

**Tradition and Transformation: Mississippian Households and Communities in the Appalachian Summit, AD 1200 - 1600**

by

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## **Dedication**

*For Felix and Theo  
And the Aniyvwiya*

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## **Abstract**

The long process of Mississippianization (AD 900 – 1500) across the midwestern and southeastern United States affected many regions at different times, albeit with a great deal of regional variation. For this dissertation, I study the changes that occur in local communities in the Appalachian Summit of North Carolina, during the Pisgah phase, when local practices appear to undergo “Mississippianization”. Through excavations at a 13<sup>th</sup> and 14<sup>th</sup> century village site (the Cane River site, 31Yc91) and analysis of previously excavated collections at a mound center (the Garden Creek site, 31Hw1) and village site (the Warren Wilson site, 31Bn29), my research will examine the nature of these Mississippian practices, and the manner and extent to which they were integrated into communities across the region and throughout the Pisgah time period. Current models for early Mississippian community and household practice are based on research and data from South Appalachian Mississippian and Late Woodland communities. Utilizing data from the Garden Creek and Warren Wilson sites, along with newly excavated areas of the Cane River site, I compare the archaeological assemblages and spatial organization of both household and community activities across the central Appalachian Summit during a major cultural transformation. This dissertation will (1) investigate the extent to which Mississippian contact and exchange influenced major Pisgah settlements and (2) how these changes affected community practice within the ecology of the Appalachian Summit.

## Chapter 1 Introduction

Approximately 500 years before Europeans arrived and began colonizing eastern North America, a culture contact phenomenon swept through the Native American landscape of the modern-day Midwest and Southeast United States. This cross-cultural interaction is known as the Mississippian phenomenon, a large-scale political, economic, and social transformation that occurred from approximately A.D. 900 to 1500. During the Mississippian transformation, small horticultural communities developed intensified subsistence practices based on maize surplus production, thus enabling hierarchical social organizations, and participated in an interregional exchange of knowledge, materials, and people. With initial Mississippian communities originating in the central Mississippi River Valley around A.D. 900, migration, interaction, and diffusion had historically related, yet distinct, Mississippian cultural groups appearing elsewhere in the American Southeast during the 12<sup>th</sup> and 13<sup>th</sup> centuries. How did communities at the periphery of the Mississippian world incorporate, or even actively reject, these Mississippian transformations? What did these village communities look like? What changes did these villages experience during the period when native people in the Southern Appalachians first encountered Mississippian groups and ideas? How did they change over time, as public architecture and household dwellings were built, rebuilt, and then abandoned? What were the plants and animals they consumed, and how important were domesticates, like maize, to their diet and subsistence economy?

While researchers have made substantial inroads into describing how Mississippian changes differ across many regions of the Southeastern United States, archaeologists do not yet understand in detail how this process of expansion and integration played out at the presumed edge of the Mississippian world, particularly in communities outside of the river floodplains and valleys of the Midwest and Lower South. If we can document the integration of Mississippian practices in non-riverine floodplain settings, we might challenge the emphasis on maize surplus production as the hallmark so prevalent in the literature on Mississippian societies. Given that much of the Appalachian Summit of western North Carolina is considered relatively marginal for maize agriculture, the Pisgah culture of the Appalachian Summit provides a unique opportunity to understand the Mississippian adaptation within a different environmental setting.

This dissertation is an archaeological study of the Mississippian impact on Pisgah communities in the Appalachian Summit of western North Carolina, in order to better understand the diversity of Mississippian lifeways and identities in peripheral communities along the Mississippian frontier. My research examines the possibility that these long-held assumptions need to be rethought. This introduction will explain the trajectory of this volume, and how I seek to study the changes that occurred during the Pisgah phase, when local Appalachian Summit communities appear to have undergone this process of Mississippianization.

