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Archaeological Analysis of an Early Mississippian Frontier Structure in Southwestern Virginia

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ARCHAEOLOGICAL ANALYSIS OF AN EARLY MISSISSIPPIAN FRONTIER STRUCTURE IN SOUTHWESTERN VIRGINIA

By

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DEDICATION

This thesis is dedicated to the Anthropology Faculty at the University of Mississippi who have fostered my love for this field and encouraged me throughout my time here. Thank you.

Also my mom, of course.

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ABSTRACT

SOPHIE BARBARA HUSSLEIN: Archaeological Analysis of an Early Mississippian Frontier Structure in Southwestern Virginia

(Under the direction of Maureen Meyers)

Ely Mound (44LE12) is a significant prehistoric frontier site located in Lee County, Virginia. Frontier sites are important in understanding processes of cultural hybridity and the formation of social hierarchies. Through an analysis of artifacts recovered from a household structure during a 2019 excavation, this research explores Ely's function on the Mississippian cultural frontier, and discusses its relationship to the Carter Robinson site located within the county (44LE10). Finally, I conclude that the occupants of Ely Mound were a local people engaging with select Mississipian cultural practices and suggest that this site could be an example of Mississippianization.

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Chapter 1. Introduction

The Ely Mound (44LE12) is located in Lee County, Virginia and is listed on the National Register of Historic Places as a significant archaeological resource (Criterion D) (Figure 1.1). The mound was first excavated in 1877 by the Harvard Peabody Museum and subsequent work in and around the site yielded no systematic excavation of the area around the mound, and no village was ever identified (Carr 1877; Egloff 1987). A field school was held at the site in 2019 under the direction of Maureen Meyers, of the University of Mississippi. The 2019 excavations included systematic shovel testing, mound excavations, and block excavations. The former resulted in the identification of remains of two structures. This Honors thesis provides an overview of the excavations and an analysis of artifacts recovered from Block 1.

Southwest Virginia is located on the edge of the Mississippian cultural world, which dominated the Southeastern United States from 900 A.D. to 1400 A.D (Hally, 1975). Holland (1970) suggested that Southwestern Virginia was a crossroads between local or regional cultures and the Mississippian world. The 2019 excavation was undertaken to identify site limits, and better understand how Ely was related to other Mississippian and non-Mississippian cultures in the region. Specifically, investigations were aimed to identify how the site functioned on the Mississippian frontier, and how the site fits into the local or regional late prehistoric settlement pattern. Broadly, this research expands our understanding of chiefdom frontiers and the Mississippian cultural frontier, and examines the question of cultural hybridity and the formation of social hierarchies in the region.

This project builds on work previously done in the region at the Carter Robinson site. Based on the presence of shell-tempered ceramics previously collected at the Ely Mound (Egloff 1987), these two sites may be contemporaneous. Excavations at Carter Robinson showed

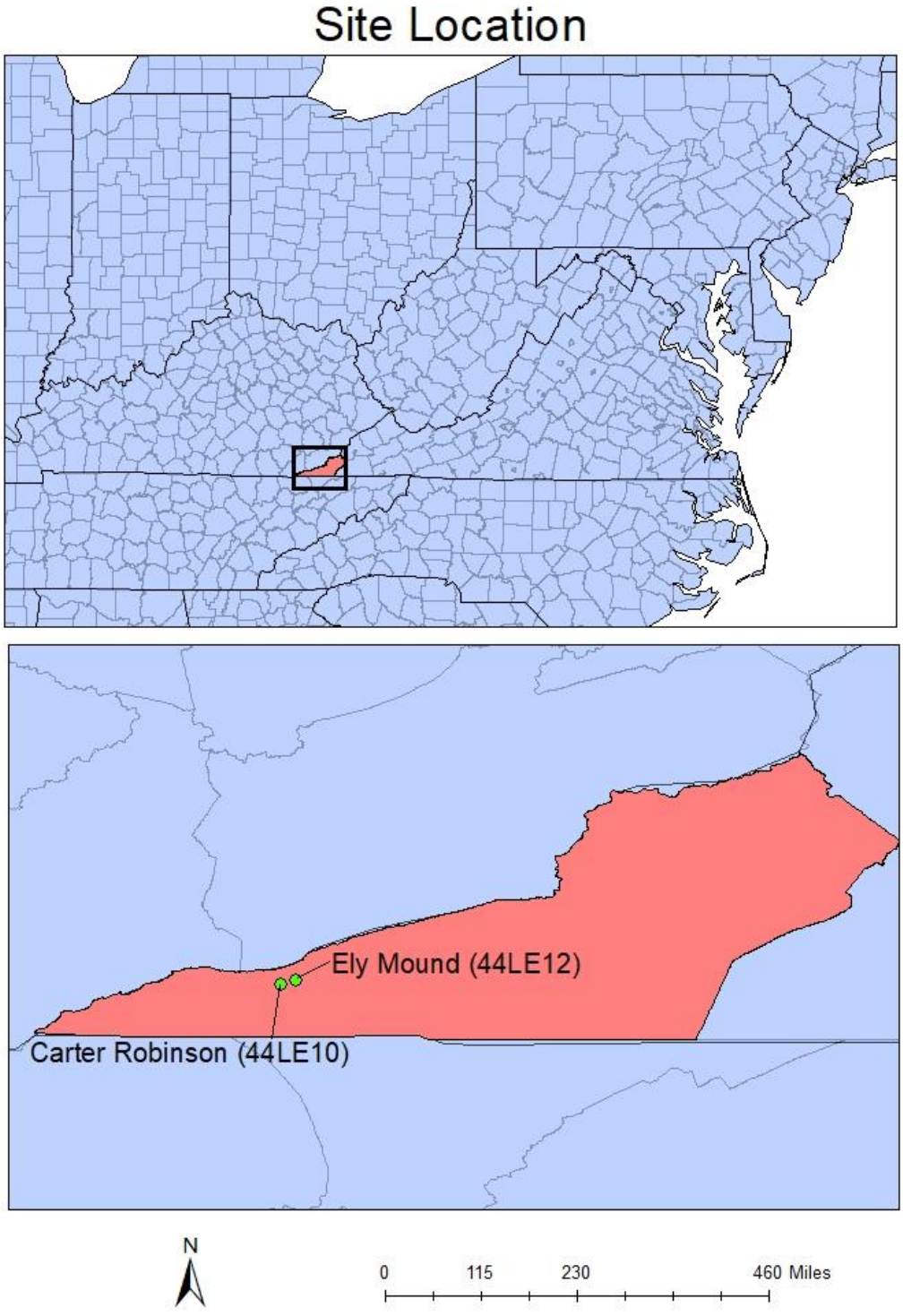

Figure 1.1. Location of site 44LE12

evidence of regional trade and shell bead production in a village over multiple occupation periods (Meyers 2015). However, the exact age and function of Ely Mound is unknown and previous excavations at Ely did not identify (nor investigate) a village located there, or, by contrast, if the mound is simply representative of an empty ceremonial center. Additionally, the type and extent of relations between Ely and Carter Robinson and other local cultures is not clearly understood. Meyers (2015) suggests that different economic activities at Carter Robinson such as the trade of key resources like salt and shell provided an alternative route to power than most core Mississippian polities, thus shaping the way that sociopolitical complexity was developed. Work at the Ely Mound site thus allows us to further test this idea and examine how power relations are formed at the Mississippian frontier.

Previous Investigations in the Area

Ely Mound was first excavated in 1877 under the direction of Lucien Carr, Assistant Curator of Harvard's Peabody Museum. Carr (1877) first identified and took samples of a series of wooden posts encircling the top of the mound and oversaw excavations of a shaft through the center of the top of the mound. On the first day of excavation, the shaft collapsed, killing one worker and injuring another. The excavation recovered three burials containing four individuals, and grave goods included a shell gorget, stone tools, shell beads, animal bones, and an intact cedar post in a mound center. Carr suggested that the mound was a place of residence with multiple occupation periods, serving as the "rotunda or council chamber of the village" (Carr 1877).

Little work was conducted in the region until the mid-twentieth century, when Evans (1955) discussed ceramic types found in the region based on samples from the Roanoke area. He

identified the Radford series, Dan River series, and New River series, which became the known types for the southwestern Virginia region. The Radford series is limestone-tempered pottery with cordmarked or net-impressed surface treatment prominent during the Late Woodland period (A.D. 800-1600). The Dan River series, found in south-central Virginia, is sand-tempered and frequently incised, and the New River series, found in the entire southwestern Virginia region, is shell-tempered with a plain or cordmarked surface decoration (Evans 1955).

Holland (1970) conducted a survey of twenty counties in Southwestern Virginia and identified the Lee series, a sand-tempered pottery with a stamped surface decoration. The Lee series in Virginia is identical to the Pisgah series of western North Carolina, and is indicative of Late Mississippian cultures (A.D. 1000-1550) in western North Carolina and the Appalachian Summit region. Based in part by the terrain and the variety of trade goods and ceramic types in the region, Holland suggested that the area was a cultural crossroads. Egloff (1987) studied ceramics found along the Powell and Clinch Rivers, as well as previous collections of Holland's collected at the Ely and Carter Robinson sites. He suggested different levels of cultural interaction was present between indigenous Radford people and Mississippian people based on variation in surface treatment and the degree of mixing of ceramic types. Reid (1997) identified the presence of Dallas phase pottery from nearby Site 44LE17. Dallas phase pottery is indicative of Late Mississippian cultures (A.D. 1300-1600) in the Little Tennessee River valley, and is identified by the presence of shell-tempering with cord-marked or plain surface decorations. Holland's New River series is likely a local iteration of Dallas phase pottery. Based on the presence of multiple contemporaneous mound sites in Southwest Virginia – whose dating was determined by artifact types and radiocarbon dating - it is suggested that a ranked social

organization, if not a chiefdom, is located in the region (Gardner 1979; Turner 1983; Jefferies 2001; Meyers 2002).

Meyers (2011; 2015; 2016; 2017) conducted the most recent work in the region at the Carter Robinson site (44LE10), located within Lee County approximately 10 kilometers (km) southwest of Ely Mound. Multiple excavations over a ten-year period identified a village and plaza around the site, and identified and excavated six structures. Occupation dates from the thirteenth century to A.D. 1375, when the site was abandoned. Shell bead production began toward the end of site occupation, in a house located 80 meters east of the mound. This same household contained Pisgah sherds, suggesting the formation of trade relations (Schubert and Meyers 2018). Ceramic types at the site during occupation change from grit-and-grog-tempered associated with an Early Mississippian occupation - toward the beginning of site occupation, to shell-tempered during the middle of site occupation, to a mix of shell and limestone tempering before the site was abandoned, indicating interactions with local groups (Meyers 2011; 2015).

