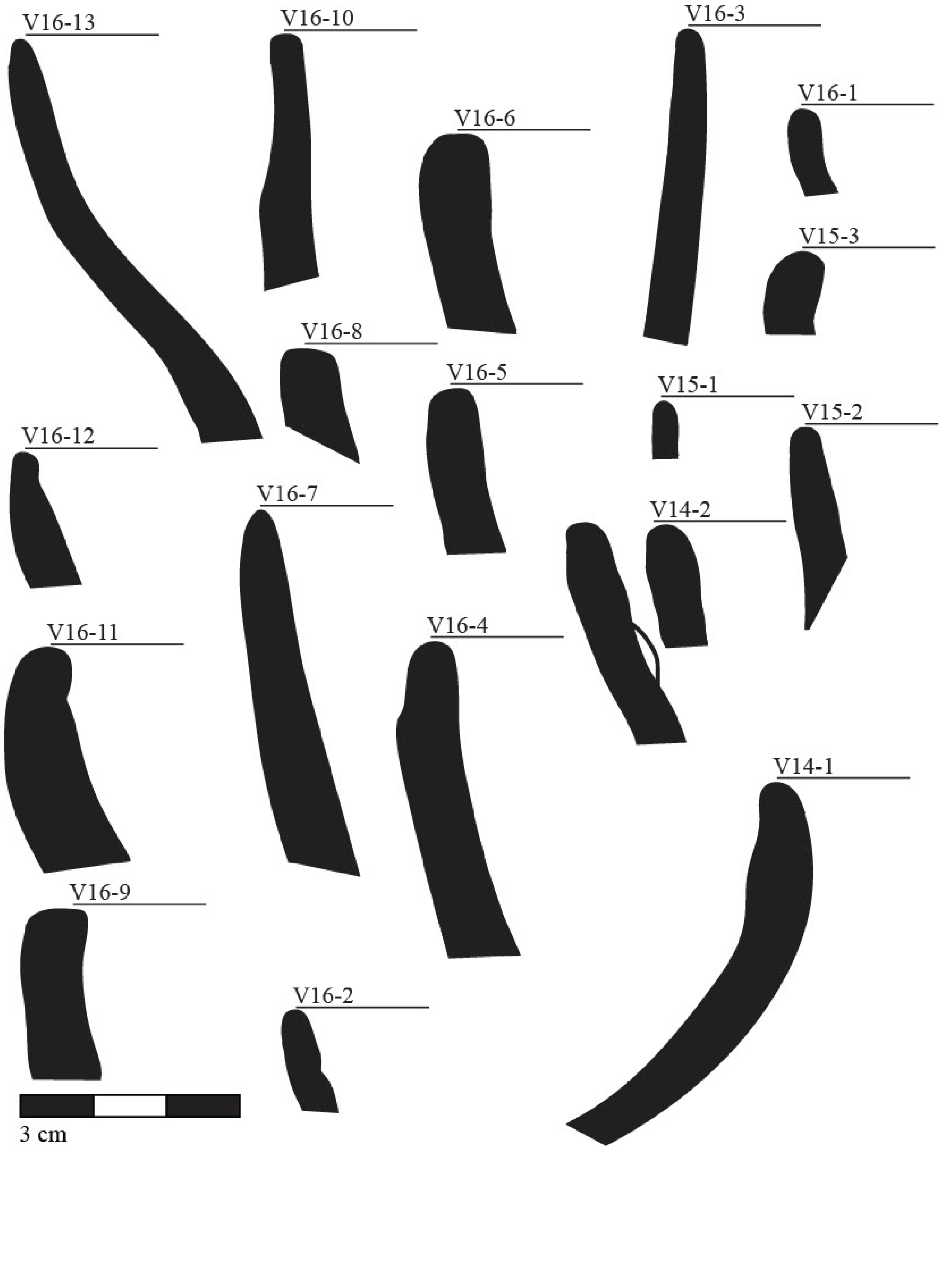
Feature #	**Munsell Descriptions**
PM19	Zone A- 10YR 4/2, dark grayish brown with mottles of 10YR 4/6 dark yellowish brown, silty clay
PM20	Zone A- 10YR 4/2, dark grayish brown, silty clay loam with some charcoal
PM21	Zone A- 10YR 3/2 to 3/3, very dark grayish brown to dark brown, silt loam with one burned soil mottle and few charcoal flecks
PM22	Zone A- 10YR 3/2 very dark grayish brown, silty clay loam with few charcoal flecks
PM23	Zone A- 10YR 5/4, yellowish brown, clayey silt loam
PM24	Zone A- 10YR 4/3, dark brown with mottles of 10YR 4/6 dark yellowish brown, silt clay
PM25	Zone A- 10YR 3/4, dark yellowish brown, silty clay loam with mottles of 10YR 4/6 dark yellowish brown and minimal burned charcoal and burned clay
PM26	Zone A- 10 YR 3/2, very dark grayish brown, silty clay loam with some charcoal and subsoil mottles
PM27	Zone A- 10YR 4/2, dark grayish brown, silt loam with some mottles of 10YR 5/4 yellowish brown Zone B- 10YR 4/2, dark grayish brown, ashy wet silt loam with some flecks of charcoal and mottles of 10YR 5/4 yellowish brown
PM28	Zone A- 10YR 3/3, dark brown, clayey silt loam with some subsoil mottles
PM29	Zone A- 10YR 4/2, dark grayish brown with mottles of 10YR 4/6 dark yellowish brown, silt loam Zone B- 10YR 4/2, dark grayish brown with mottles of 10YR 4/6 dark yellowish brown with charcoal, ashy silt loam
PM30	Zone A- 10YR 3/3, dark brown with mottles of 10YR 4/6 dark yellowish brown, silt loam
PM31	Zone A- 10YR 4/3, silt loam with mottles of 10YR 5/4 yellowish brown and some charcoal
PM32	Zone A- 10YR 4/2, dark grayish brown with mottles of 10YR 4/6 dark yellowish brown and some charcoal/burned earth
PM33	Zone A- 10YR 3/2, very drak grayish brown, slightly clayey silt loam
PM34	Zone A- 10YR 3/2, very dark grayish brown with mottles of 10YR 4/6 dark yellowish brown, silty clay
PM35	Zone A- 10YR 4/2, dark grayish brown, silt loam with heavy wood charcoal
PM36	Zone A- 10YR 3/2, very dark grayish brown with mottles of 10YR 4/6 dark yellowish brown, silty clay with heavy amounts of charcoal
PM37	Unexcavated
PM38	Zone A- 10YR 3/3 dark brown, silty clay loam with subsoil mottles
PM39	Zone A- 10YR 5/2, grayish brown, very wet silt loam with mottles of 10YR 5/4 yellowish brown, silty clay loam Zone B- 10YR 5/2, grayish brown, very wet ashy silt loam with wood charcoal flecking

Table C.3 (cont.).

Feature #	Munsell Descriptions
PM40	Zone A- 10YR 3/3, dark brown, sily loam Zone B- 10YR 4/3, brown with mottles of 10YR 4/6 dark yellowish brown, silty clay Zone C- 10YR 3/3, dark brown, silty clay with charoal, burned earth, and burned bone
PM41	Zone A- 10YR 3/2, very dark grayish brown, silty clay loam mottles with subsoil and charcoal
PM42	Zone A- 10YR 4/2, dark grayish brown, silt loam mottled with 10YR 3/2, very dark grayish brown
ST1	PZ- 10YR 4/2, silty loam B- 10YR 5/3, clay
ST2	PZ- 10YR 3/3, loam B- 10YR 5/3, clay
ST3	PZ/Midden- 10YR 3/2, loam B- 10YR 5/3, clay
ST4	Information Missing
ST5	PZ- 10YR 3/2, loam Midden- 10YR 3/2, clay loam B- 10YR 5/3, clay
EB1 (North Wall)	PZ- 10YR 3/2, very dark grayish brown, slightly clayey silt loam BE/Bt- 10YR 3/3, dark brown, slightly clay loam
EB 1 (SW Corner)	PZ- 10YR 2/2, very dark brown, slightly clayey silt loam Midden Remnant- 10YR 3/2, very dark grayish brown, silty clay loam mottles with 10YR 3/3 Subsoil- 10YR 4/4 dark yellowish brown, clay loam, Bt horizon
EB2 (West Wall)	PZ- 10YR 2/2, very drak brown, slightly to moderately clayey silt loam Subsoil- 10YR 3/4 tp 3/6, dark yellowish brown, slightly silty clay loam
EB2 (SE Corner)	PZ- 10YR 3/2 to 2/2, very dark grayish borwn to very dark brown, slightly clayey silt loam Subsoil- 10YR 4/4 to 3/4, dark yellowish brown, clay loam mottled with blobs of topsoil

APPENDIX D: RIM PROFILES

This appendix shows rim profiles for all vessels identified from 2020 excavations. In each profile the interior of the vessel is facing left. Each profile is labeled according to the feature from which the rim sherd(s) was found. For example, V16-13 is the thirteenth vessel identified during analysis from Feature 16. Any profile that is not filled in with black and that has dashed lines was drawn based on my best guess for what the profile would have looked like because the rim sherd was too fragmentary to provide a full profile. More information on each vessel can be found in Table A.2.