The Pisgah phenomenon was initially classified as part of the South Appalachian Mississippian tradition due to the distinctive carved wooden paddle-stamped surface finish on its pottery, which William Henry Holmes (1903) first identified as a “Mississippian” pottery style. The large, nucleated Pisgah villages often have a palisaded, circular layout with rectangular houses surrounding a central plaza. These aspects of the Pisgah culture, in addition to substructure platform mounds and items with certain ceremonial motifs, constitute evidence of

some interaction with other South Appalachian Mississippian groups. Still, others have argued that the difficult terrain of the Blue Ridge Mountains would have made these highland communities more isolated and less likely to interact with neighboring, contemporaneous Mississippian groups (Ferguson 1971; Moore 1986a). In addition to the steep terrain, maize agriculture would have been severely limited by the soil composition (Purington 1983:93). The narrow floodplain likely restricted the potential for population growth and intensive exploitation of resources that facilitated the sociopolitical structures of Mississippian polities (Dickens 1978; Moore 1986a).

The Pisgah culture is thus an important research focus because it represents a preexisting cultural tradition that adopted Mississippian practices at a relatively late date (after A.D. 1200) in a comparatively “marginal environment” less conducive to maize agriculture. In order to better understand the diversity of Mississippian lifeways and identities in Pisgah communities, this project will analyze the material correlates of household and community practice in two Pisgah sites during the later end of the Pisgah phase (AD 1200-1600) – the Garden Creek site and the Cane River site. Both of these communities are located in the central Appalachians of North Carolina and exemplify two different Appalachian Summit microenvironments for which people may have selected distinct aspects of the Mississippian cultural “package”.

My research will examine the nature of these Mississippian practices, and the manner and extent to which they were integrated into communities across the region and throughout the Pisgah phase. Using these comparative data, I propose to look at (1) community layout and organization; (2) household architecture and features; and (3) foodways and subsistence. Current models for early Mississippian community and household practice are based on research and data from South Appalachian Mississippian and Late Woodland communities. Utilizing

assemblages from a 13<sup>th</sup> and 14<sup>th</sup> century village site (the Cane River site) and previously excavated collections from a mound and village center (the Garden Creek site), I will compare the archaeological assemblages and spatial organization of both household and community activities across the central Appalachian Summit during a time of major cultural transformation. The goals of this project are (1) to investigate the extent to which Mississippian contact and exchange influenced major Pisgah settlements and (2) to evaluate how these changes affected community practice within the ecology of the Appalachian Summit. The degree to which such practices were integrated by Pisgah communities in the Appalachian Summit will further our understanding of the adoption of Mississippian economic and social patterns on the periphery and in more marginal ecological zones. Additionally, how certain aspects were incorporated, and others excluded or avoided indicates the social mechanisms and motives for incorporating Mississippian socio-political practices into the Appalachian Summit way of life.

### **1.1 Broader Relevance: The History and Heritage of the Cherokee**

“The Cherokee legacy was paid for with thousands of lives and millions of acres”  
- Principal Chief Chadwick Smith, Cherokee Nation

There are more than 200,000 Cherokee people in the United States today, within three different federally recognized tribes. The largest tribe is the Cherokee Nation in Oklahoma, and the United Keetoowah Band is also located in Tahlequah, Oklahoma. The Eastern Band of Cherokee Indians reside today on a remnant of the ancestral Cherokee homeland in western North Carolina, with approximately 57,000 acres of tribal land (Conley 2002; Duncan and Riggs 2003:1). The Eastern Band of the Cherokee still living in present day North Carolina represent

the descendants of the hardy few who managed to avoid the disastrous Cherokee Removal of 1838-1839, also known as the Trail of Tears.