Hypothesis

Previous work conducted at the Ely Mound site identified Dallas phase pottery and other Mississippian-style artifacts, like shell gorgets and beads, thus approximately dating the site to the Late Mississippian period, which spans from 1300 A.D. to 1600 A.D (Carr 1877; Meyers 2002). Meyers (2006) also suggested that Ely Mound is the administrative center for a polity encompassing three other mound sites, two village sites, and two sites with structures located within a 30-km-wide area within Lee County, Virginia. The site is closely associated with Carter Robinson, due to the proximity of the two mounds, and the similar artifact assemblages. Carr's excavation at Ely Mound and recent excavations at Carter Robinson recovered mostly Dallas phase pottery and shell objects, which suggests a contemporaneous occupation period.

Given this information, it is expected that Ely Mound contains an artifact assemblage similar to that of Carter Robinson, with grit-tempered pottery at the beginning of occupation, transitioning quickly to shell-tempered pottery, as well as evidence of shell bead production and regional interaction in the form of Radford and Pisgah artifacts. Additionally, as a possible administrative center to a polity, I expect Ely Mound to have a higher frequency of goods like non-local pottery and shell beads, indicating greater regional interaction and craft specialization. Looking specifically at the structure identified in Block 1, the analyses reported on in this thesis will identify if it is domestic or non-domestic, and if there is any evidence of craft production present, as was the case with multiple households identified at Carter Robinson.
Through a detailed analysis of ceramics and structural remains, this thesis will identify the occupation period and type of structure present in Block 1, and the interaction between inhabitants of the structure and groups in the area.

Chapter 2 examines the background literature for chiefdoms, the Mississippian period, frontiers, Southwest Virginia archaeology, and household archaeology. Chapter 3 provides an overview of the excavation techniques and details the methods used in the analysis. Chapter 4 reports the results of the excavation and analysis. Chapter 5 discusses and interprets these results.

Chapter 2. Background

This chapter provides a theoretical and cultural background of the Mississippian period (A.D. 900-1600) chiefdoms, the Ely Mound, and ceramic analysis. Specifically, this includes the conceptualization of chiefdoms, the Southeastern Mississippian period, frontiers, southwestern Virginia archaeology, and household level artifact analysis, specifically ceramics. All of these sections contribute to understanding the context in which Ely Mound existed, as well as providing the theoretical basis for the following analysis.

Part 1: Mississippian and Southeast Chiefdoms

The term 'chiefdom' first appears in Oberg's, "Types of Social Structure Among the Lowland Tribes of South and Central America" in 1955 as a way to categorize a specific type of political hierarchy and territorial control. A chiefdom is a system with social inequality, an economic, social, political, and religious center controlled by one person- the chief - and resource redistribution as a result of food surplus and a favorable environmental situation (Service 1962; Fried 1967). However, there are conflicting views on how or why these systems emerged and the basis of this consolidated economic and political power (Service 1962; Fried 1967; Carneiro 1981; Feinman 1995; Earle 1997).

Service (1962) argues that chiefdoms are a stage in cultural evolution which arose out of the following factors: environmental abundance and diversification, sedentisms, and an outside force like warfare to spur development. In his model, social stratification and complexity preceded central economic consolidation, the latter of which arose to increase the efficiency of labor by directing large-scale cooperative endeavors. These were multi-village systems that lost

much of their autonomy for the sake of specialization but remained relatively equal in an economic sense.

Following Service's model, Fried (1967) describes a system that he names "ranked societies". Like Service, he argues that the economy was relatively egalitarian, but asserts that villages were mostly autonomous and simply articulated with a larger cooperative network. Additionally, the ranked societies follow a more organic model of development, arising from beneficial ecological circumstances allowing for a resource surplus thus redistribution, which he defines as a form of reciprocal exchange in which there is a flow of goods in and out of an economic center. Redistributive systems are put in place to make the most of a community's growing capital and rankings are subsequently developed as a way to regulate these new systems.

Carneiro (1981) by contrast proposed a political basis of chiefdoms, in which villages were forcefully subjugated under the larger political and economic entity. Social stratification arose as a result of this circumscription as captives became lower class members of society. Once a part of this multi-community unit, people were given economic incentives or politically coerced to mobilize labor to produce a food surplus and complete large-scale projects, like monumental architecture. He also enumerates the scale of chiefdoms, organizing them into minimal, typical, and maximal chiefdoms that are, respectively, made up of 5-10 villages, 10-60 villages, and greater than sixty but just below the threshold of a state.

This is consistent with the typology of chiefdoms described by Anderson (1994), in which he describes three types of chiefdoms: simple, complex, and paramount defined by the number of levels in the decision making hierarchy. A simple chiefdom typically has a single-level control hierarchy, with only one level of control above the villages or settlements in

the polity, dividing people into commoners or elites. A complex chiefdom typically has two levels of control above the village, dividing people into commoners, lesser elites, and primary elites. Paramount chiefdoms will have three or more levels in the administrative hierarchy. These are comparable to Carneiro's (1981) minimal, typical, and maximal chiefdoms, respectively. Given these models, I would argue that Fried (1967) describes a minimal or simple chiefdom, while Service (1962) describes a typical or complex chiefdom.

Following the social model of chiefdoms, Feinman (1995), explores the mechanisms in which social inequality became ingrained into chiefly societies. In order to both usher in and justify social hierarchy, internal conditions must change to negate social and economic leveling strategies maintained by egalitarian societies. Like Fried's (1967) ranked societies, this is done through a process of enculturation over generations as an emergent leader pulls on their ties within the community. Institutionalized inequality also requires some outside force, as the ties between an emergent leader and external communities become important as dispute resolution becomes a greater concern for a growing political entity.

Earle (1987, 1997b) elaborates on the ideological basis of chiefly power and the economic basis of chiefdoms in general. While Fried (1967) and Service (1962) both argue that the chief holds a symbolic rather than an economic place in the social hierarchy, Earle asserts that ranking must derive from economic control and differential access to goods. The chief also has two major roles: a system-serving function, and exploitative capability. The former deals with their ability to mobilize goods for large displays rather than day-to-day redistribution, and dealing with the practical creation of an effective economic system - like constructing irrigation complexes - and handling the risks associated with this - like storage solutions. The latter derives

from differential access to and ownership of resources and control over the definition and distribution of wealth through foreign or specialized objects.

Earle (1997a) elaborates on this when he examines how leadership can emerge and become institutionalized. He argues that there are three main sources of power a chief can draw from: economic, military, and ideological. Further, economic power can arise in two different ways: voluntarily in which people accept regionalization for rational reasons and the belief that this will make life better; or coercively - which follows Carneiro's model - that people are forced to give up their autonomy. Although economic power is the foundation of development, given its variability according to the environment, when the economy lacked, leaders pulled from the alternate sources of power - military and ideological.

Mississippian Chiefdoms

The Mississippian period spanned from 900 A.D. to 1400 A.D. and stretched from modern day Missouri down to Florida (Hally, 1975). This period is culturally recognized based on the presence of chiefdoms, mound-building, shell-tempered pottery, ritual artifacts, and maize agriculture, with some degree of local variation and identity (Peebles and Kus 1977).

Hally (1975) focuses on Mississippian culture in modern-day Georgia. He follows a chronological framework of how Mississippian culture was presented throughout the state and the development of regional pottery styles, focusing on the three largest Mississippian cultural sites in the region: Etowah, Moundville, and Cahokia. Most settlements followed a very typical Mississipian cultural tradition with mound building, agriculture, and shell- or grit-tempered pottery. Hally also outlines the problems with archaeological studies in Georgia, as it focuses

mainly on presentations of Mississippian culture in the state, but not enough on how it developed in the area or the lived significance of ceremonialism and mounds.

More generally, Peebles and Kus (1977) examine how ranked societies are reflected in the archaeological record by examining Moundville, one of the largest Mississippian chiefdoms. They initially argue that models of chiefdoms focusing on redistribution and ecological specialization - like those presented by Fried (1967) and Service (1962) - are not sufficient, and align themselves with Earle's models of more holistic economic control and regulation. They propose five major aspects that are distinctive of chiefdoms that can be hypothesized and tested in the archaeological record: clear evidence of ranking, hierarchy of settlement types and sizes, settlements located in areas ensuring sufficient local subsistence strategies, evidence of organized productive activities which transcend household group, and society-wide organizational activity to deal with predictable environmental issues. At Moundville, all of these requirements were met, supporting the model of an economic and political basis for Mississippian period chiefdoms.

Building on Kus and Peebles' assertion that chiefdoms are located in highly productive environments, Smith (1978) examines the Meander-Belt habitation zone along the lower alluvial valley of the Mississippi river, and defines the Mississippian period as a cultural adaptation to a specific habitat situation and a particular level of sociocultural integration. The Meander-Belt habitation zone is a naturally subsidized ecosystem with an abundance of energy coming from the sun and nutrients flowing in the river. The meandering Mississippi river rapidly deposited soil along river beds and formed new channels, often creating oxbow lakes. These lakes provided great plant biodiversity and supported a variety of animals at high population densities.

Additionally, the soil deposited by the river was easily tilled, high in quality, and supported high levels of energy.

All of this considered, the area was suitable for horticulture, and provided easy access to protein-rich resources requiring little energy input. Though one cannot say that this energy necessarily caused Mississippian development in the lower alluvial valley, Smith (1978) asserts that this environment was a necessary prerequisite to chiefdom-level development. Differences in settlement patterns of Mississippian populations involved a balance of this type of energy capture that they had adapted to and outside pressures from competing with other cultural groups. The variations in Mississippi settlement patterns in the lower alluvial valley are thus related to short- and long-term variation - like seasonal warfare and soil depletion, respectively - geographical variation - depending on subsistence strategy - and sociopolitical complexity that influenced the number and location of local centers for proximity to the regional center.

The size of Mississippian territories, Hally (1993) argues, is limited by cultural and physical factors. In a study of 47 different Mississippian sites in north and central Georgia, he first determined which mound sites were primary – containing two mounds - or secondary – with one mound - centers and measured the distances between said sites to determine the frequency of distances between sites. This aligns with Carneiro's argument (1981), that chiefdoms only have two levels of political organization - the village(s) and the political center. Mound sites which were separated by no more than eighteen km, he determined, are administrative centers for a single polity, while sites greater than thirty-two km apart are administrative centers for different polities. Later work by Livingood (2015) re-examined these data and took into account factors such as accessibility and terrain. Meyers (2015) found the model was applicable to other areas in southern Appalachia as well.