V16-13
V16-10
V16-3
V16-1
V16-6
V15-3
V16-8
V16-5
V15-1
V15-2
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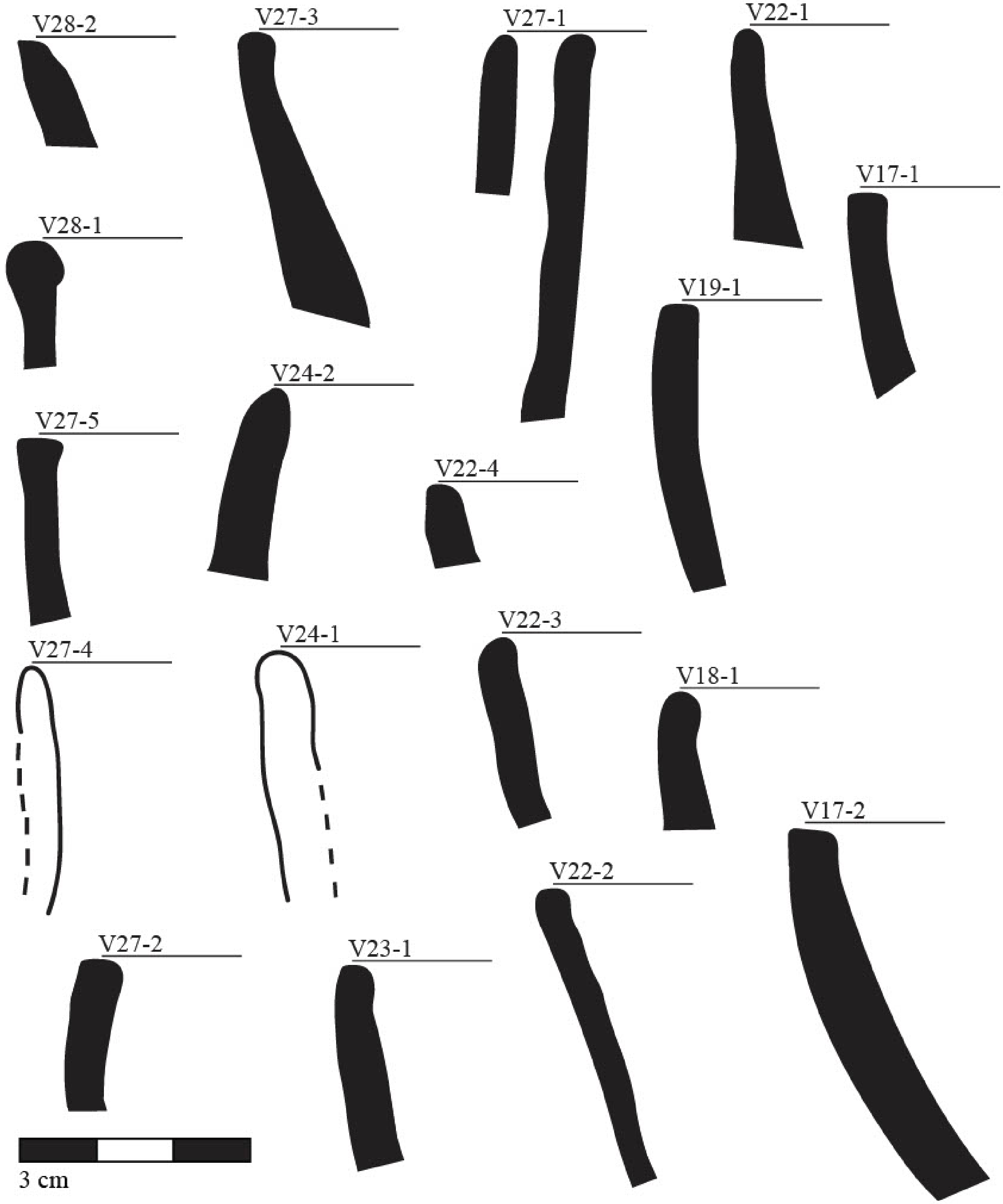
V16-7
V14-2
V16-11
V16-4
V14-1
V16-9
V16-2
3 cm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V27-3
V27-1
V22-1
V17-1
V28-1
V19-1
V24-2
V27-5
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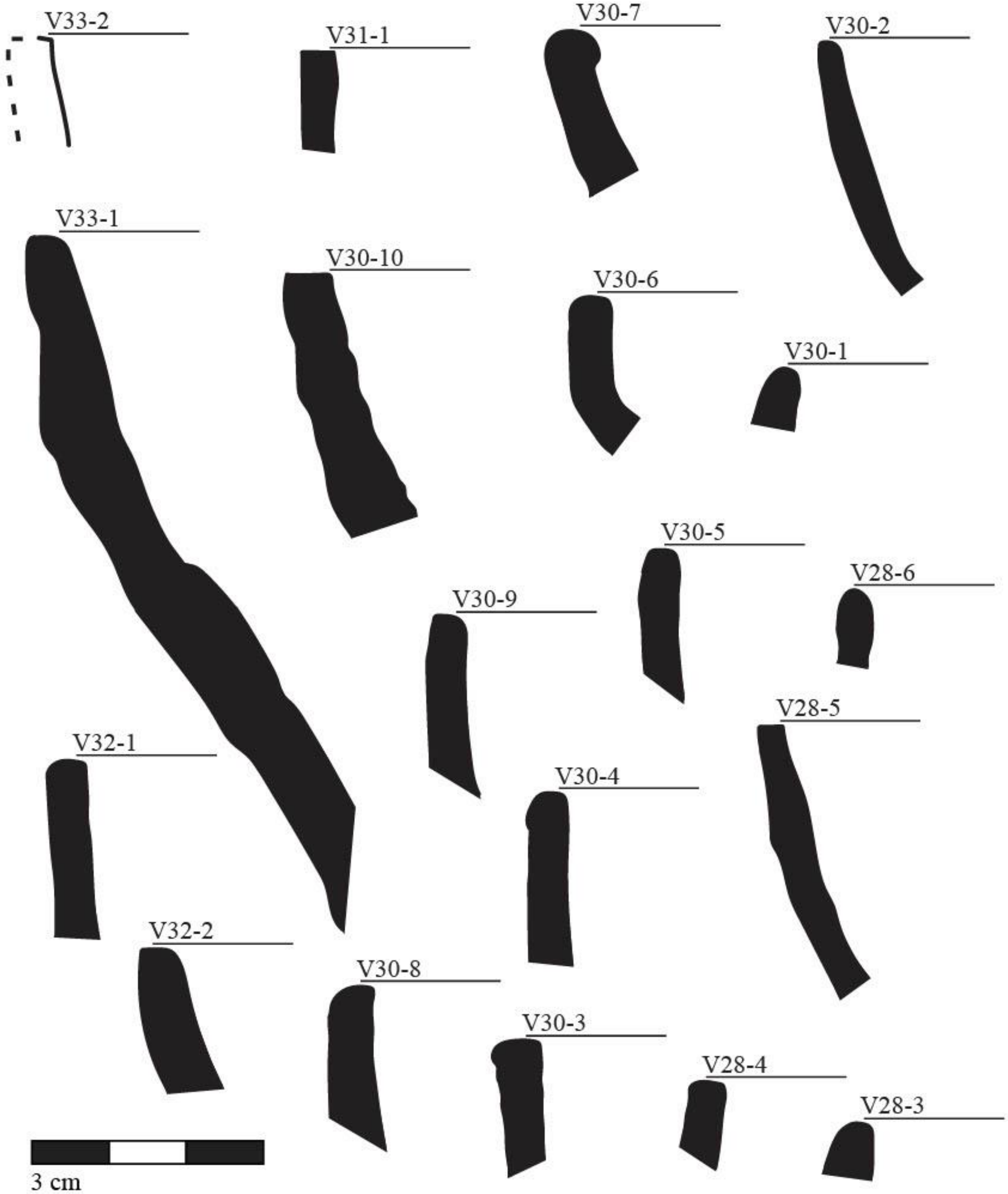
V22-2
V27-2
V23-1
3 cm