In 1887, James Mooney was appointed to work among the Eastern Band of the Cherokee Indian by the Bureau of American Ethnology. He proceeded to collect stories and document sites within the Cherokee homeland from 1887 to 1916, providing some of the most comprehensive ethnology and field maps of the Cherokee prior to removal (Kirk 2013; Mooney 1902), in addition to some historical documentation from early Spanish and English colonists (DePratter et al. 1983; Hudson 1990, 2005; Waselkov and Braund 1995). Perhaps the richest record of Cherokee practices comes from the modern-day Cherokee themselves, who utilize an oral tradition that keeps their stories, dances, medicine, ceremonies and customs alive today (Duncan 1998; Teuton 2016). Despite the removal of the majority of the Cherokee from their homes in North Carolina, South Carolina, Kentucky, Tennessee, Virginia, West Virginia, Georgia, and Alabama to the Indian Territory in Oklahoma, the original South Appalachian homeland is still considered the birthplace of Cherokee creation. This is the place of their ancestors, a belief emphasized in prehistoric Cherokee mortuary practices where the dead are interred within or adjacent to the structures of the living (Kirk 2013:7; Rodning and Moore 2010). General commonalities among all Native American cultures include the embodiment of living histories in indigenous homelands. Home embodies the present, but also allows current generations to actively participate with their past ancestors (Basso 1996:32–33). Therefore, home and identity are one and the same.

The Cherokee people have been a part of the Southeastern North America landscape for more than 3,000 years. Cherokee origin stories begin with the water beetle, *Dayunishi*, bringing mud from below the waters to make the earth and the great buzzard who shaped it with his wings



into the mountains of the Cherokee country. The first man and woman, Kanati and Selu, lived at Shining Rock Wilderness near present-day Waynesville, North Carolina (adjacent to the Garden Creek site location). Archaeological excavations in the Appalachian Summit area have produced evidence that the Cherokee culture can be traced back at least 2,000 years to the Middle Woodland period ((Faulkner 1978; Keel 1976; Wright 2014). This evidence primarily comes from similarities and continuities in ceramic styles, burial methods, mound construction, and architectural forms. It is likely the first Paleoindian hunter-gatherer people living in the southern Appalachians more than eleven thousand years ago were also ancestors to many of the southeastern cultures identified today. The first Cherokee village was at the Kituwah (or Keetoowah) Mound near present-day Bryson City, and according to tradition this is the town where all Cherokee originated. The Cherokees refer to themselves as *Ani-Kituwagi*, or the Keetoowah People.

When the first English colonists encountered the Keetoowah People and began to trade with them in 1673, the Cherokees were living in approximately two hundred towns scattered across their home states. Linguistically the Cherokee is an Iroquoian language, related closely to the northern Iroquoian people (Mohawk, Seneca, Cayuga, Oneida, Onondaga, and Tuscarora) but their geographically nearest neighbors were mostly Muskogean-speaking people (the Creek Confederacy). Based on different dialects of their language and their geographic locations, the Cherokees can be divided historically into three groups – the Upper Towns, Lower Towns, and Middle Towns. However, an early pattern emerged in European and Native American relations that came to define the post 1700-history of the tribe: dwindling land rights and broken treaties. Beginning with the French and Indian War period in the 1750s, the Cherokee sided repeatedly with the British in colonial conflicts – being promised by Great Britain that the empire’s interests

lay solely along the eastern seaboard and they had no wish to encroach upon Cherokee land. This was a promise the new United States government could not make during the American Revolution, and when a small faction of the Cherokee sided with the British (the remaining Cherokee attempted to remain neutral), early repercussions resulted in the Cherokee being pressured to move west. As early as 1792, some Cherokees gave in and began to relocate to Missouri, Arkansas, and eventually Oklahoma. These towns made up the first Western Cherokee Nation, later aggregated into the Cherokee Nation.