Overall, the territories of different chiefdoms varied from 11-29 km across, and chiefdoms were separated by buffer zones roughly 20-30 km wide, functioning as a buffer zone between different polities, presumably for militaristic and environmental competition reasons. The upper limit of chiefdom territories is roughly consistent with the maximum distance a person can walk in a day, and the ability for a chief to easily travel between administrative centers and local communities is essential to exercise effective control for long term survival. Paramount chiefdoms, or those larger than forty km across, were typically short lived and unstable due to loose connections between the administrative center and the communities under it. Feinman (1995) also suggests that chiefdoms may be limited by population size, around 2,000 to 3,000 people. This number corresponds to the maximum group size in which information can reach every individual, as well as the number of social contacts that can be remembered by an individual, further suggesting that close ties between the leader and the people are essential.

Furthermore, Pauketat (2000) suggests reasons why people would participate in chiefdoms, which are typically thought to have constrained people's activities. He argues that common people were active participants in early chiefdom formation, as models of fully voluntary or fully forced cooperation do not take into account how cultural practices contribute to social formations. Rather, he suggests that chiefdom-building was a result of negotiations between emergent leaders and laborers who either saw some benefit in this growth, or followed along with social trends that encouraged compliance. As for Mississippian chiefdoms, he proposes that the economy existed only as “ideological projects” of historical moments (Pauketat 2004). Essentially, activities like monumental construction and craft production are considered a cultural act, and “economy” is inevitably caught up in this history. This concept is supported by

the fact that the "economic shadow" or size of polities often coincides with linguistic and cultural boundaries.

Ethnicity and Frontiers

In historical studies, frontiers are often conceptualized in the traditional colonial model of territorial expansion in which frontiers are simply passive recipients of innovations at the core and provide a sharp boundary between one culture and another (Lightfoot 1995). This interpretation of frontiers in an archeological context generally disregards the openness of boundaries and the role that variability at the edge plays in larger cultural transformations.

In regional societies, there is an important relationship between size, organization, complexity, and openness to the outside (Kowalewski 1982). Boundary maintenance becomes essential in non-industrial societies as it encourages a regular flow across the boundary and increases available energy when a given society is not actively investing in new technology. Depending on how a system is expanding, it is often cheaper to obtain goods through transitions rather than at-home production. When a system is relatively stable (i.e., not disintegrating or rapidly growing), increased permeability of boundaries is associated with increased polity size and less centralization, and boundary closure is associated with smaller polity size and greater centralization. There is an important balance here between territory and control, which speaks to the importance of boundary maintenance as well as those individuals who are regulating external interactions.

Elaborating on the colonial model of frontiers, these are generally understood as spaces important for territorial advancement, sharp boundary maintenance to segregate the colonial from the indigenous populations, and containment of homogenous colonial populations

(Lightfoot 1995). Lightfoot (1995) argues against the traditional core-periphery model, which suggests that cultural innovations move outward from the dominant cultural and economic center to the passive periphery. This model typically frames the frontier as simply a territorial marker, and marginalizes the role of indigenous-colonial interactions in cultural transformation. He states that there is significant evidence to suggest that colonial people cooperated with and exploited indigenous relationships and vice versa through activities like arranged marriages, work cooperatives, and alliances to mutually beneficial ends (Brumfiel 1994). As Kowalewski (1982) suggests, colonial territorial advancement was associated with permeability and a mixing of culture at the frontier.

King (2002) further argues for a regional perspective beyond the traditional definition of Mississippian chiefdoms. Frontiers are typically at the forefront of transgressive trends, and can thus provide insight into the development of Mississippian social formations. Using the example of the Creek, a group at the temporal periphery of Mississippian culture during the seventeenth and eighteenth centuries, he attempts to map what became of the Mississippian period. During the middle to late Mississippian period, most Mississippian groups followed a mainly network political-economic strategy that followed individual decision makers who used goods and energy to legitimize their decision-making monopoly into social networks. However, as a periphery of the Mississippian world, the Creek were structured differently around a corporate political economic strategy, in which the social group was valued over individual wealth and status and activities were much more group oriented, like collective decision making and use of goods for beneficial community projects. In the period of instability caused by the arrival of European colonizers and the diseases they brought with them, the corporate, community-centered strategy practiced by the Creek put them in a position better suited to accommodate this regional change

and incorporate disparate groups remaining in the Southeast, eventually forming new polities in the shadow of the Mississippian. By understanding the periphery and its adaptive qualities, the rise and ultimate fall of Mississippian culture can be better understood.

Southwest Virginia

Mississippian sites in southwestern Virginia are located at the northern periphery of this cultural epoch given the location and the lack of extensive floodplain resources common at the core (Jefferies 1996). The area first started to gain archaeological attention in mid-twentieth century due to the rich artifact assemblages found there. Holland (1970) suggested that the area was a cultural crossroads, based in part on its terrain, made up of rivers originating from and flowing out of the state. Throughout the 1960s, analyses of ceramic assemblages supported the cultural crossroads concept, as ceramics similar to that of Tennessee, North Carolina, and northern Georgia were found, as well as ceramics that mixed together different regional styles. In the 1980s, additional evidence in the archaeological record suggested that southwest Virginia might have been the location of ranked societies, if not chiefdoms (Turner 1983).

The Croley-Evans site in Kentucky provides further evidence of how these peripheral societies adapted to their location, and how this is represented in the artifact assemblage (Jefferies 1996). Croley-Evans is located spatially between the Mississippian world and the Fort Ancient culture of the Late Woodland period, and temporally contemporaneous with both. The ceramic assemblage was mainly shell-tempered, similar to much of the Mississippian tradition, but lacked exotic vessels that the period became known for, which suggests that the site was relatively isolated from major centers. The faunal assemblage also suggested that the site had an ecologically distinct subsistence strategy from other Mississippian sites in the region. The

residents practiced a mixed foraging and farming subsistence strategy comparable to Mississippi sites. However, the proportion of how much the inhabitants of the Croley-Evans site relied on nuts sets it apart from both Mississippian and Fort Ancient tradition, and Jefferies likens this assemblage to a typical Late Woodland assemblage, rather than one or the other. The unique faunal and ceramic assemblage are, he argues, manifestations of the differing social and environmental demands between the frontier and their core.

In addition to these adaptive strategies, Meyers (2006) argues that the settlement type and nature of power at the frontier manifested in different types of leadership and administrative patterning at the periphery. In an analysis of sites in three counties in southwestern Virginia, she established two different types of settlement patterns: center, in which the administrative node is literally located centrally to all the secondary settlements, and dendritic, in which the administrative node was a fixed point from which secondary settlement branched off in one direction. Generally, a central settlement pattern is associated with larger Mississippian chiefdoms like Moundville, which saturated the settlement for the administrative center to protect resources and control the flow of said resources out from the center. Dendritic settlement patterns are more common in frontiers, as the administrative center can collect and distribute resources from multiple environments along transport routes. In southwestern Virginia, frontier communities moved commodities like salt, copper, and shell to elite settlements in the core. By manipulating the location and organization of trade routes and settlements, frontier leaders pursued a different route to power than that of the traditional Mississippian core.

Trade, made possible by access to extralocal goods, essentially functioned as the basis of chiefly power on the frontier (Meyers 2015). But trade that took place between the periphery and the core was not limited to exotic commodities; they also traded information. The frontier

chiefdoms served as a defense or warning system against outside threats, brokered peace with local communities, and the act of defining of what makes a valued commodity is a source of power on both sides; the frontier which procures said commodities, and the core which upholds claims to power through the acquisition of them.

Carter Robinson is one of two mound sites in southwestern Virginia - the other being Ely Mound - and was settled during the fourteenth century in order to take advantage of economic opportunities at the frontier. People followed a trade-centered route to power previously mentioned, evident in the frequency of shell, salt, and cannel coal at the site and the fact that the area's environment does not support intensive maize agriculture. However, power at Carter Robinson is visible in a typical Mississippian fashion with differences in household placement and size as well as the act of mound building. Power in frontier chiefdoms could also be pursued by many individuals, given the accessibility of trade and outside connections and, Meyers (2015) argues, the lack of a rigid sociopolitical structure prohibiting access to power. The economic strategies available to communities like Carter Robinson could theoretically allow for power to increase through non-confrontational means, thus conserving resources like warriors and increasing exchange. All of this considered, the power amassed at a peripheral chiefdom could rival that of a core chiefdom.

Carter Robinson was excavated between 2006-2017 by the University of Mississippi (Meyers 2011; 2015; 2017; Warner 2018). These excavations identified remains of five Mississippian-style houses and a shell bead production area, as well as two mound-building stages. The site was first occupied in the late thirteenth century by a population likely originating from the Norris Basin area. The mound was then built in two stages over a fifty-year period. During the second stage, occupation was located around the mound and there is evidence of shell

bead and fiber production occurring. A house east of the mound dated toward the end of site occupation found evidence of shell bead production and Pisgah sherds, suggesting the formation of trade relations. The site was abandoned by 1375 A.D. The research following this excavation focused on better defining the identified structures as well as the stages of shell bead production at the site. By analyzing these artifacts, the household-level distribution and variation of Mississippian craft production can be better understood (Meyers 2017).

Shell bead production specifically at Carter Robinson began in the middle of the site occupation around the same time that ceramics at the site changed to combine both Mississippian and Woodland styles of production (Meyers 2017). This suggests a deepening relationship with local groups and, thus, is indicative of a rise in chiefly power at the site. Meyers additionally argues that further analysis of shell bead production debris at the household level can shed light on the social relationship between different households as well as the economic importance of shell beads during this time period.

Household Archaeology

This section focuses on methods of household artifact analysis and how the individual household can be reflective of the economy of the society as a whole.

Households serve as an important analytical unit from which one can identify aspects of social organization through archaeology and a cross-cultural comparative framework (Hirth, 1992). Households acquire symbolic importance over time, either politically as an administrative seat of power, or on an individual level as people identify with a place due to burials there or thinking of it as their ancestral home. Households are created and maintained in connection with

social and economic factors, and household form can directly reflect the economic modes of production, resource ownership, and distribution that defines their creation.

A household and its related assemblages similarly convey information to reconstruct social rank (Hirth 1993). The most common indicators of rank and wealth include: household size, architectural design, and tool assemblages. Household size is the most common indicator of rank, as more powerful individuals will have a space that reflects the inclusion of non-kinsmen in a household. Architecture differentiates elite spaces through special features and building materials as a manifestation of their power and control over resources. Tool assemblages will vary qualitatively and quantitatively, as tool functions - or lack thereof - and quantity are indicators of wealth. However, individual categories cannot be solely relied upon to make socioeconomic claims and thus the reliability of any conclusion is dependent on the number of artifact classes and data sets included. Socioeconomic rank could theoretically be determined using household assemblages so long as the data size condition is met.