V33-2
V31-1
V30-7
V30-2
V33-1
V30-10
V30-6
V30-1
V30-5
V28-6
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V32-1
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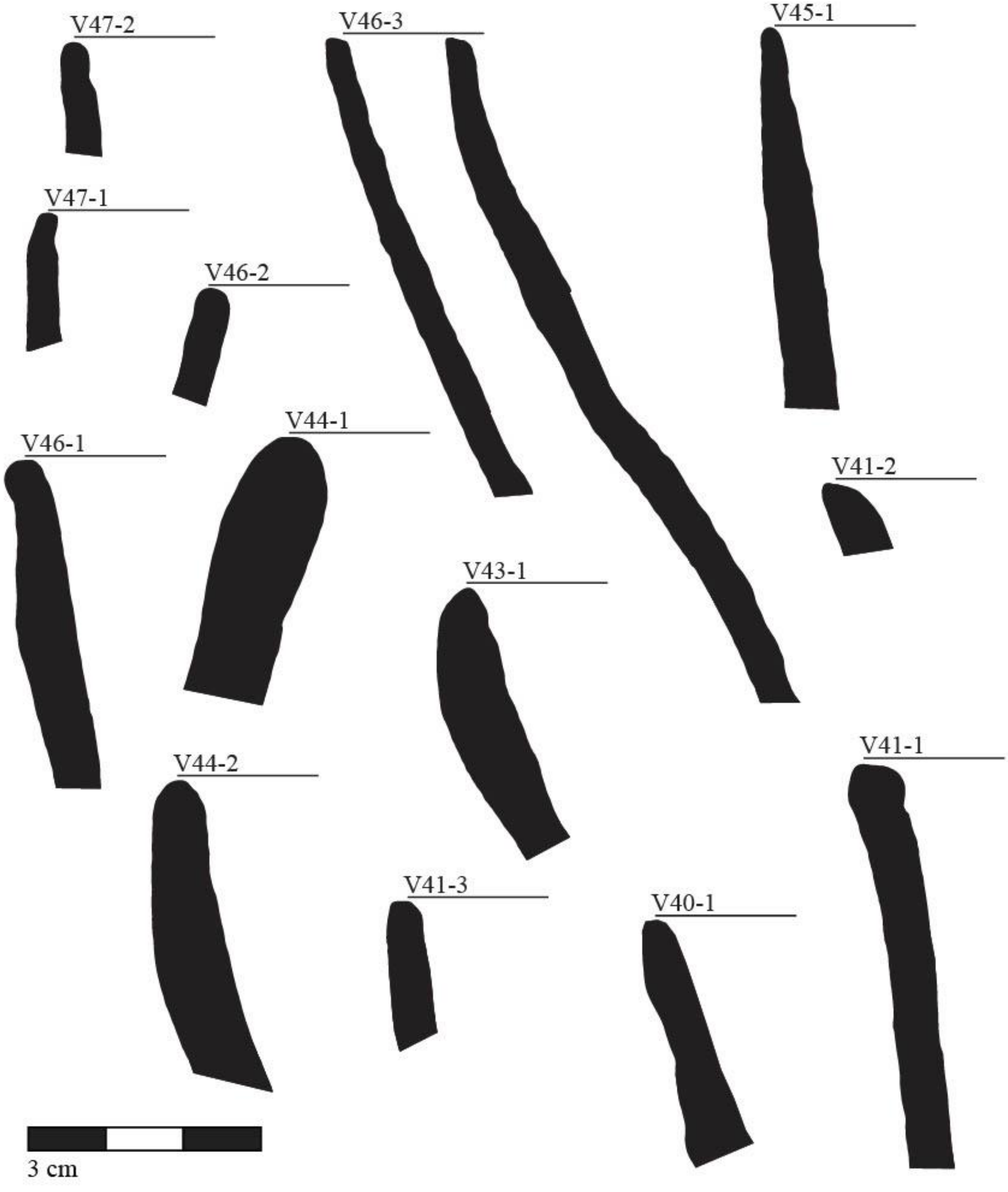
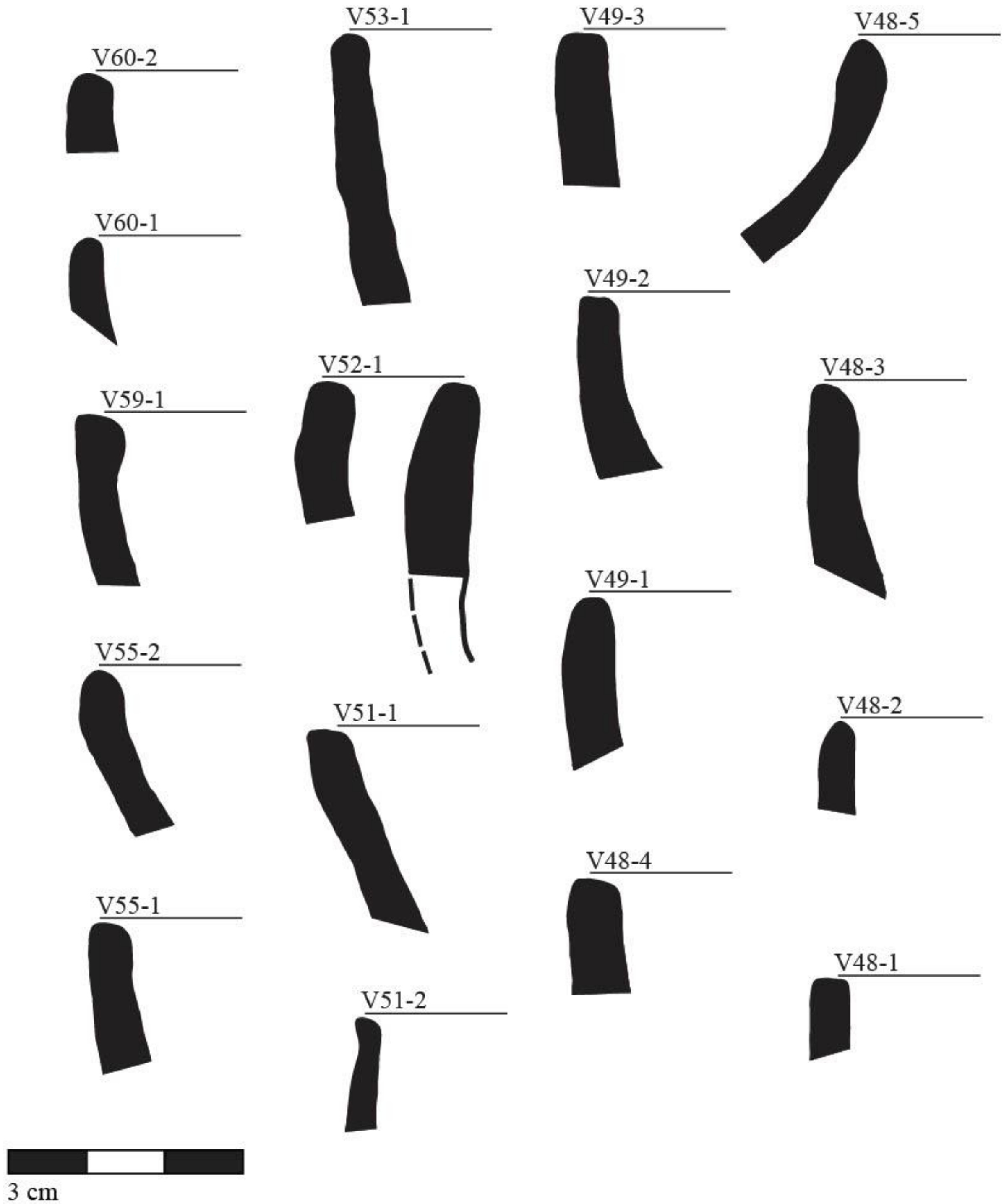
V30-3
V28-4
V28-3
3 cm