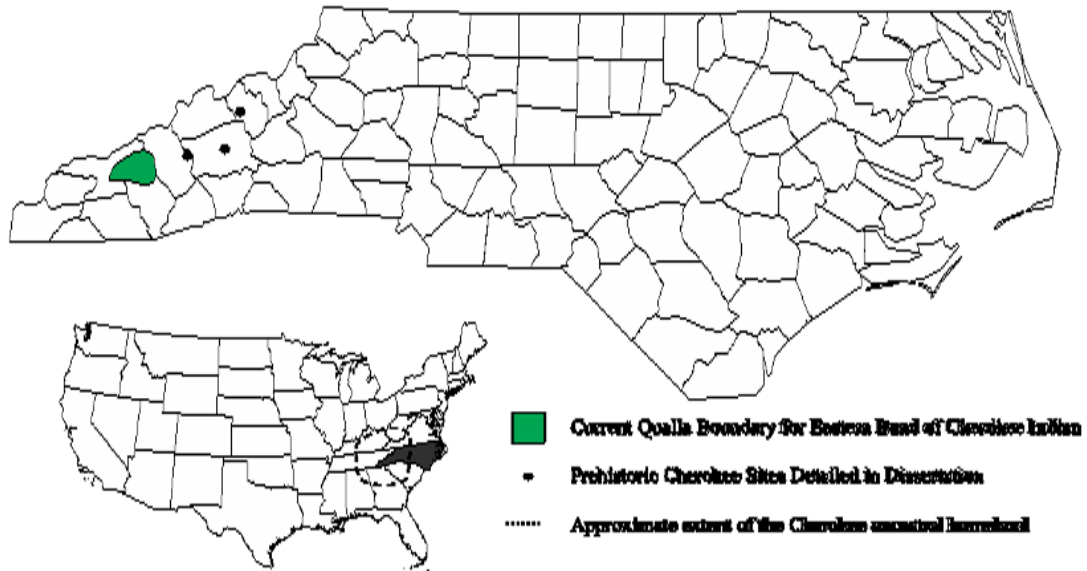
Those Cherokee that attempted to remain in their southeastern homes resisted removal by “assimilating” and becoming “civilized”. They built schools and hired white teachers. Churches were also constructed, and missionaries were invited to come preach their religion. The Cherokee even had their own written syllabary, created in 1821 by an illiterate Cherokee named Sequoyah. He created a system in which there is a symbol for each syllable within the Cherokee language. Within a year, the Cherokee people had their own bilingual newspaper. However, all of these attempts by the Five Tribes to assimilate proved to be futile. In 1830, President Andrew Jackson urged Congress to pass the Indian Removal Act. Under the guidance of Chief John Ross, the Cherokee resisted removal by taking the case all the way to the U.S. Supreme Court. They won. But the President refused to acknowledge the high court’s decision or enforce it. On December 29, 1835, a small group of prominent Cherokee citizens – none of whom had any official position in the government of the Cherokee Nation – signed the Treaty of New Echota. It was a treaty of total removal and despite being fraudulent, it was accepted as valid by the United States. The U.S. Army began forcibly gathering, detaining, and removing Cherokee from their homes in 1838. The Trail of Tears refers to routes taken by fourteen waves of Cherokee between 1838 and 1839 to the new territory in Oklahoma. It is estimated that one quarter of the

Cherokee population died along the way. The few that avoided the round-up and removal process by hiding in the mountains of western North Carolina are the ancestors of the modern-day Eastern Band of the Cherokee Indian.

Even after Removal, the Cherokee continued to see their rights taken away. During the Civil War, the Cherokee split into Confederate Cherokee and Union Cherokees. Many stayed home and fought each other, having a civil war within the Cherokee Nation that more or less mirrored the larger one in the United States. The U.S. government used the short-lived Cherokee Confederate treaty as an excuse to force a new treaty on the Cherokee Nation and take land. In the 1890s, the land allotment began. Previously, all Cherokees owned the land together since many traditional Cherokees were opposed to the idea that land could be owned. The U.S. broke up the Nation's land into individual 160-acre allotments, one to each head of a household. This allotted land, when added together, did not constitute the whole of the old Cherokee National land, so the rest was sold as "surplus". This basically dissolved the Cherokee Nation as a formal entity.