Gougeon (2000) focuses specifically on the ceramic assemblage of households in an attempt to identify the number of potters supplying each household. His work builds on the assumption that ceramic production was standardized in the sample area, meaning that there is a reduced variation in vessel attributes due to the scale of production. And the idea that an individual potter either consciously or subconsciously repeats the same techniques in their work, and this differs from that of other potters in the same household or community. He concluded that it is possible to determine the number of potters in a household based on stylistic choices, and suggests that this research can be applicable to an intra-community or even regional scale as a way to understand the nature of household level prehistoric behavior.

By modeling ceramic refuse in a computer simulation, Pauketat (1989) determined the duration of small habitation sites in the American Bottom. By analyzing fourteen homesteads in the Lohmann or Stirling phases - present in and around Cahokia around 1000-1150 A.D. - he determined that occupation ranged from less than a year up to thirty years, and most of the homesteads were likely abandoned gradually. From this, he argues that this variable occupation along with the settlement hierarchy reflects a loosely integrated chiefdom with a tributary economy in the American bottom.

Ceramics

Braun (1983) analysed a ceramic assemblage with a focus on its mechanical attributes to attempt to answer why vessel styles and attributes change over time. He argues that pre-industrial potters were aware of the technical effects of decisions made during vessel manufacture. Pots were created to be used, not just to be tempered and decorated to demonstrate cultural affiliation. Most important to a pre-industrial potter is the ability for a pot to perform its intended function - i.e., withstanding physical stress without shattering or being able to manipulate the contents of a vessel - and this thus constrains the type of type of decoration a vessel can receive and the social information it carries. He criticizes ceramic typologies that combine decorative and mechanical aspects for this reason. Further, ceramic technical variation can be used to inform whole-vessel use. For example, wall thickness can be used as a measure of thermal shock resistance to determine if a vessel was created to be used over a fire. Overall, he argues that much of the technical variation seen in pots is simply variations of mechanical demands depending on intended use and ceramic typologies need to have greater consideration when they include mechanical alongside decorative aspects.

In contrast, Gosselain (1998) argues that technical behaviors *are* cultural productions rather than just a utilitarian aspect of vessel manufacturing. He disagrees with previous interpretations of ceramics that frames vessel manufacturing as constrictive, with style only existing in neutral or functionless areas for the sake of cost-efficiency. Instead, style exists in every stage of manufacturing, given the fact that learning is a social practice that will inform technical choices. Material culture, he argues, has a direct link to ethnicity and shared knowledge. Contrary to Braun (1983), Gosselain views vessel manufacture as a cultural activity, with mechanical properties merely a side effect of this accumulated knowledge.

Chapter 3. Methods

Fieldwork at the Ely Mound site (44LE12) in Lee County, Virginia was conducted from May 30-June 22, 2019 under the direction of Dr. Maureen Meyers, assisted by students at the University of Mississippi as part of the annual field school. This mound site was last archaeologically excavated in 1877 by the Harvard Peabody Museum (Carr 1877). This previous excavation identified individuals buried in the mound associated with Mississippian elite status symbols, like shell gorgets and shell earplugs. No village has ever been identified with the site. Additionally, there is little understanding of how this site fits into the regional late prehistoric settlement pattern, or how it functioned on the edge of the Mississippian world. Excavations were conducted in order to identify any village remains. With permission from the site owners — The Archaeological Conservancy, the Virginia Department of Historic Resources, and the Virginia Wilderness Foundation — fieldwork consisted of close-interval shovel testing to identify site limits and cultural occupations, as well as test unit block excavations in selected areas and mound test unit excavations to identify mound stages. A contour map of the site was made and a datum was established, located on the eastern-central edge of the site, along a stream marking the site's eastern boundary, and given an arbitrary 1000N 1000E designation.

Shovel Testing

Shovel tests were excavated every 10 meters based on an established datum (Figure 3.1). Beginning in the southwest property corner, shovel tests were laid in an eastward direction in line with the southern fence that parallels Rt. 58, beginning at the western property fence line and running east. Shovel tests pits (STPs) were located between the fence marking the western property line and the creek on the eastern edge of the property, and encompassed both the mound and the barn. Transects were labeled alphabetically A, B, C, etc., and shovel tests in each transect

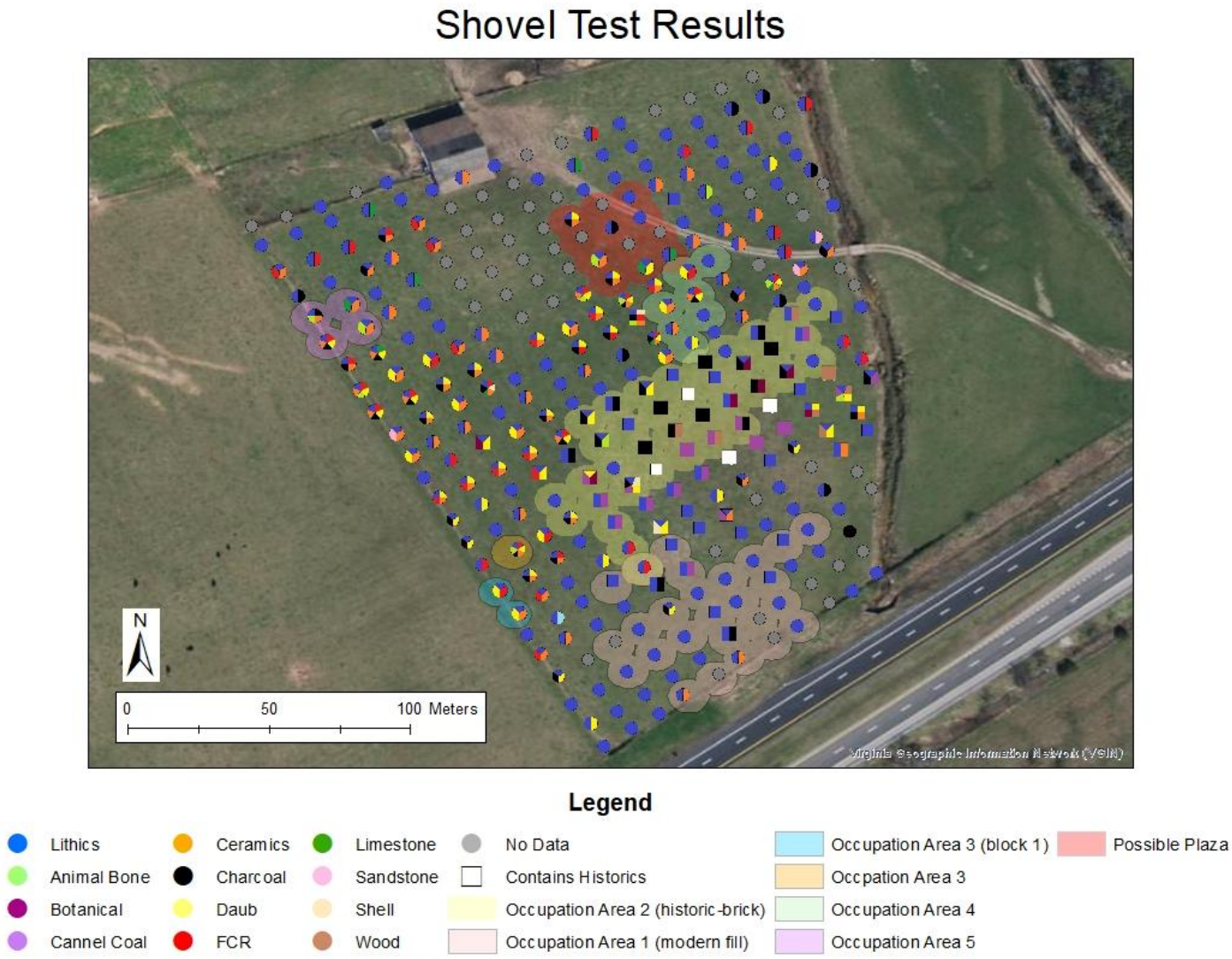

Figure 3.1. Map of Ely Mound shovel tests (44LE12)

were labeled numerically, so the first STP was A-1. Each STP was excavated to subsoil and screened through a ¼-inch mesh screen. Cultural and stratigraphic layers were recorded. Artifacts from each identified layer were cleaned and bagged separately according to level. During excavation, the dirt from each shovel test was screened over plastic in order to backfill the hole upon completion. The shovel test "cap" or the upper layer of hummus was preserved and replaced after the hole was backfilled. A total of 297 shovel tests were excavated, and 193 were positive (65%). Positive shovel tests were used to create maps of total artifact frequencies and typological frequencies to identify probable structure locations. At least five areas of occupation were identified through the shovel tests. These occupations include both prehistoric and historic remains, as well as modern disturbance. These occupation areas were used to determine the location of test units.

Test Unit Excavations

Based on the results of the shovel tests, test units were placed in select areas. A total of 16 1-x-1-m test units were excavated, including one 1-x-2-m test unit in the western mound flank, and two blocks of seven test units in two separate areas along the western edge of the site. An area of multiple positive shovel tests was located along the western property line. Some of these STPs included prehistoric pottery and one included a burned log and thick midden layer. Test units were placed in both of these areas to recover structure remains. Initial test units were excavated in 10-centimeter arbitrary levels. Once plowzone was identified—usually at a depth of about 30 centimeters below surface (cmbd)—subsequent test units had the plowzone removed as one level (Level 1) and then excavation changed to trowel by arbitrary 10-cm levels until sterile subsoil or features or cultural zones were encountered.

Features, mostly postholes, identified were drawn, photographed, bisected, and screened through a ¼-in mesh screen separately from the surrounding material. Once features were bisected, they were profiled, then the entire feature was excavated in 10-cm levels. Photographs were taken pre- and post- excavation, along with photographs of the bisected feature. Zones were distinguished by changes in soil texture and color and were labeled numerically and mapped. Artifacts from each feature and from each zone were collected and bagged separately. If a zone exceeded 10 cm in depth, it was excavated in 10-cm levels, numbered sequentially.

Following excavation, all test units were covered in black plastic and rust-resistant metallic tags labeled with site number, test unit number and date were placed in each test unit. Test units were then backfilled.