V47-2
V46-3
V45-1
V47-1
V46-2
V44-1
V46-1
V41-2
V43-1
V41-1
V44-2
V41-3
V40-1
3 cm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V53-1
V49-3
V48-5
V60-1
V49-2
V52-1
V48-3
V59-1
V49-1
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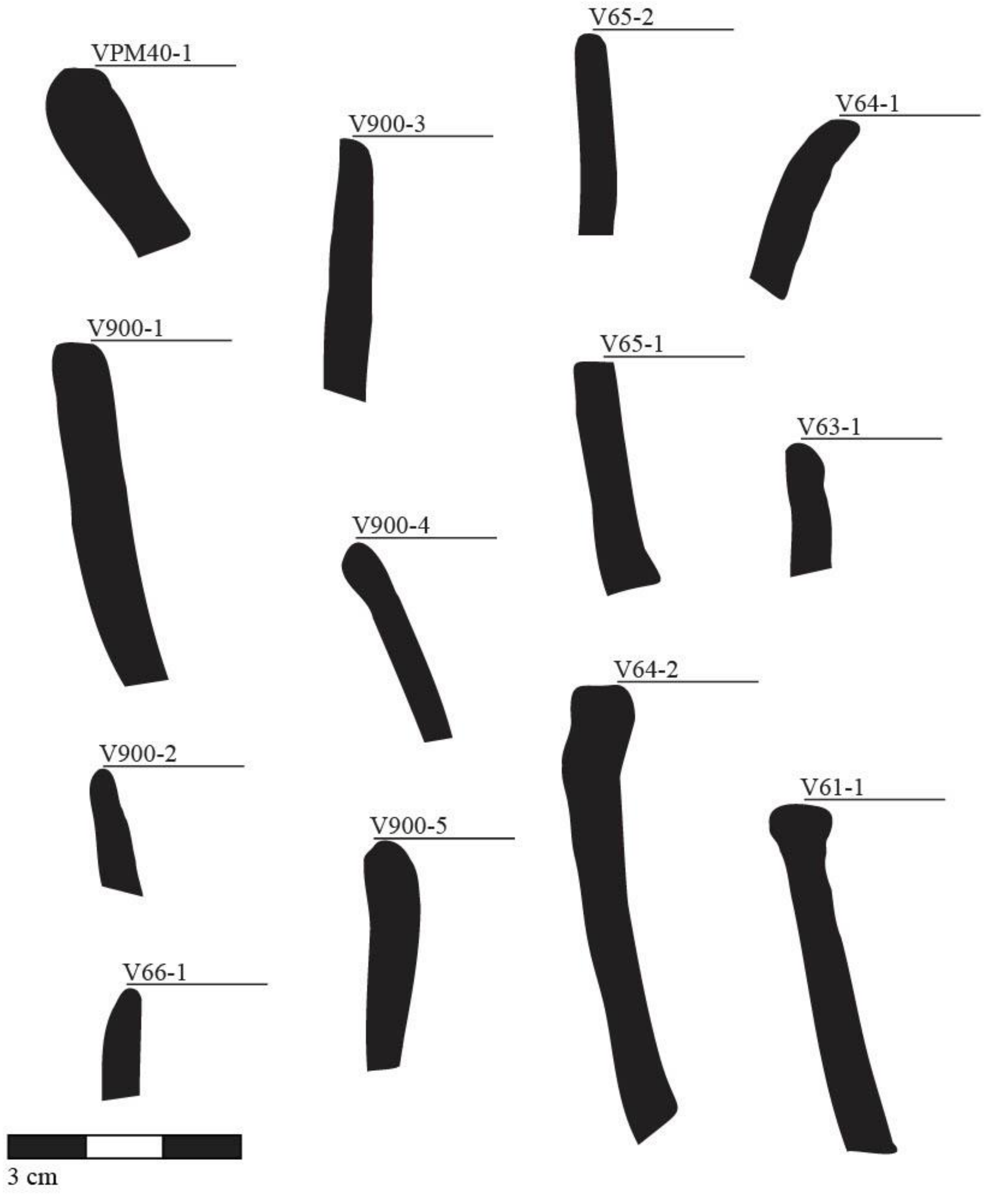
V55-1
V48-1
V51-2
3 cm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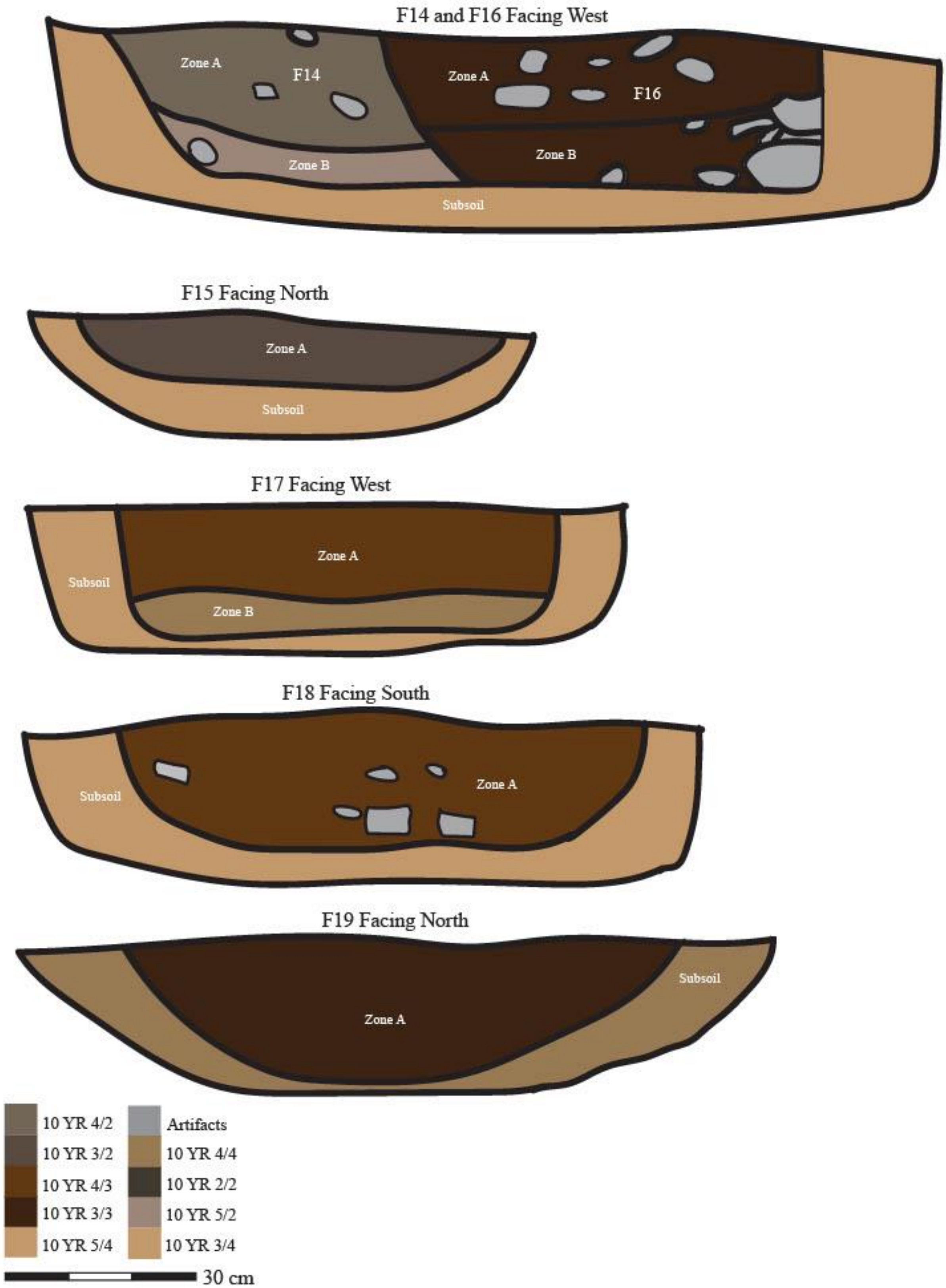
V900-3
V65-2
V64-1
V900-1
V65-1
V63-1
V900-4
V64-2
V900-2
V61-1
V900-5
V66-1
3 cm

APPENDIX E: FEATURE PROFILES

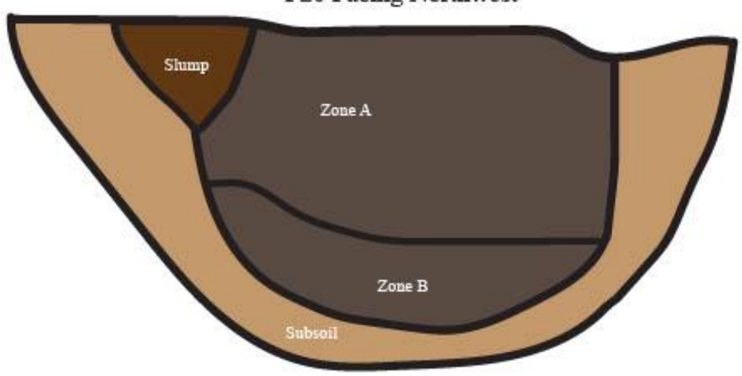
This appendix shows feature profiles for all features identified from 2020 excavations. Each profile is labeled according to which feature(s) it contains and which way the archaeologist drawing the profile was facing. Some features are included in multiple profiles. This is due to multiple cuts being made within that feature to best capture profiles for adjacent or superimposed features. More information on these features and the soil types within each zone can be found in Appendix C.