In total, the United States of America signed thirty-three treaties with the Cherokee Nation. Within every treaty, land was taken away and promises were made that no more land would be taken ever again. In each treaty it alleged perpetual peace and friendship. Yet white Americans kept moving onto Cherokee land and the government did nothing about it. When the Cherokee attempted to do something about it, the U.S. moved to protect its citizens and thus followed conflict that would result in a new treaty being signed and more land being wrenched away. It wasn't until the 1970s that the government began to change its policies towards Native Americans and began to make legal reparations, including giving back land rights to federally recognized tribes.

While the Eastern Band of the Cherokee Indians is the recognized local descendant community of the Pisgah culture, I hope all Cherokee will find this research relevant to their past and heritage. The prehistoric record of the Pisgah people can be used to fill in gaps regarding the extent of the Cherokee homeland in the Appalachian Summit, as well as increase the knowledge about ancestral populations and how they changed or maintained traditions before the arrival of European colonialists. The present-day Qualla boundary (extent of the land owned by the Eastern Band of the Cherokee Indians) is over an hour from the Cane River, Warren Wilson, and Garden Creek sites (Figure 1.1). Yet these prehistoric communities represent an important piece of the Cherokee nation's past. I hope a greater understanding and connection to their ancestral lands is made by continuing to detail the activities of these Pisgah communities to the north. Despite the long accounts of oppression and diminished rights to land and property by the United States government, the Cherokee history of persistence and tradition is still an integral part of the greater Appalachian Summit landscape.



*Figure 1.1 The approximate extent of ancestral Cherokee homeland prior to Euro-American contact, the present-day Qualla Boundary for the Eastern Band of the Cherokee Indian (green), and locations of the Garden Creek, Warren Wilson and Cane River sites*

## 1.2 Summary of Chapters

In this dissertation, I address the goals of this project in six chapters, not including the conclusion. The first two chapters (Chapter 2 and 3) set up the background, theory, and context to my research questions and the main data sets (and sites) used to answer them. In the following chapter, I will provide an overview of the cultural phenomenon, known as the Mississippian transformation, which swept through the Midwestern and Eastern United States from approximately A.D. 900 until contact. This heterogeneous culture-contact phenomenon has gone through several iterations of definitions and theoretical discussions, which will also be discussed in Chapter 2 as it relates to the principal question of ethnicity and identity. This chapter also deals with the theoretical background of how I analyze interaction. Next, I introduce the reader to the South Appalachian Mississippian region. The various other sub-regions and cultural areas that are also classified as South Appalachian Mississippian will be briefly summarized, as they provide a critical comparative foil to the Pisgah culture and what the process of Mississippianization looks like through an archaeological lens. Finally, this chapter will lay out the two models for the process of Mississippianization as they relate to Pisgah: the Mississippian Adaptation scenario and the Upland Continuity scenario. While not being mutually exclusive, by setting out these scenarios and expectations, I hope to show the reader how separate elements of the Pisgah material culture are being independently evaluated as they relate to the broader community-wide and regional considerations of cross-cultural interaction and traditional identities.

In Chapter 3 I provide some more regional and site-specific background to the Appalachian Summit and the trajectory of archaeological research in this beautiful and enigmatic mountain environment. First, this chapter goes into the variable geographic and environmental

setting at higher elevations, which covers the climate and resource limitations – and dare I say potential? The historical landscape of the Appalachian Summit presents each period of cultural history that is known so far, and some important archaeological site overviews. This will lead into the origins of Pisgah research in western North Carolina and the major sites that have been excavated and studied so far from both the Early Pisgah and Late Pisgah sub-phases. Three of these sites – Warren Wilson, Garden Creek, and Cane River – will be discussed in further detail within later chapters.