Cataloging and Analysis

All artifacts collected from the shovel tests and test units were cleaned and bagged in acid-free polypropylene bags and labeled with provenience information daily. Artifacts were returned to the University of Mississippi Labs for analysis. Initial analysis included storing artifacts by type: ceramics, lithics, animal bone, botanical remains, shell, etc. Each sorted provenience lot was then analyzed and recorded on both analysis sheets and in an Excel spreadsheet.

Specific Analyses

<u>Lithics</u>

Lithic material was counted and recorded on analysis sheets. They were identified by artifact type (eg. flake, core, drill, graver, flake tool, etc.) and within artifact type by material (eg. chert, heat-treated chert, quartz, etc.). Drawings were made for select stone tools.

Ceramics

Ceramics were sorted by temper and within temper categories by surface decoration. They were also sorted by sherd type (eg. body, rim, residual, or other). Rims were further analyzed on special rim analysis sheets, including data on paste and morphological attributes, as well as sketches of each sherd and a profile view.

Other Artifacts

Faunal remains were sorted as shell or animal bones, and the count and/or weight of remains were recorded for each provenience. Daub and botanical remains were weighed and recorded for each provenience. Radiocarbon dates were obtained from charcoal samples from multiple features and levels. Other artifacts identified such as fire cracked rock and pebbles were recorded separately by provenience.

The catalog of all artifacts recovered is available as an appendix.

Chapter 4. Results

Fieldwork at the Ely Mound site (44LE12) in Lee County, Virginia was conducted in order to identify any village remains, site limits, and more broadly understand how the settlement functioned at the edge of the Mississippian world. Shovel tests were conducted to identify possible occupation areas and ultimately one test unit was opened in the western mound flank, as well as two blocks of seven test units in two separate areas along the western edge of the site, referred to as Block 1 and Block 2. This thesis focuses on Block 1 only.

Block 1 Test Units

Block 1 was located between shovel test pit (STP) G-1 and STP H-1 it consisted of seven contiguous test units. The initial test unit was excavated in four arbitrary 10-cm layers, to a total depth of 40 cmbs. Each subsequent test unit was excavated in three 10-cm layers, to a total depth of 30 cmbs. A total of 2,677 artifacts - including ceramics, lithics, daub, and botanical remains - were recovered in this block, and 26 features, all postholes, were identified.

Level 1 in the initial test unit, N880 E890, was a dark brown clay (10YR3/3) silt that contained 142 artifacts, including lithics, sherds, and daub (Table 4.1). Level 2 was a very dark brown clay (7.5YR2.5/2) silt that contained 282 artifacts, including lithics, sherds, fire cracked rock, and daub. Level 3 was a very dark brown clay (7.5YR2.5/3) silt that contained 151 artifacts, including lithics, ceramics, and daub. Level 4, excavated to a depth of 35 cmbs, was a strong blown clay (7.5YR4/6) mixed with soil from Level 3 and contained 55 artifacts, including lithics, ceramics, charcoal, and fire cracked rock. Feature 18, a possible posthole, was identified in Level 4 in the north-central part of the test unit. It was a very dark brown silty clay (10YR2/2) loam and excavation recovered one flake. The feature measured 25 cm north-south, and 24 cm

east-west and extended to a total depth of 33 cm. An additional, smaller posthole was identified 3 cm northwest of Feature 18. This feature was mapped, but not excavated.

Table 4.1. Test Unit N880 E890 Artifact count and distribution.						
	Lithics (n)	**Ceramics (n)**	**FCR (n)**	**Daub (g)**	**Botanical (g)**	**Total per Level (n)**
Level 1	135 (22.7%)	7 (33.3%)	-	4.7 (22.5%)	-	142 (22.5%)
Level 2	262 (44%)	7 (33.3%)	13 (86.7%)	7.7 (36.8%)	-	282 (44.7%)
Level 3	146 (24.5%)	5 (23.8%)	-	8.5 (40.7%)	-	151 (23.9%)
Level 4	51 (8.6%)	2 (9.6%)	2 (13.3%)	-	< 0.1 (100%)	55 (8.7%)
Feature 18	1 (0.2%)	-	-	-	-	1 (0.2%)
Total	**595**	**21**	**15**	**20.9 g**	**< 0.1**	**631**

Six additional test units were opened immediately north of Test Unit N880 E890, all of which contained a similar stratigraphy to the first test unit. Excavated features in the following test units were identified at an approximate depth of 30-35 cmbs.

Test Unit N881 E890, was excavated in two levels and three features were identified and excavated in this test unit - Features 12, 16, and 17. Level 1 (0-30 cmbs) contained 399 artifacts, including charcoal, daub, lithics, and fire cracked rock (Table 4.2). Level 2 contained 62 artifacts, including ceramics, lithics, and charcoal. Feature 12 contained 3 artifacts, including ceramics, lithics, and charcoal. Feature 16 contained 1 flake. Feature 17 contained 21 lithic artifacts, and charcoal. All of these features measure between 5-10 cm in diameter.

Test Unit N881 E891 was excavated in four 10-cm levels to a total depth of 40 cmbs and four features were identified and excavated - Features 6, 9, 10, and 11. Level 1 contained 9 lithic artifacts (Table 4.3). Level 2 contained 100 lithic artifacts. Level 3 contained 53 artifacts, including ceramics lithics, daub, fire cracked rock, and botanical remains. Level 4 contained 46

Table 4.2. Test Unit N881 E890 Artifact count and distribution.						
	Lithics (n)	**Ceramics (n)**	**FCR (n)**	**Daub (g)**	**Botanical (g)**	**Total per Level (n)**
Level 1	380 (82.3%)	-	19 (100%)	9.9 (100%)	0.5 (12.5%)	399 (82.1%)
Level 2	59 (12.8%)	3 (60%)	-	-	< 0.1 (2.5%)	62 (12.8%)
Feature 12	1 (0.2%)	2 (40%)	-	-	3.3 (82.5%)	3 (0.6%)
Feature 16	1 (0.2%)	-	-	-	-	1 (0.2%)
Feature 17	21 (4.5%)	-	-	-	< 0.1 (2.5%)	21(4.3%)
Total	**462**	**5**	**19**	**9.9 g**	**4 g**	**486**

artifacts, including ceramics, lithics, daub, fire cracked rock, and botanical remains. All four features were probable postmolds. Feature 6, located in the northeast corner of the test unit, contained 4 artifacts, including lithics, daub, and botanical remains. Feature 9, located in the north-central part of the test unit, contained one sherd, daub, and botanical remains. Feature 10, located in the south-central part of the test unit, contained two artifacts, including lithics, daub, and botanical remains. Feature 11, located in the northwest corner of the test unit, contained 12 artifacts, including lithics, ceramics, fire cracked rock, daub, and botanical remains. All of these features measured between 5-10 cm in diameter.

Table 4.3. Test Unit N881 E891 Artifact count and distribution.

	Lithics (n)	**Ceramics (n)**	**FCR (n)**	**Daub (g)**	**Botanical (g)**	**Total Per Level (n)**
Level 1	9 (4.3%)	-	-	-	-	9 (4%)
Level 2	100 (47.4%)	-	-	-	-	100 (44.1%)
Level 3	47 (22.3%)	1 (12.5%)	5 (62.5%)	3.9 (21.9%)	1.0 (31.3%)	53 (23.3%)
Level 4	41 (19.4%)	4 (50%)	1 (12.5%)	6.0 (33.7%)	< 0.1 (3.1%)	46 (20.2%)
Feature 6	4 (1.9%)	-	-	5.6 (31.5%)	1.5 (46.9%)	4 (1.8%)
Feature 9	-	1 (12.5%)	-	0.3 (1.7%)	< 0.1 (3.1%)	1 (0.4%)
Feature 10	2 (0.9%)	-	-	0.9 (5%)	< 0.1 (3.1%)	2 (0.9%)
Feature 11	8 (3.8%)	2 (25%)	2 (25%)	1.1 (6.2%)	0.4 (12.5%)	12 (5.3%)
Total	**211**	**8**	**8**	**17.8 g**	**3.2 g**	**227**

Test Unit N881 E892 was excavated in two levels to a depth of approximately 30 cmbd and four features were identified and excavated - Features 1, 2, 4, and 5. Level 1, excavated to a depth of of 30 cmbd, contained 402 artifacts, including lithics, ceramics, daub, botanical remains, shell, and fire cracked rock (Table 4.4). Level 3 contained 69 artifacts, including lithics, ceramics, daub, botanical remains, and fragments of groundstone and hematite. Feature 1, located in the eastern-central part of the test unit, was a probable postmold and contained 39 artifacts, including lithics, ceramics, daub, botanical remains, and animal bone. Feature 2, also a postmold, contained one lithic artifact and daub. Feature 4, located in the western-central part of the test unit, contained one lithic artifact and daub. Feature 5, located in the southeast corner of the test unit contained three artifacts, including lithics, ceramics, daub, and botanical remains.

Feature 1 is approximately 35 cm in diameter. Features 2, 4, and 5 measure between 5-10 cm in diameter.

Table 4.4. Test Unit N881 E892 Artifact count and distribution.								
	Lithics (n)	**Ceramics (n)**	**FCR (n)**	**Animal Bone (n)**	**Daub (g)**	**Botanical (g)**	**Shell (g)**	**Total per Level (n)**
Level 1	374 (81.1%)	11 (31.4%)	17 (100%)	-	18.9 (77.1%)	0.4 (40%)	< 0.1 (100%)	402 (78%)
Level 3	68 (14.8%)	1 (2.9%)	-	-	1.8 (7.4%)	< 0.1 (10%)	-	69 (13.4%)
Feature 1	15 (3.3%)	22 (62.8%)	-	2 (100%)	1.0 (4.1%)	< 0.1 (10%)	-	39 (7.6%)
Feature 2	1 (0.2%)	-	-	-	0.5 (2%)	-	-	1 (0.2%)
Feature 4	1 (0.2%)	-	-	-	1.2 (4.9%)	-	-	1 (0.2%)
Feature 5	2 (0.4%)	1 (2.9%)	-	-	1.1 (4.5%)	0.4 (40%)	-	3 (0.6%)
Total	**461**	**35**	**17**	**2**	**24.5 g**	**1.0 g**	**< 0.1 g**	**515**

Test Unit N882 E890 contained three excavated features: Feature 13, Feature 14, and Feature 15. Feature 13 contained 1 lithic artifact and daub. Feature 14 contained 2 lithic artifacts. Feature 15 contained 3 lithic artifacts (Table 4.5). All of these features measure between 5-10 cm in diameter.