+Subsoil is usually 10 YR 5/4

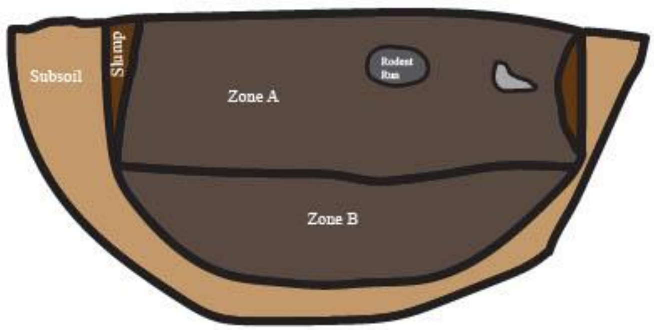


+Subsoil is usually 10 YR 5/4

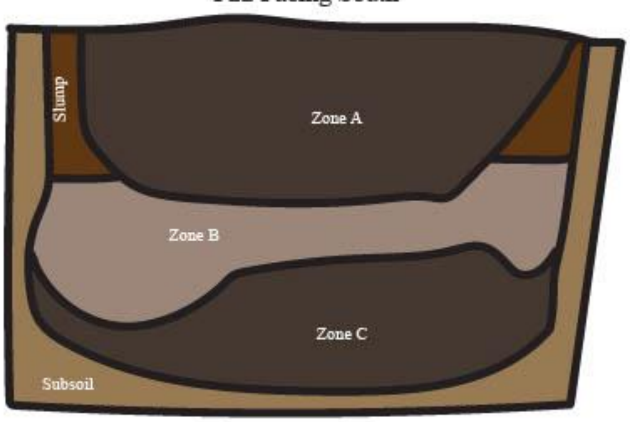
F20 Facing Northwest



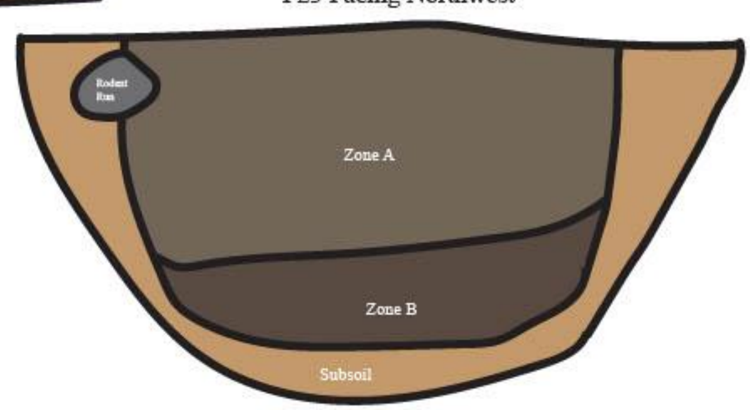
F21 Facing South

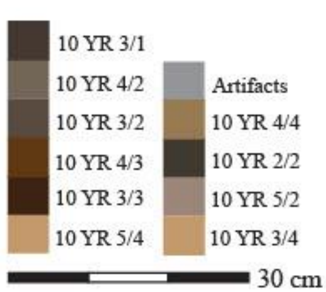


F22 Facing South

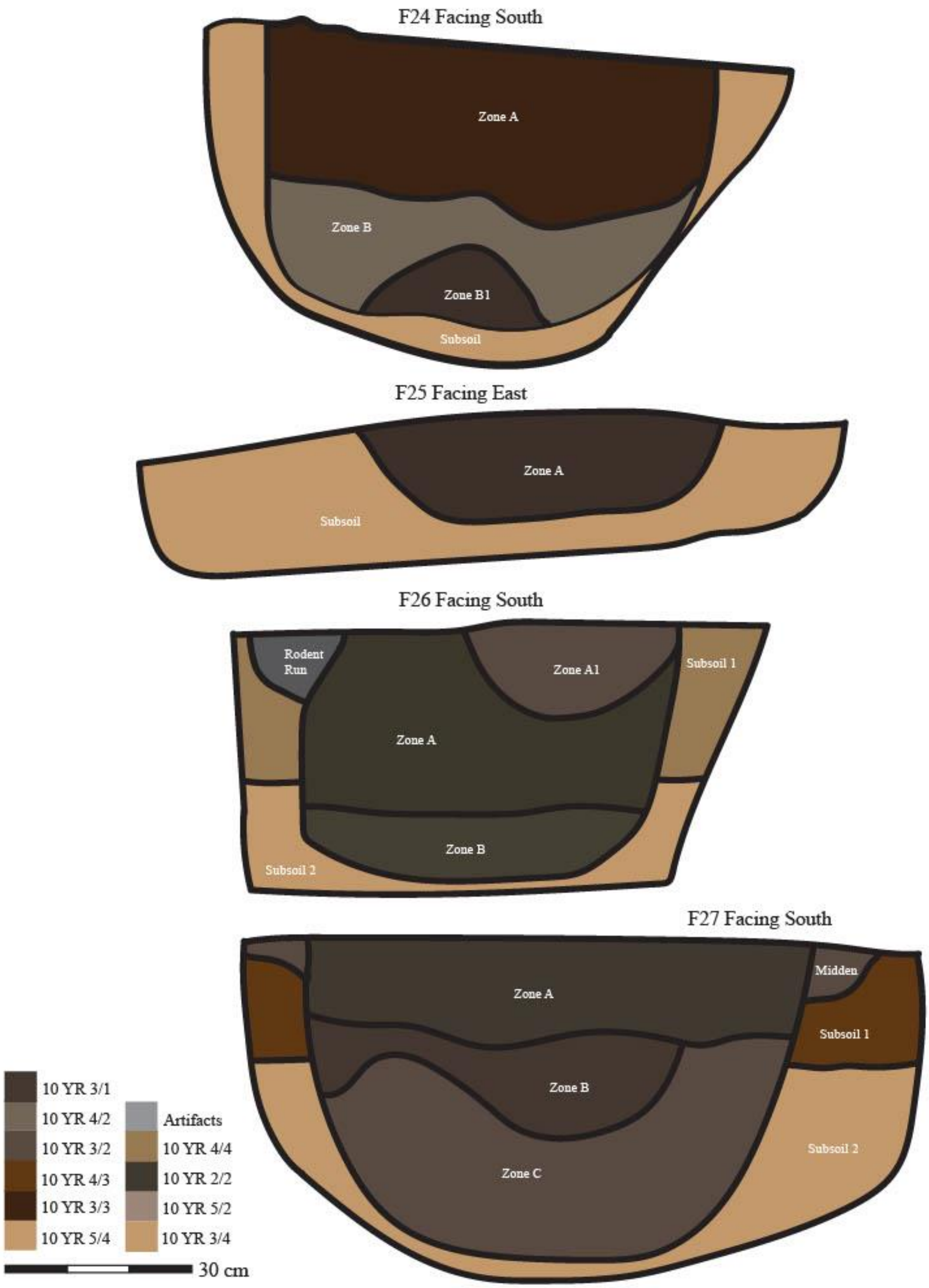


F23 Facing Northwest





+Subsoil is usually 10 YR 5/4

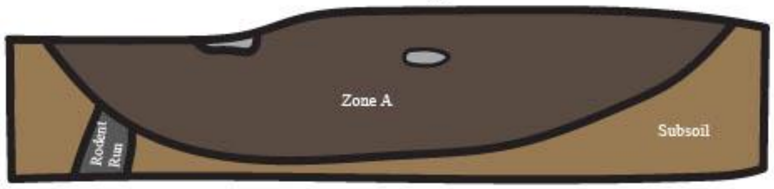


+Subsoil is usually 10 YR 5/4

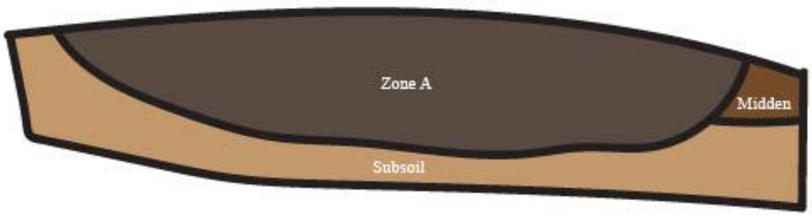
F28 and PM18 Facing South

F29 Facing East

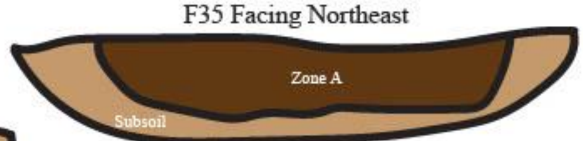
F32 Facing North



F33 Facing South

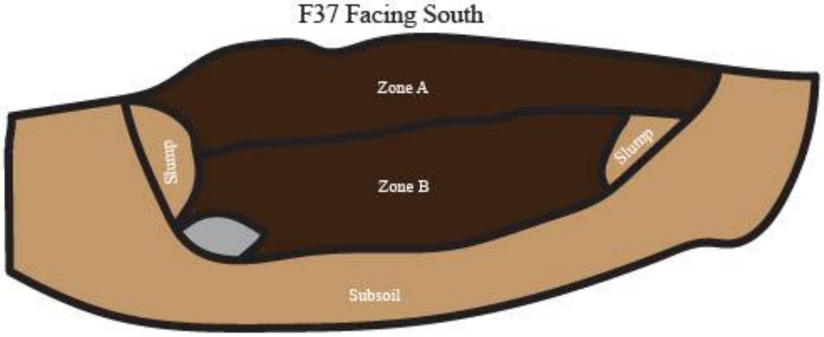