The next four chapters (Chapter 4, 5, 6, and 7) present the core results and summarize the findings from recent excavations at Cane River, the analysis of newly recovered artifacts, and the artifact analysis done on extant collections previously recovered at Garden Creek. These often include a comparison to previously well-studied and published sites, such as Warren Wilson. Chapter 4 addresses the built environment and community structure of these three Late Pisgah sites. The first section introduces the reader to the theory behind why spatial organization and community-level aspects of the built environment are integral to community-wide identity and shared worldviews of the cosmos. This can be linked to both the religious principles of a community, but also the social and political order of families and clans. Thus the concept of a “Mississippian Community Grammar” provides an important analogy to the community’s cosmology. This “grammar” will be discussed in three primary parts: the palisaded community, the mound and plaza complex, and the overall community organization. This final section also takes into account new radiocarbon data that can shed light on the chronology and life history of these sites and how practices changed – or persisted – through time. Lastly, the built environment will be discussed as a Mississippian phenomenon and how elements at all three sites fit the Mississippian Adaptation scenario.

Chapter 5 in this volume will focus on Pisgah subsistence and foodways. Chapter 5 starts out recapping the trends in Mississippian food practices from studies of other sites through the Midwest and Southeast. Feasting and commensal events, as well as specialization, are discussed as defining attributes in Mississippian foodways. Then I will describe the results of the botanical analysis from the Cane River flotation samples, which recovered quite a lot of carbonized plant food remains including an ample amount of maize and beans – domesticated plants that were previously thought to be too difficult to cultivate in large quantities at such high elevations! Comparing these remains to the limited amounts recovered from Garden Creek and Warren Wilson (which were before flotation methods and sampling was commonplace), as well as other South Appalachian sites, some interesting conclusions can be made about domesticated plants and agriculture within Pisgah communities. Finally, I describe the results of the faunal analysis from the recent Cane River excavations and the sample analyzed from the Garden Creek Mound 1, including how these results compare to those previously recovered and studied from Warren Wilson. The faunal material from Cane River, primarily from residential garbage, has high taxonomic and elemental diversity - and significant data on the treatment of the bones (more evidence for burning and breakage indicating marrow-getting). The materials from Garden Creek Mound 1 formed a ritual/ feasting deposition with a lower taxonomic/elemental diversity (less diversity of species), and a focus on deer, elk, and bear. This is interesting in contrast to Cane River and Warren Wilson, where elk was a food resource not utilized and the overall range of species was broad and diverse. A discussion about what these foodways trends implies about variation in resource access and utilization, and how that informs our interpretation of the Mississippianization process, will conclude this chapter. It is important to highlight that the data presented in Chapter 5 was primarily a collaborative effort with faunal and botanical specialists,



who analyzed the flotation samples and animal bone for me after my team finished excavations in the field from 2013-2014.

Pisgah households, activities and features will be categorized and discussed in penultimate chapter, Chapter 6. First I will highlight the theory behind household archaeology and then dive into the architectural elements recovered from houses at Warren Wilson, Cane River, and Garden Creek. This chapter will also deal with the Pisgah features recovered from each site and how they are identified and classified as byproducts of various types of activity. These features represent a palimpsest of practice and provide a wealth of information on daily site activities, as well as long-term patterns in storage and use of site areas. This chapter will also discuss the ceramic data set. I begin with the early research and identification of Pisgah pottery, specifically the chronology and in situ developments from the Early Pisgah phase to the Late Pisgah phase. For the purposes of this dissertation, the Late Pisgah period is the primary focus given the occupation period for the Cane River, Garden Creek, and Warren Wilson sites. I present the results of the new ceramic analysis from Cane River and Garden Creek – first with the inter-site results (variation within each site) and then intra-site results (variation between Late Pisgah sites). This later critique will bring in pre-existing analysis of the Warren Wilson site ceramics, although some comparisons will be limited based on differences of data collection. Finally, I consider the role ceramic variation has illuminating practices within Pisgah communities – in terms of how stylistic variability informs questions of identity.