Table 4.5. Test Unit N882 E890 Artifact count and distribution.		
	Lithics (n)	**Daub (g)**
Feature 13	1	0.6
Feature 14	2	-
Feature 15	3	-
Total	**6**	**0.6g**

Test Unit N882 E891 was excavated to a depth of 30 cmbd and a plow zone and midden was identified and excavated as one feature from 0-30 cm. The plow zone and midden, occupying the north-central half of the test unit, contained 333 artifacts, including lithics, ceramics, daub, botanical remains, fire cracked rock, and fragments of jasper and quartzite pebbles (Table 4.6). No other features in this test unit were excavated. Level 3 contained 48 artifacts, including lithics, ceramics, daub, and botanical remains.

Table 4.6. Test Unit N882 E891 Artifact count and distribution.						
	Lithics (n)	**Ceramics (n)**	**FCR (n)**	**Daub (g)**	**Botanical (g)**	**Total per Level (n)**
PZ/Midden	331 (88%)	2 (40%)	2 (100%)	6.7 (30.3%)	1.7 (94.4%)	335 (87.5%)
Level 3	45 (12%)	3 (60%)	-	15.4 (69.7%)	< 0.1(0.6%)	48 (12.5%)
Total	**376**	**5**	**2**	**22.1 g**	**1.8 g**	**383**

Test Unit N882 E892 was excavated in a depth of 40 cmbd and two features - Features 7 and 8 - were identified and excavated. A total of 324 artifacts were recovered from the 0-30 cm level, including lithics, ceramics, daub, botanical remains, fire cracked rock, and a quartzite pebble. Feature 7 was located between units N882 E891 and N882 E892. Artifacts were cataloged according to the location in the western or eastern half of the feature. The western half of Feature 7 contained 26 artifacts, including lithics, ceramics, daub, fire cracked rock, and animal bone (Table 4.7). The eastern half of Feature 7 contained 42 artifacts, including lithics, ceramics, daub, botanical remains, and animal bone. Feature 8 contained 10 ceramic artifacts and daub.

Table 4.7. Test Unit N882 E892 Artifact count and distribution.

	Lithics (n)	Ceramics (n)	FCR (n)	Animal Bone (n)	Daub (g)	Botanical (g)	Total per Level (n)
0-30 cm	297 (87.9%)	19 (35.8%)	8 (40%)		112.4 (67.6%)	0.9 (24.3%)	324 (78.8%)
Feature 7 W ½	11 (3.2%)	17 (32.1%)	8 (40%)	1 (50%)	14.2 (8.5%)	-	36 (8.8%)
Feature 7 E ½	30 (8.9%)	7 (13.2%)	4 (20%)	1 (50%)	39.4 (23.7%)	2.8 (75.7%)	41(10%)
Feature 8	-	10 (18.9%)	-	-	0.3 (0.2%)	-	10 (2.4%)
Total	**338**	**53**	**20**	**2**	**166.3 g**	**3.7 g**	**411**

Cleaning of the entire block was done after all test units were excavated to the same cultural level below plowzone. Block 1 floor cleaning at a depth of 35 cmbd recovered an additional 115 artifacts. These included lithics (n=98), ceramics (n=9), daub (49.9 g), botanical remains (2.0 g), fire cracked rock (n=5), and animal bone (n=3).

Ceramics

A total of 136 ceramic artifacts were recovered from Block 1. Of these, 90 were residual sherds of which only temper was able to be recorded. Additional attributes, primarily surface decoration, were recorded for the remaining 25 body sherds and 9 rim sherds. Due to the low number and small size of the rim sherds analyzed, information about vessel shape or type is not

statistically significant, though analyses of data on rim angles and estimated orifice diameter are presented and suggest that most of the vessels are bowls.

The majority of the sherds (70%) were primarily grit-and-grog-tempered, followed by a combination of shell, grit, and grog (13%) temper (Table 4.8). Mica and limestone each only account for 1% of the temper present in the sample, and these inclusions are only present-primarily or secondarily- in a total of 5 sherds. Surface decoration of the sherds include plain, cordmarked, incised, and stamped. In addition, a salt pan fragment may be present (Table 4.9). Most sherds (61%) were not able to be identified to decoration, a result of their residual nature. Of the sherds with recorded surface decoration, the two most common types are plain (72%) and cordmarked (22%). Incised, stamped, and incised/stamped each only makeup 2% of this sample.

Table 4.8. Count and percentage of temper types

Temper Type	N	Percent
Grit and Grog	96	70%
Shell, Grit, and Grog	17	13%
Grit	11	8%
Grog	5	4%
Mica and Grit	2	1%
Grit, Grog, Shell	2	1%
Grit and Mica	2	1%
Limestone and Grit	1	1%
Total	**136**	**-**

Table 4.9. Count and percentage of decoration type

Decoration	N	Percent (total sample)	Percent (excluding UID)
Plain	33	24%	72%
Cordmarked	10	7%	22%
Incised	1	1%	2%
Stamped	1	1%	2%
Incised/Stamped	1	1%	2%
UID or not recorded	90	22%	-
Total	**136**	**-**	**-**
Total (excluding UID)	**46**	**-**	**-**

Overall, the most common ceramics found in Block 1 are grit-and-grog-tempered sherds with a plain or cordmarked surface (Table 4.10). Additionally, all of the primarily shell-tempered sherds were recovered in the upper levels, suggesting that shell was being incorporated toward the end of site occupation (Table 4.10). The presence of primarily limestone and mica-tempered sherds (n=3) in the same levels suggest that there is some degree of regional exchange occurring at the same time.

Table 4.10. Level distribution of primary temper

Level	Grit	Grog	Shell	Limestone	Mica
PZ/Midden (0-30cmbd)	3 (3%)	-	17 (100%)	1 (100%)	-
L1	17 (15%)	-	-	-	2 (100%)
L2	8 (7%)	1 (20%)	-	-	-
L3	9 (8%)	1 (20%)	-	-	-
L4	27 (25%)	3 (60%)	-	-	-
Features	38 (34%)	-	-	-	-
Floor Clean, 35 cmbd	9 (8%)	-	-	-	-
Total	**111**	**5**	**17**	**1**	**2**

Artifact assemblages at Carter Robinson, located within the same county as Ely, similarly show an early to middle Mississippian occupation by the presence of ceramic types that transition from grit to shell temper. At the same time that ceramic types changed at the site, Carter Robinson began extensive shell bead production. The lack of shell remains and the significant presence of shell-tempered pottery could suggest that this structure was abandoned previously to shell craft production at Carter Robinson and around the same time Carter Robinson transitioned to shell-tempered pottery (Meyers 2011; 2015; 2017).

Sherds with shell (n=2) and mica (n=2) inclusions are also present in Features 7 and 12, respectively (Table 4.11). This suggests that these features are from a later occupation period than the others, whose ceramic assemblages are made up solely of grit-and-grog or grit-tempered pottery.

Table 4.11. Feature distribution of temper				
Feature	**Grit and Grog**	**Grit**	**Grit and Mica**	**Grit, Grog, and Shell**
Feature 1	22 (39.3%)	-	-	-
Feature 5	1 (1.8%)	-	-	-
Feature 7 E ½	7 (12.5%)	-	-	-
Feature 7 W ½	15 (26.8%)	-	-	2 (100%)
Feature 8	9 (16.1%)	-	-	-
Feature 9	-	1 (33.3%)	-	-
Feature 11	-	2 (66.7%)	-	-
Feature 12	-	-	2 (100%)	-
Plowzone/Midden	2 (3.5%)	-	-	-
Total	**56**	**3**	**2**	**2**

Structure Type

Looking at the artifact assemblage as a whole, the structure type and associated activities can be examined. Lithic artifacts collected at the site (n=2,541) significantly outnumber ceramic artifacts (n=136), suggesting that the structure is a tool making and lithic reduction area. Lithic artifacts are concentrated primarily in Test Unit N880 E890 and secondarily in Test Unit N881 E890 on the southwestern side of the block (Figure 4.1; Table 4.12). Ceramic artifacts are concentrated primarily in TU N882 E892 and secondarily TU N881 E892 on the northeastern side of the block (Figure 4.2; Table 4.12). Not many botanical remains were recovered from the block, and they were concentrated primarily in TU N881 E890 and TU N882 E892, in the eastern central part of the block (Figure 4.3; Table 4.12). Daub is concentrated primarily in TU N882 E892 and secondarily in TU N881 E892 and TU N882 E891, in the northeastern area of the block (Figure 4.4; Table 13).

All of this suggests that there is a possible wall located where the daub is concentrated in the block (see Figure 4.4). Ceramics are concentrated generally in the same test units as the daub, suggesting that these areas represent part of the inside or near the inside of the structure. Lithics concentrated in the southern end of the block suggest that this area is a tool making and lithic

Table 4.12. Distribution and count of artifacts by test unit					
Test Unit N	**Test Unit E**	**Ceramics (n)**	**Lithics (n)**	**Daub (g)**	**Botanical (g)**
880					
	890	21 (15.4%)	595 (23.4%)	20.9 (6.7%)	< 0.1 (0.6%)
881					
	890	5 (3.7%)	462 (18.2%)	9.9 (3.2%)	3.9 (24.8%)
	891	8 (5.9%)	211 (8.3%)	17.8 (5.7%)	3.2 (20.4%)
	892	35 (25.7%)	459 (18.1%)	24.5 (7.8%)	1.0 (6.4%)
882					
	890	---	6 (0.2%)	0.6 (0.2%)	---
	891	5 (3.7%)	373 (14.7%)	22.1 (7.1%)	1.8 (11.5%)
	892	53 (39%)	337 (13.3%)	166.3g (53.3%)	3.7 (23.6%)
Floor Clean		9 (6.6%)	98 (3.8%)	49.9 (16%)	2.0 (12.7%)
	Total	**136**	**2,541**	**312g**	**15.7g**

reduction area located outside the structure. The botanical remains concentrated near the lithics and daub could reflect a burn pattern located outside of the structure. Additionally, most of the botanical remains were wood, not seeds, so botanical remains in TU N882 E891 are possibly wood from a roof, representing an overhang area outside of the house.