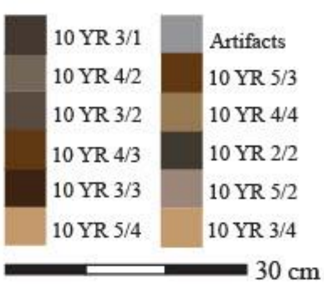
F35 Facing Northeast

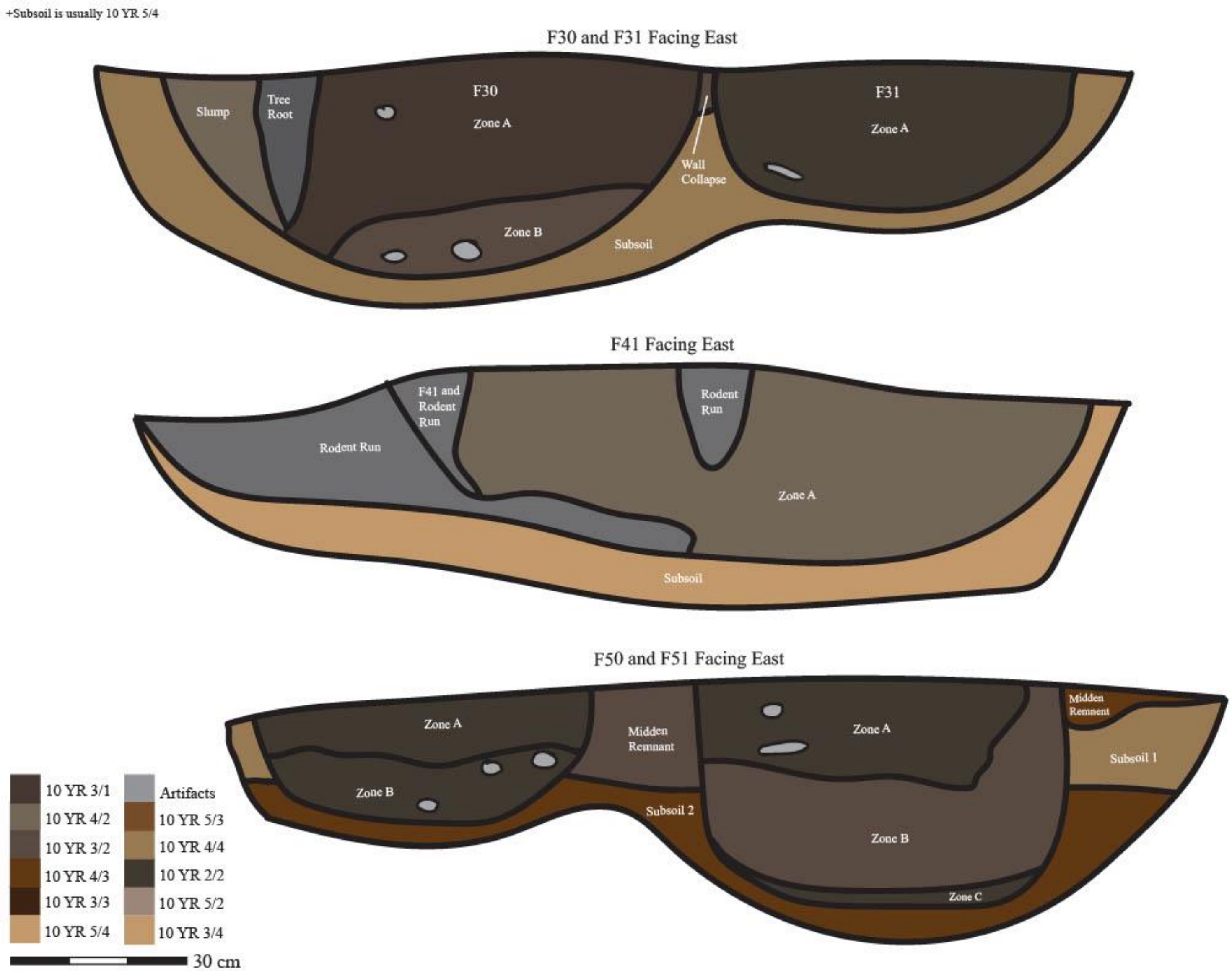


F36 Facing East

F37 Facing South

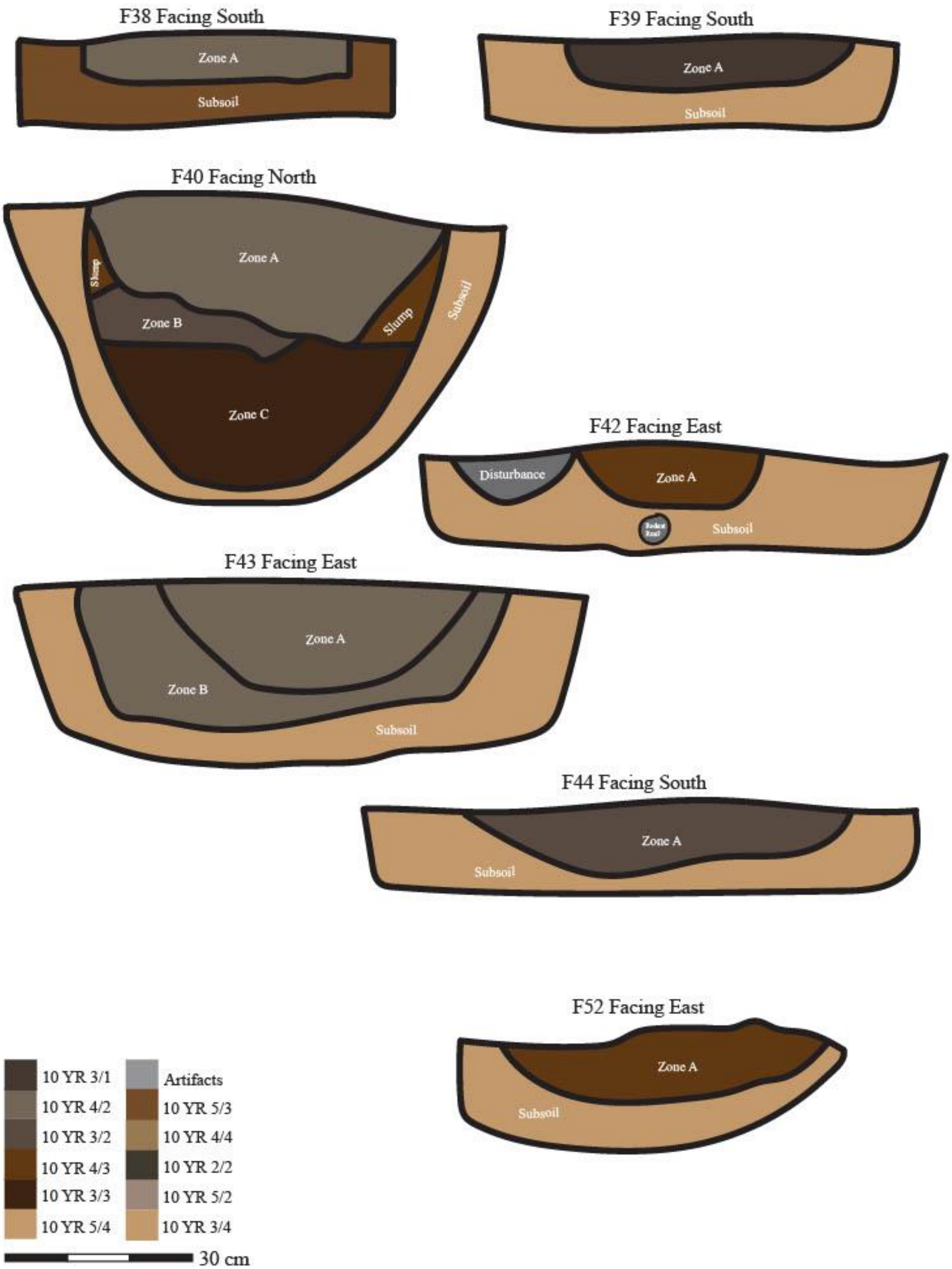




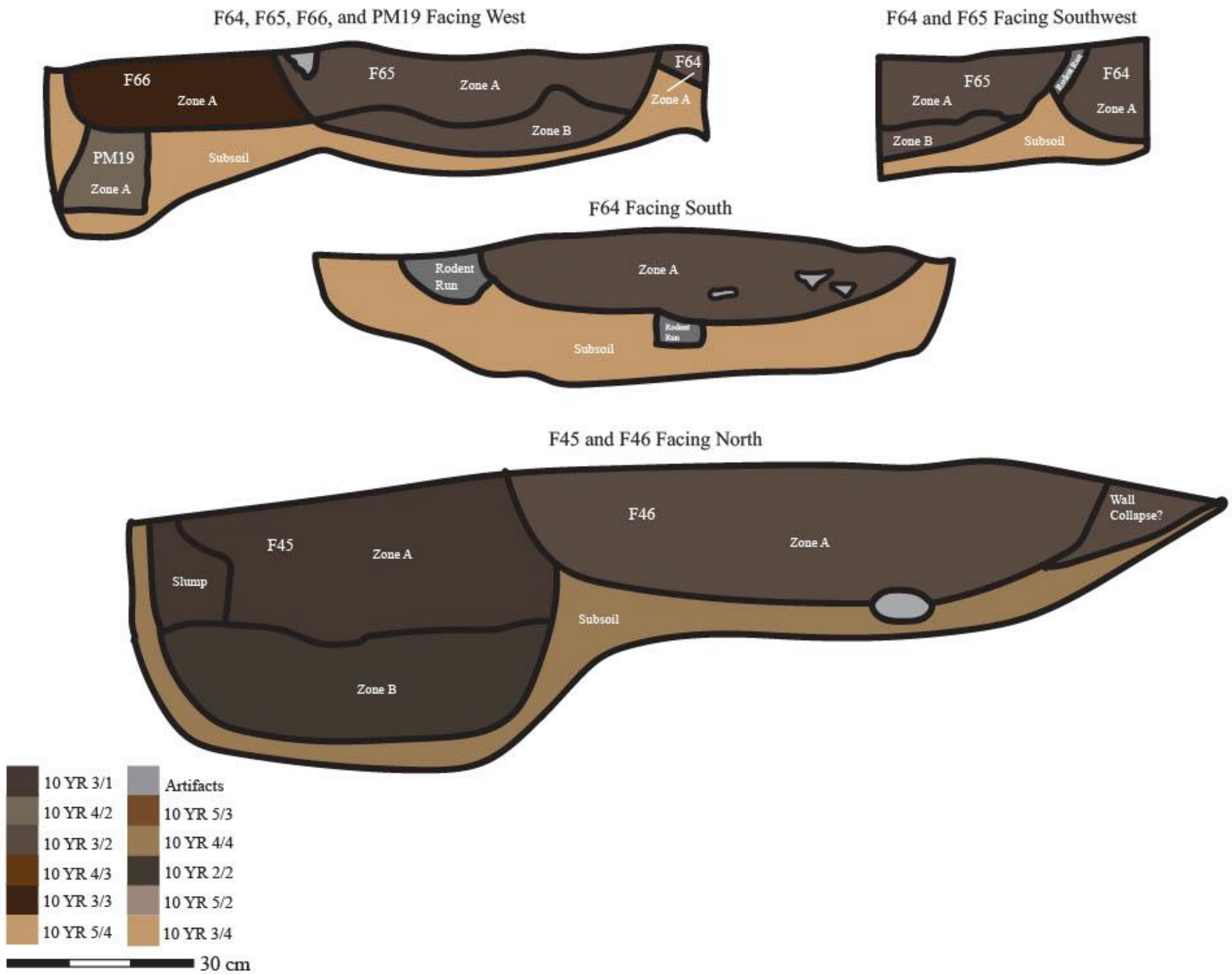


+Subsoil is usually 10 YR 5/4
F30 and F31 Facing East
Slump
Tree Root
F30
Zone A
Zone B
Wall Collapse
Subsoil
F31
Zone A
F41 Facing East
Rodent Run
F41 and Rodent Run
Rodent Run
Zone A
Subsoil
F50 and F51 Facing East
Zone A
Zone B
Midden Remnant
Zone A
Zone B
Zone C
Subsoil 2
Midden Remnent
Subsoil 1
10 YR 3/1
10 YR 4/2
10 YR 3/2
10 YR 4/3
10 YR 3/3
10 YR 5/4
Artifacts
10 YR 5/3
10 YR 4/4
10 YR 2/2
10 YR 5/2
10 YR 3/4
30 cm