The seventh and final chapter will recap all of the data trends and consider how the results answer my larger research questions: how were these Mississippian transformations incorporated, or even actively rejected, by communities at the periphery of the Mississippian world? How did they change over time, as the native people in the Southern Appalachians

encountered Mississippian groups and ideas and reacted to them? How does the fit, or lack of fit, of the Mississippian Adaptation and Upland Continuity scenarios highlight regional and site variation? What processes and factors of ecological and cultural interaction could account for this variation? In addition to considering the implications of this study, I will also discuss goals and directions for future research, for this is only a beginning.

While aspects of the Pisgah built environment, household practices, and foodways certainly conform with the daily and community-wide practices seen at other Mississippian-integrated sites, the variation in data sets within some communities demonstrate that the Pisgah people were still maintaining some aspects of their local traditions and utilizing resources specific to their ecological zone and niche. The strong ecological and landscape factors that limit travel and communication certainly played a part in the variable types of interaction with other communities and could explain some of the inter-site variation. Overall, there were aspects of Mississippian practices at each of these three Late Pisgah towns and this further re-enforces the categorization of the Pisgah period as a Mississippian mountain phenomenon.

By combining analysis of the rich but as yet understudied assemblages from Garden Creek Mound 1 with those from Cane River and drawing comparisons to previous work at the Warren Wilson site, my research has the potential to generate a more comprehensive picture of early Mississippian emergence and interaction across a frontier geopolitical region. This dissertation is tackling the definition of what it means to be Mississippian, despite great variation among communities that are all part of the same Pisgah culture. By observing this variation in Pisgah villages and how each community chose to selectively adapt parts of the Mississippian program, we can start to ask why each community independently chose their own path of resistance. Each Pisgah community had its own strategy, and possibly the mountain ecology and

the differing cultural landscape made some locales more receptive than others to Mississippianization.

## **Chapter 2 Tradition and Transformation at the Periphery of the Mississippian World**

### **2.1 Culture Contact in the Mississippian World**

Archaeologists have long been interested in the mechanisms and effects of culture contact situations, particularly in local processes of culture change (Caldwell 1964; Redfield et al. 1936; Willey 1953; Willey and Lathrap 1956). Recently, explanations have moved beyond acculturation theories to agency-based perspectives that emphasize the degree to which culture contact situations are actively selected, borrowed, contested, and modified by all parties (Cusick 1998; Lightfoot et al. 1998; Schortman 1989; Schortman and Urban 1987, 1992). My dissertation contributes to this literature, by considering how Mississippian practices may or may not have been incorporated into communities and households on the eastern periphery of the Mississippian world. This is really a question of identity, and how culture contact with non-local groups can influence the multi-faceted and overlapping forms of identity that exist at the individual, household, clan, community, and regional scales. The frontiers or peripheries of pan-regional systems are particularly useful locations for considering questions of ethnicity and identity. While social identity tends to be more malleable at the frontier, interaction - rather than isolation - has been found to create ethnic boundaries (Barth 1969). Because multiple parties have different agendas when culture contact situations occur, resistance and agency at various levels within peripheral communities can compete with non-local identities or reconstitute those identities, as in the process of ethnogenesis.

Within the Southeastern United States, archaeological work on culture contact is usually discussed within the context of European colonialism and the stark contrast between fifteenth and sixteenth century Old and New World cultures. However, there is mounting evidence on the importance of culture contact in issues of social change long before Europeans arrived in the Southeast (Blitz 1993a, 2010; Cobb 2005; Pauketat 2001a). While perhaps not as drastic in their consequences, the pre-Columbian interactions between Native American groups had interesting repercussions in terms of changing social identity and ethnic diversity. This is especially true for the Mississippian cultural development that predated the Spanish and English arrival to North America by some 600 years. This Native American landscape was quite diverse and consisted of a myriad of competing societies throughout the Southeastern United States. How these groups interacted, fought, and networked with one another was a defining element of their social structure that later influenced interactions and confrontations with colonial Europeans.