Overall, the artifact distribution suggests that the block uncovered a section of one wall as well as part of the outside and inside of a domestic structure. Based on the quantity of lithic artifacts, it appears that lithic reduction was occurring outside the structure

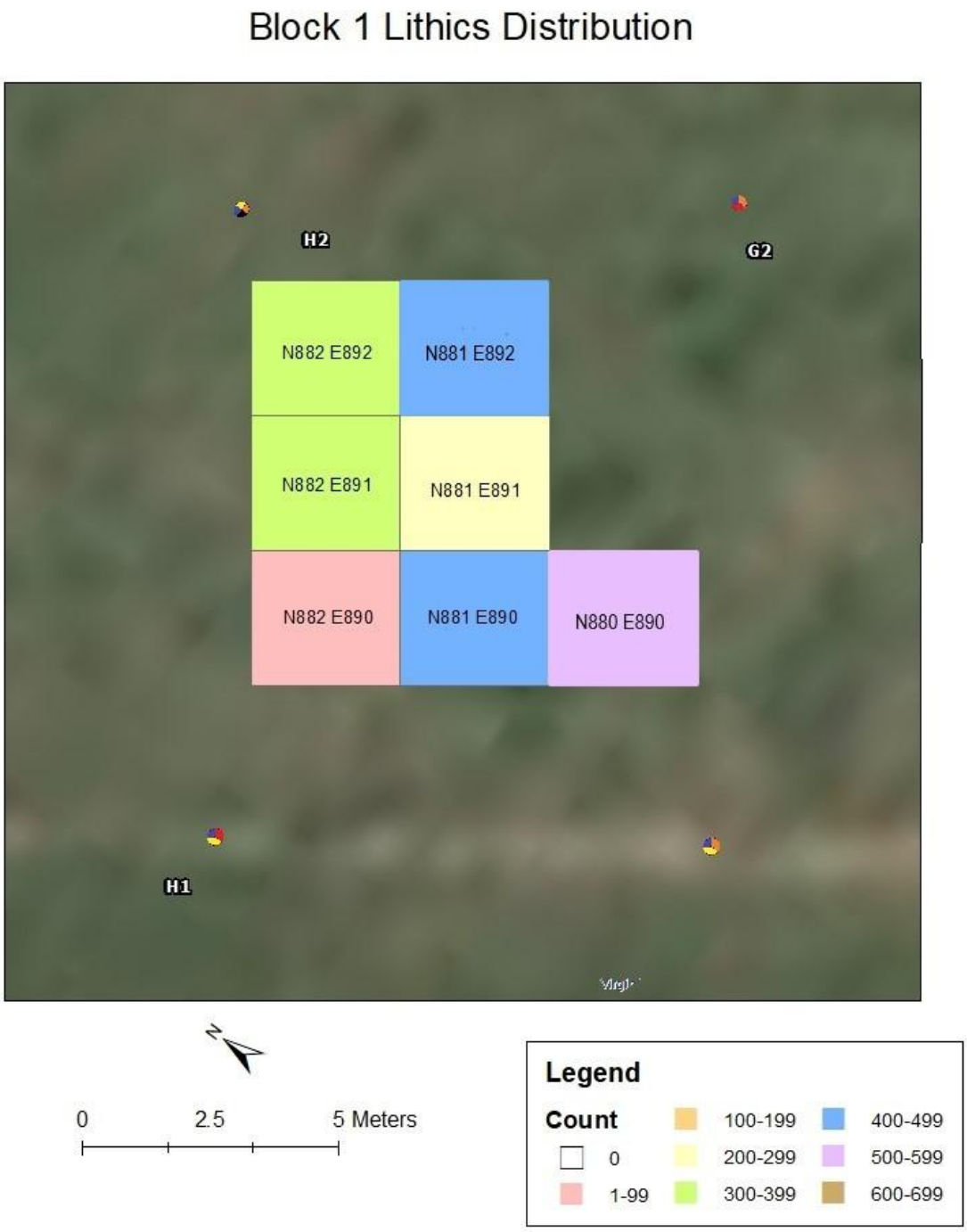

Figure 4.1. Block 1 lithic distribution

Figure 4.2. Block 1 ceramic distribution

Figure 4.3. Block 1 botanical remains distribution

Figure 4.4. Block 1 daub distribution

Radiocarbon Dates

Radiocarbon dates for Block 1were calculated from samples of charcoal obtained from N881 E891 Feature 11, N882 E892 Feature 7, Level 4, and N906 E888 Level 3. BP (before present) ages and calibrated date ranges for all of these samples are shown in Table 4.13 and Figure 4.5.

Table 4.13. Radiocarbon dates from Block 1

Location	Test Unit	Sample Type	BP age	2 sigma range
Feature 11	N881 E891	Charcoal	366 +/- 20	1456-1631
Feature 7, Level 4	N882 E892	Charcoal	250 +/- 20	1470-1635
Level 3	N906 E888	Charcoal	412 +/- 21	1437-1615

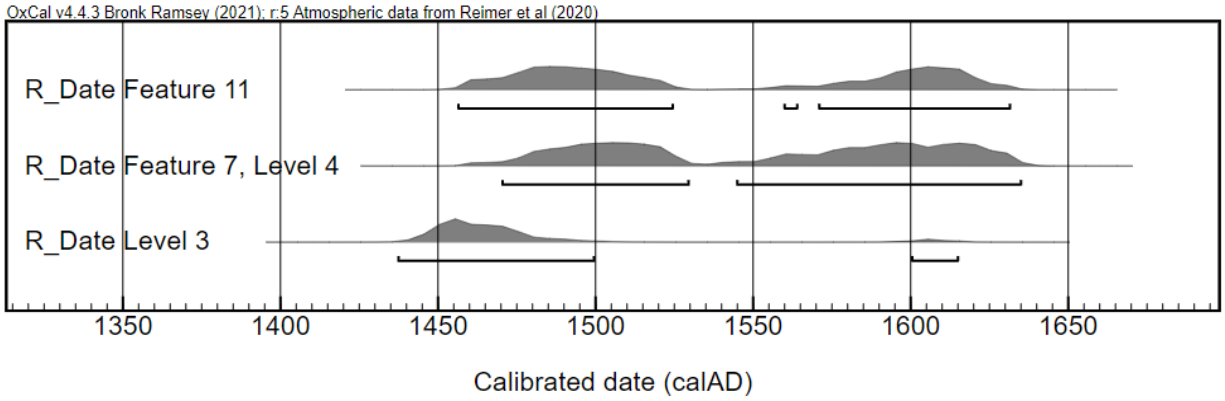

Figure 4.5. Date range for all radiocarbon samples

The ceramics recovered from the features or levels of the radiocarbon samples, in chronological order, are as follows. A total of 10 ceramics were recovered from Level 3 of Test Unit N906 E888, nine are grit-and-grog-tempered, and one is grog-tempered. In N881 E891 Feature 11 a total of 2 grit-tempered ceramics were recovered. N882 E892 Feature 7, Level 4 contains primarily grit-and-grog-tempered ceramics (n=22) and secondarily grit, grog, and shell ceramics (n=2). These data show that shell-tempered ceramics appear somewhat later in site occupation, while grit and or grog tempering were used throughout occupation (Table 4.14.).

Table 4.14. Frequency of temper and surface decoration at dated features and levels (excluding UID)		
Feature/Level	**Temper**	**Count**
Level 3	Grit and Grog	9
	Grog	1
Level 3 Total		**10**
Feature 11	Grit	2
Feature 11 Total		**2**
Feature 7, Level 4	Grit and Grog	22
	Grit, Grog, and Shell	2
Feature 7, Level 4 Total		**24**
Grand Total		**36**

This pattern of ceramic tempers — grit-and-grog-tempered pottery early in site occupation and later beginning to incorporate small amounts of shell-tempered pottery — in a site on the Mississippian frontier would typically suggest that the site's occupation spanned the transition between the Early and Middle Mississippian cultural periods. However, the dates calculated from the site indicate a Late Mississippian occupation. This suggests that the inhabitants of Ely were not fully taking part in typical contemporaneous Mississippian cultural practices.

While Carter Robinson had a high percentage of shell-tempered pottery, the lack of shell tempering present at this block and across the site could suggest that occupants at Ely were interacting with Carter Robinson, but not as engaged with Mississippian groups in Eastern Tennessee. Ely occupants may have been a local Radford group incorporating Mississippian cultural practices into existing practices.

In summary, Block 1 consisted of seven excavated test units, from which a total of 2,677 artifacts were recovered and 26 features, all postholes, were identified. The artifact assemblage and distribution suggests that Block 1 uncovered a wall and part of the interior and exterior of a domestic structure where lithic reduction was occurring. Ceramic artifacts recovered were

primarily grit-and-grog-tempered, with a small amount of shell, limestone, and mica-tempered ceramics appearing toward the end of site occupation. Radiocarbon dates show that the site has a later occupation period than suggested by the ceramic temper, and an analysis of temper types with regards to the dates suggests that Ely occupants were a local group incorporating Mississippian practices in the form of shell-tempered pottery near the end of occupation.

Chapter 5. Conclusion

The 2019 excavations at Ely Mound identified and partially excavated remains of a possible village site around the mound and established site limits in order to better understand how Ely was related to other Mississippian and non-Mississippian cultures in the region. This research allows us to date the site and determine the level of interaction between its inhabitants and contemporaneous local or regional settlements like Carter Robinson. This ultimately expands our understanding of interactions and social hierarchies at the Mississippian cultural frontier.

Excavation methods included shovel tests across the entire property, as well as the excavation of a mound test unit, and two blocks of contiguous test units at the western edge of the site. Of the 297 shovel tests excavated, 193 (65%) were positive. These positive shovel tests were used to identify at least five areas of occupation and the placement of test units which ultimately formed Blocks 1 and 2, both located in Occupation Area 3. This thesis focused on the artifacts recovered from Block 1. The purpose of this thesis was to analyze the ceramics and structural remains of Block 1, to determine the occupation period and type of structure present, and to explore interactions between inhabitants of the structure and local groups.

An analysis of the ceramic artifacts determined that the assemblage is primarily grit-and-grog-tempered and secondarily shell-, grit-, and grog-tempered with a plain or cordmarked exterior. Very few sherds with mica or limestone inclusions were recovered in the upper levels of the block.

The distribution of ceramics and other artifacts recovered from the block helped identify the shape and type of the structure. The distribution suggested that Block 1 uncovered a wall and part of the interior and exterior of a domestic structure where lithic reduction was occurring.

I hypothesized that the artifact assemblage recovered from Block 1 would be similar to that of Carter Robinson, with a higher frequency of goods like nonlocal pottery and shell beads, and that the two sites were occupied contemporaneously. Carter Robinson recovered evidence of different stages of shell bead production, and primarily shell-tempered or shell- and limestone-tempered pottery, with grit-and-grog-tempered pottery only appearing briefly at the beginning of site occupation. In contrast, most of the pottery recovered from Block 1 is grit-and-grog-tempered with little shell-tempered pottery or shell material recovered.