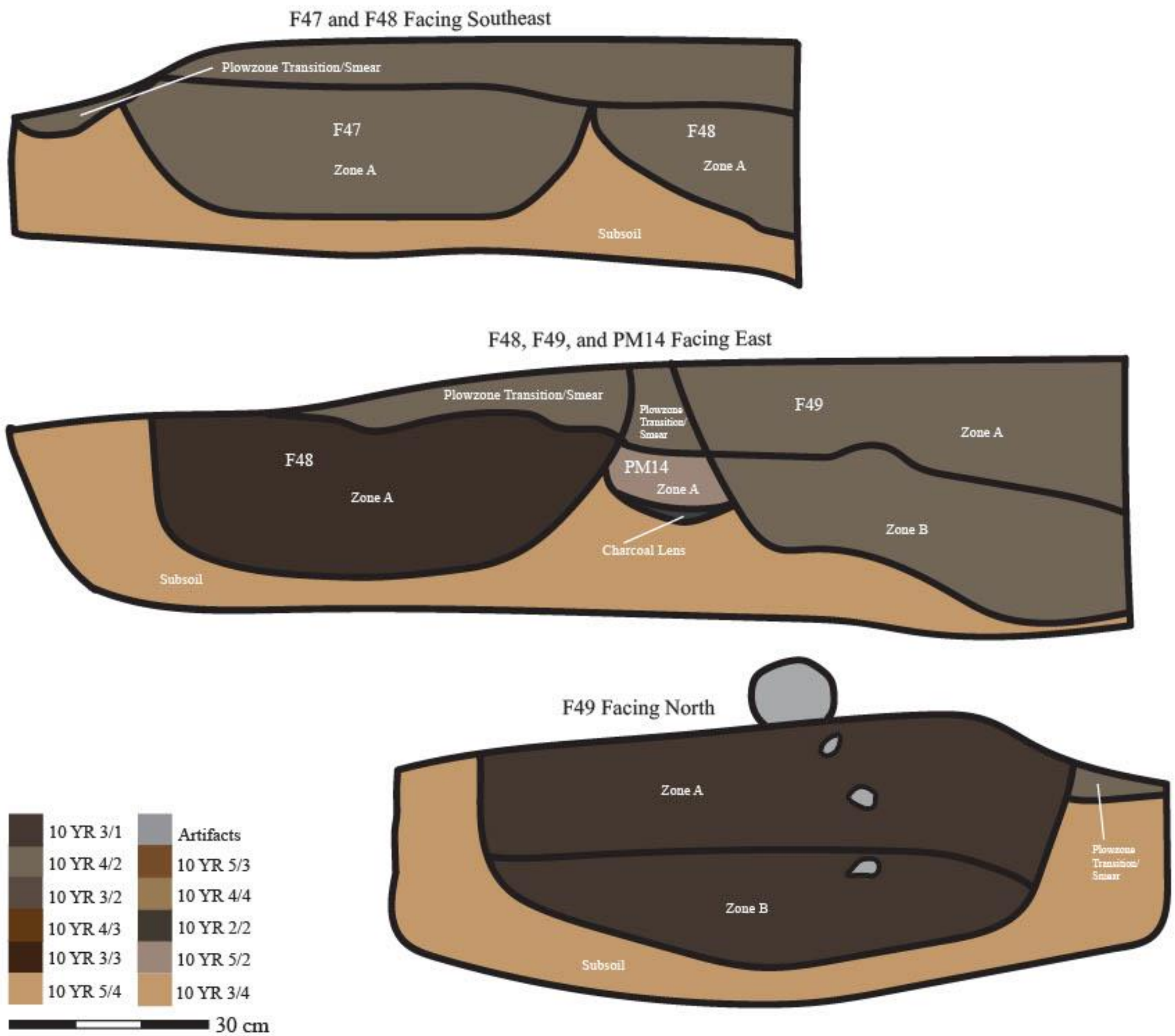
+Subsoil is usually 10 YR 5/4

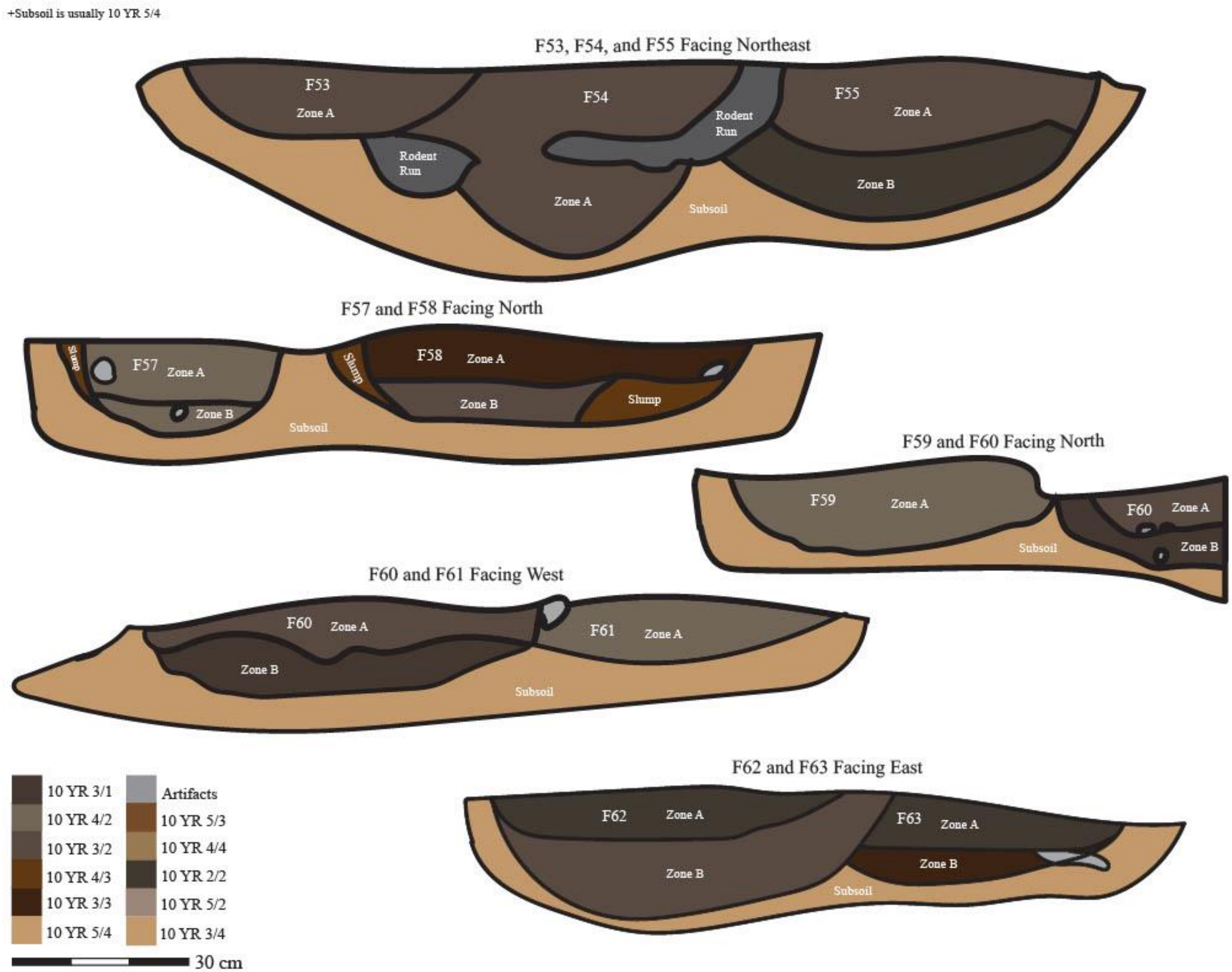


+Subsoil is usually 10 YR 5/4

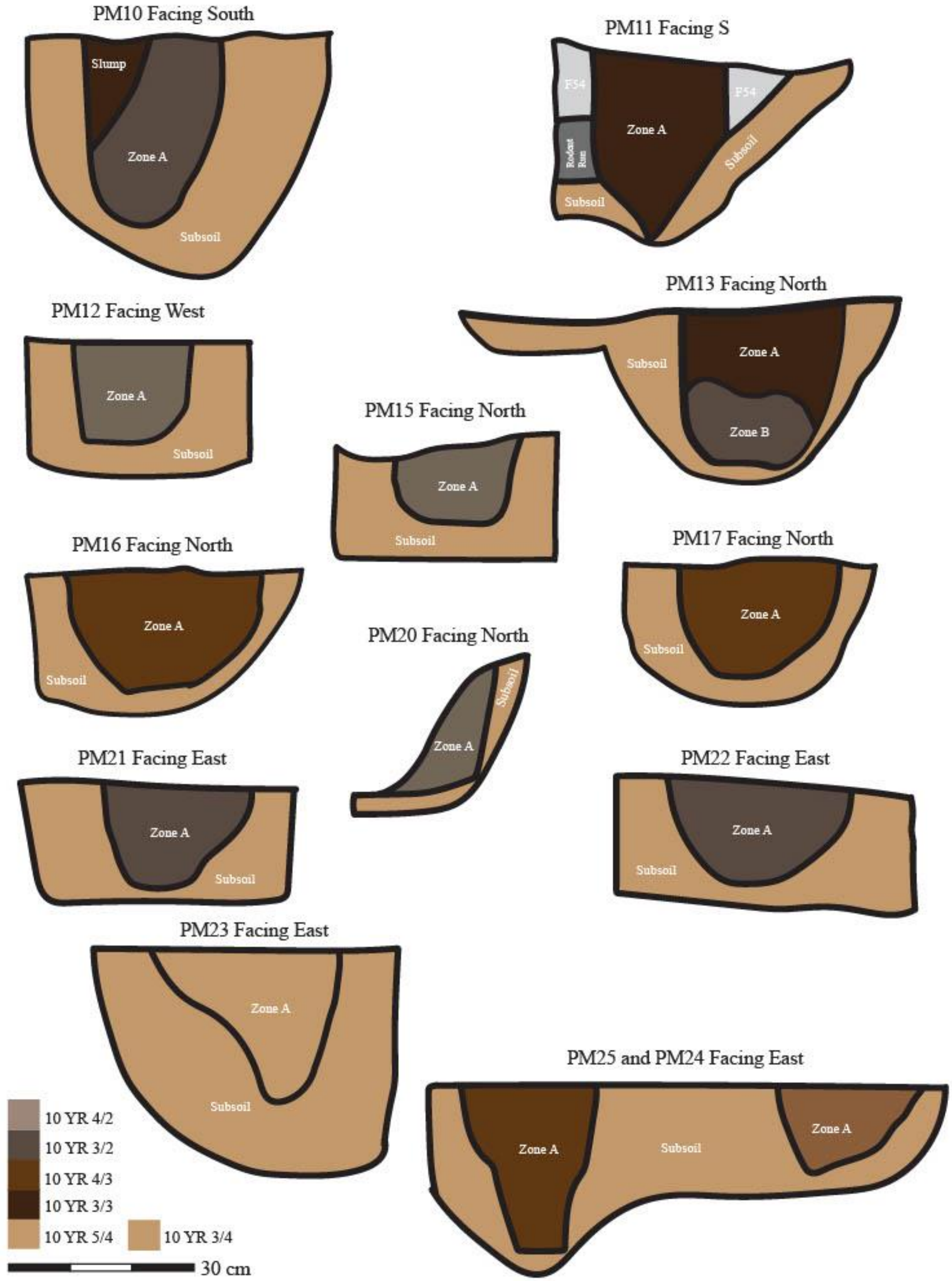


+Subsoil is usually 10 YR 5/4

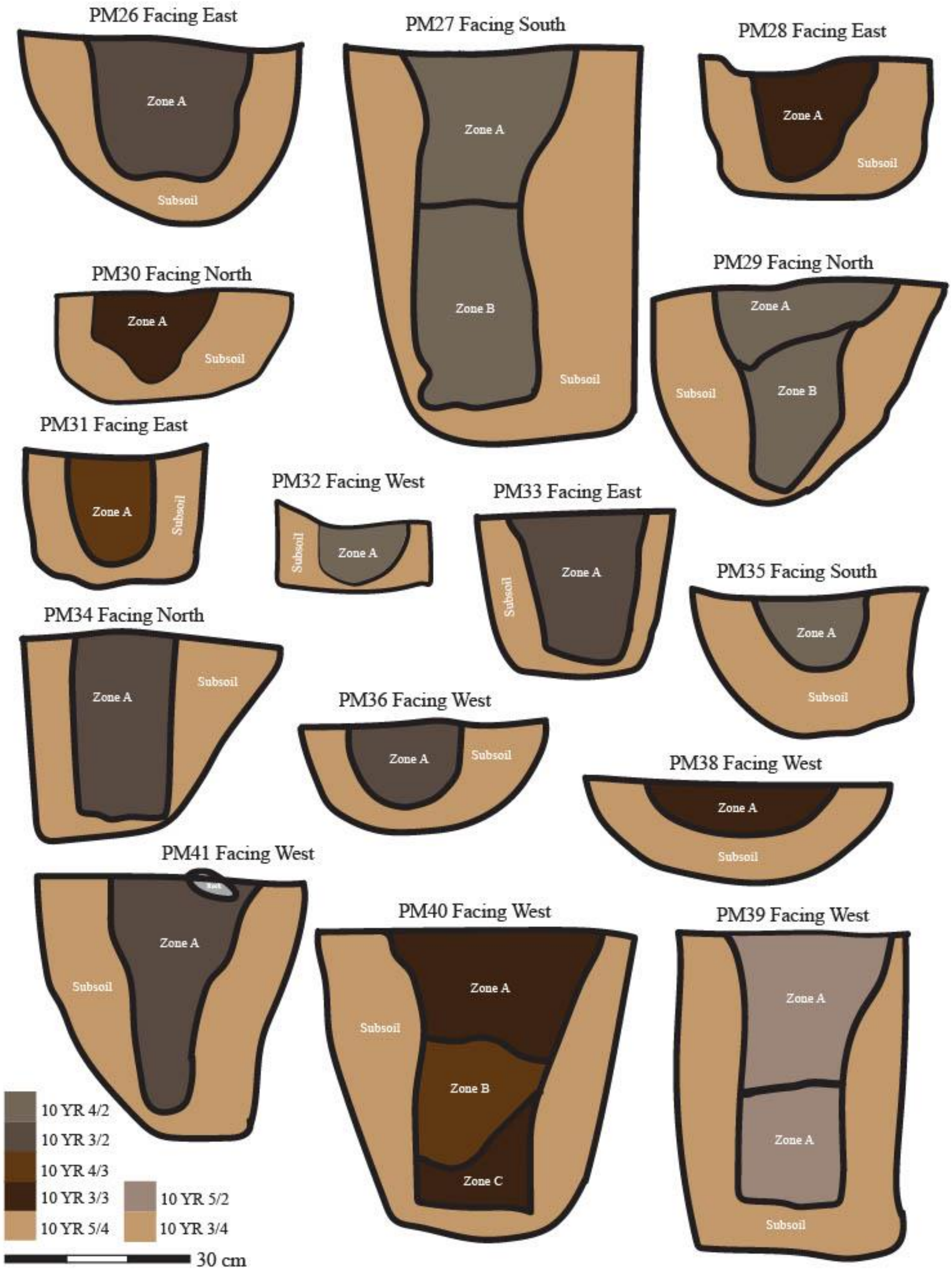



+Subsoil is usually 10 YR 5/4
F53, F54, and F55 Facing Northeast
F53
Zone A
Rodent Run
F54
Zone A
Rodent Run
F55
Zone A
Zone B
Subsoil
F57 and F58 Facing North
Slump
F57
Zone A
Zone B
Slump
F58
Zone A
Zone B
Slump
Subsoil
F59 and F60 Facing North
F59
Zone A
Subsoil
F60
Zone A
Zone B
F60 and F61 Facing West
F60
Zone A
Zone B
F61
Zone A
Subsoil
F62 and F63 Facing East
F62
Zone A
Zone B
F63
Zone A
Zone B
Subsoil
10 YR 3/1
10 YR 4/2
10 YR 3/2
10 YR 4/3
10 YR 3/3
10 YR 5/4
Artifacts
10 YR 5/3
10 YR 4/4
10 YR 2/2
10 YR 5/2
10 YR 3/4
30 cm

+Subsoil is usually 10 YR 5/4



+Subsoil is usually 10 YR 5/4



+Subsoil is usually 10 YR 5/4