The ceramic data would normally indicate an Early to Middle Mississippian occupation when compared to the assemblage recovered from Carter Robinson, but radiocarbon dates show a later occupation during the Late Mississippian period. Dates obtained from the mound concluded that the early stage of mound-building at Ely is contemporaneous with late occupation at Carter Robinson, but occupation at Ely post-dates occupation at Carter Robinson. The inhabitants of Ely were primarily producing grit-and-grog-tempered ceramics with little use of shell - a trademark of Late Mississippian culture. What this suggests is that the Ely occupants were local people incorporating Mississippian ideas, beliefs, and cultural practices, as indicated by the presence of the mound. The small amount of shell-tempered pottery and other goods suggests that the people either had limited access to shell, or had little want or need to fully identify with Mississippian peoples and culture. The ceramics recovered with shell temper were also combined with grit and grog, normally indicating a transitional period from Early to Middle Mississippian pottery types, but it could suggest that this combination is a local adaptation in which the occupants were creating hybrids of what the Mississippian people had introduced.

If Mississippian practices were not incorporated at the site, it would look more similar to Radford settlements, which are characterized by the following: no mounds, round houses, and limestone-tempered pottery.

The nominal amount of shell recovered suggests that there was no shell bead production occurring in this structure. Shell beads and other objects recovered from the mound by Carr (1877) could indicate that there was either local trade occurring to obtain these goods, or shell bead production was occurring somewhere else at Ely, though further excavations must be done to test this. The few limestone-tempered sherds recovered from the structure suggests an association with the local Radford culture as well.

Additionally, Carter Robinson was abandoned around the same time Ely Mound was built and settled. This suggests that the occupants of Carter Robinson could have resettled at Ely alongside the local people, leading to the hybrid cultural elements. While Carter Robinson occupants would be culturally closer associated with Mississippian settlements in Tennessee, it is possible that they chose instead to settle further into Virginia. Carter Robinson primarily engaged in trade and craft related economic activities, and possibly built kinship networks with local peoples over time. These ties could have come to surpass Carter Robinsons association with Mississippian settlements in Tennessee, and guided their choices as they abandoned the site. The lack of evidence of abandonment of palisades at the site also suggests that the incorporation of Mississippian practices at Ely was voluntary.

In summary, this would be an example of "Mississippianization" as discussed by Greg Wilson (2019) in a recent volume. Mississippianization describes the process of how external ideas are merged into local lifeways. When evaluating the emergence of Mississippian culture, Wilson theorizes that these practices began in Cahokia and built outward, incorporating different

levels of variation according to a settlement's proximity to Cahokia. At the frontier, this process results in a hybrid of Late Woodland and Mississippian attributes. Further research should be conducted, specifically with regards to house design at the site and material attributes, like the use of limestone temper and vessel form analysis.

Regarding the larger questions about Ely Mound and its place on the Mississippian frontier, the exact function of the site remains unclear, though the presence of this domestic structure suggests that this was, in fact, a village site and not an empty ceremonial center around the mound. Radiocarbon dates changed the initial perception of the site's culture and occupation period. Despite the proximity and temporal overlap with Carter Robinson, the two sites had different cultural practices. Carter Robinson was a Mississippian cultural site at the frontier utilizing a different economic strategy than most core Mississippian polities and interacting with local groups. Meanwhile, Ely instead appears to have been occupied by a local group incorporating select Mississippian cultural practices. The diversity of the cultural practices at these two sites speaks to the permeability of cultural boundaries at the frontier. Following Kowalewski's (1982) model of boundary maintenance, the geographic spread of Mississippian culture and the distance between Carter Robinson and Ely to major Mississippian chiefdoms means that the boundary at the southwestern Virginia Mississippian frontier should be relatively open, encouraging a regular flow of goods and ideas between Mississippian and non-Mississippian groups (see also Parker 2006). The conclusions about Ely occupants based on radiocarbon dates and artifact assemblages support this idea, as well as Holland's (1970) suggestion that southwestern Virginia was a crossroads between local cultures and the Mississippian world.

Given that only two structures were excavated, little can be said about the settlement pattern and social hierarchy at the site, though the presence of a mound within a Mississippian village site suggests this is a ranked society, if not part of a chiefdom. While Meyers (2015) argues that power at Carter Robinson was derived from the acquisition and trade of goods like shell, cannel coal, and salt, the lack of evidence of these goods, especially shell bead production, means the question about the economic basis of power and hierarchy at Ely Mound still remains.

Future research should include more excavations at the site. Namely, this ideally would include returning to both blocks and identifying the entirety of both structures and comparing analyses of Structure 1 (Block 1) and Structure 2 (Block 2). The shovel tests also identified three additional occupation areas, a historic brickmaking area possibly located on prehistoric remains, and a possible plaza where additional excavations should be opened. Some of these areas could be further investigated. Finally, shovel tests should be continued on the eastern and northern edges of the site to more firmly identify the site boundaries.

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APPENDIX A

Appendix Table 1. Catalog of all artifacts

Catalog Number	Block	TU North	TU East	Level	Feature	Animal Bone count	Shell Weight	Botanical Weight	Daub Weight	Ceramics Total Count	Lithics Total Count
701	Bl 1	882	891	0-30cm	PZ/Midden					2	
702	Bl 1	882	891	0-30cm	PZ/Midden						328
703	Bl 1	882	891	0-30cm	PZ/Midden			1.7g			
704	Bl 1	882	891	0-30cm	PZ/Midden				6.7g		
709	Bl 1	882	892	0-30cm							296
710	Bl 1	882	892	0-30cm							
711	Bl 1	882	892	0-30cm				0.9g			
712	Bl 1	882	892	0-30cm					112.4g		
713	Bl 1	882	892	0-30cm						19	
815	Bl 1	880	890	Floor Clean, 35 cmbd							98
816	Bl 1	880	890	Floor Clean, 35 cmbd							
817	Bl 1	880	890	Floor Clean, 35 cmbd				2.0g			
818	Bl 1	880	890	Floor Clean, 35 cmbd					49.9g		
819	Bl 1	880	890	Floor Clean, 35 cmbd						9	
724	Bl 1	880	890	L1	F8						135
725	Bl 1	880	890	L1	F8				4.7g		
726	Bl 1	880	890	L1						7	
738	Bl 1	881	892	L1				0.4g			
739	Bl 1	881	892	L1			<0.1g				
740	Bl 1	881	892	L1						11	
741	Bl 1	881	892	L1					18.9g		
742	Bl 1	881	892	L1							
743	Bl 1	881	892	L1							374
744	Bl 1	881	890	L1							380
745	Bl 1	881	890	L1							
746	Bl 1	881	890	L1				0.5g			
747	Bl 1	881	890	L1					9.9g		
748	Bl 1	881	890	L1							
752	Bl 1	881	891	L1							9
727	Bl 1	880	890	L2							262
728	Bl 1	880	890	L2							
729	Bl 1	880	890	L2					7.7g		
730	Bl 1	880	890	L2						7	
749	Bl 1	881	890	L2							59
750	Bl 1	881	890	L2					>0.1g		
751	Bl 1	881	890	L2						3	
753	Bl 1	881	891	L2							100
705	Bl 1	882	891	L3							45
706	Bl 1	882	891	L3				<0.1g			
707	Bl 1	882	891	L3					15.4g		
708	Bl 1	882	891	L3						3	
731	Bl 1	880	890	L3							146
732	Bl 1	880	890	L3					8.5g		
733	Bl 1	880	890	L3						5	
754	Bl 1	881	891	L3							66

755	Bl 1	881	891	L3							2
756	Bl 1	881	891	L3				<0.1g			
757	Bl 1	881	891	L3					1.8g		
758	Bl 1	881	891	L3						1	
759	Bl 1	881	891	L3							47
760	Bl 1	881	891	L3				1.0g			
761	Bl 1	881	891	L3						1	
762	Bl 1	881	891	L3					3.9g		
763	Bl 1	881	891	L3							
718	Bl 1	882	892	L4	F7						34
719	Bl 1	882	892	L4	F7			2.8g			
720	Bl 1	882	892	L4	F7	1					
721	Bl 1	882	892	L4	F7				39.4g		
722	Bl 1	882	892	L4	F7					7	
714	Bl 1	882	892	L4	F7 W1/2					17	
715	Bl 1	882	892	L4	F7 W1/2	1					
716	Bl 1	882	892	L4	F7 W1/2						18
717	Bl 1	882	892	L4	F7 W1/2				14.2g		
734	Bl 1	880	890	L4							51
735	Bl 1	880	890	L4				<0.1g			
736	Bl 1	880	890	L4						2	
737	Bl 1	880	890	L4							
766	Bl 1	881	891	L4							41
767	Bl 1	881	891	L4				>0.1g			
768	Bl 1	881	891	L4					6.0g		
769	Bl 1	881	891	L4						4	
770	Bl 1	881	891	L4							
774	Bl 1	881	892		F1						15
775	Bl 1	881	892		F1			<0.1g			
776	Bl 1	881	892		F1	2					
777	Bl 1	881	892		F1				1.0g		
778	Bl 1	881	892		F1					22	
796	Bl 1	881	891		F10						2
797	Bl 1	881	891		F10			<0.1g			
798	Bl 1	881	891		F10				0.9g		
799	Bl 1	881	891		F11			0.4g			
800	Bl 1	881	891		F11						8
801	Bl 1	881	891		F11						
802	Bl 1	881	891		F11				1.1g		
803	Bl 1	881	891		F11					2	
804	Bl 1	881	890		F12						1
805	Bl 1	881	890		F12					2	
806	Bl 1	881	890		F12?			3.3g			
807	Bl 1	882	890		F13						1
808	Bl 1	882	890		F13				0.6g		
809	Bl 1	882	890		F14						2
810	Bl 1	882	890		F15						3
811	Bl 1	881	890		F16						1
812	Bl 1	881	890		F17						21
813	Bl 1	881	890		F17			<0.1g			
814	Bl 1	880	890		F18						1

779	Bl 1	881	892		F2						1
780	Bl 1	881	892		F2				0.5g		
782	Bl 1	881	892		F4						1
783	Bl 1	881	892		F4				1.2g		
785	Bl 1	881	892		F5						2
786	Bl 1	881	892		F5			0.4g			
787	Bl 1	881	892		F5				1.1g		
788	Bl 1	881	892		F5					1	
789	Bl 1	881	891		F6						4
790	Bl 1	881	891		F6			1.5g			
791	Bl 1	881	891		F6				5.6g		
792	Bl 1	882	892		F8				.3g		
	Bl 1	882	892		F8					10	
793	Bl 1	881	891		F9			<0.1g			
794	Bl 1	881	891		F9				0.3g		
795	Bl 1	881	891		F9					1	