The Mississippian phenomenon is a large-scale political, economic, and social transformation that occurred from approximately A.D. 900 to 1500 across what is now the midwestern and southeastern United States. During the Mississippian transformation, small horticultural communities developed intensified subsistence practices based on maize surplus production. This surplus enabled hierarchical social organizations, in which a hereditary chief maintained regional control through enlarged interregional exchange networks of information, materials, and people (Cobb 2003; Griffin 1985; Pauketat 1994; Steponaitis 1986). Initially a trait-list approach was used to define the Mississippian culture and expansion. This often included a configuration of specific and co-occurring traits such as wall-trench constructed houses, substructure earthen platform mounds, shell-tempered pottery, and large village settlements along floodplains (Deuel 1935, 1937; Griffin 1952; Holmes 1903). The presence of

exotic goods with distinctive motifs, known collectively as the Southeastern Ceremonial Complex (SECC) was thought to be also a common trait of Mississippian cultures. Recent definitions have now moved away from this trait-list approach and Mississippianization is now conceptualized as a series of local “adaptations” of maize-based agriculture, surplus production, and the construction of platform mounds (Blitz 2010; Cobb 2003; Griffin 1985; Pauketat 1994; Smith 1978, 1990).

The Mississippian culture was named for its emergence along the rich floodplain and farmland along the Mississippi River, also referred to as the American Bottom of modern-day Illinois, Indiana, and Missouri. Although this political-economic shift started with a rapid series of changes in the American Bottom ca. A.D. 1050 (Kelly 2000; Pauketat 1994), the overall tempo and extent of Mississippianization across the Southeast is now regarded as a heterogeneous transformation in which varied Mississippian cultural practices were integrated within local social structures (Anderson 1994a; Beck and Moore 2002; Cobb 2015; Griffin 1943, 1992; Hally 1994; King 2003a; Meyers 2002; Ward and Davis 1999; Woodall 1999). This spread of a pan-regional tradition across a wide geographic area, cross-cutting language and ethnic boundaries, has been compared to the historical dynamics of another well-known episode of human interaction, the European Renaissance (Cobb and Garrow 1996:24). While having a shared cultural florescence of humanism, a revival of the arts, and rediscovery of the sciences, the Renaissance Period can still be separated into regional variants such as the Northern versus Southern Renaissance or the French versus Venetian model – thus local traditions modify and transform the regional tradition while maintaining the spread of a broad set of ideas. The Mississippian phenomenon is comparable to this in its heterogeneity and the difficulty archaeologists face in trying to define it.

Some scholars conceive of Mississippian expansion as a phenomenon based on agriculturally-productive floodplains and valleys producing maize surpluses to support large regionally-based polities (Larson 1972:389; Smith 1978, 1990; Ward 1965). Maize, being high in caloric content and easy to produce in larger quantities, was an ideal domesticate to produce within the rich riverine floodplains of the Mississippi River and its tributaries – and it remains so to this day. Mississippian economies initially were based on the presence of corn surplus, likely produced by select kin groups who experienced consecutively good harvests. With such surplus, others around them could become indebted through feasting (which utilized the surplus harvest) and such indebtedness enabled select groups to increase their labor pool and work more land. This further increased the surplus to the point that it came to be an expected part of the economy and these emergent leaders could therefore procure non-local prestige goods or subsidize local craft production. These goods often solidified and institutionalized their power and place within the group, which could be based on both economic and sacred/social power and place within the community.

Other scholars considered the regional Mississippian adaptations to be a reflection of broadly shared Mississippian ideas and beliefs. This Mississippian cosmology or worldview was expressed through the Southeastern Ceremonial Complex imagery and ideology, which held special significance and legitimized new social institutions and hierarchies (King 2007; Knight 1986; Knight et al. 2001; Reilly and Garber 2007). The SECC imagery and ideology were frequently produced, utilized, and traded on various prestige goods made of shell, copper, and even salt. Prestige good exchanges are vital to the maintenance of elite power, for the goods symbolize links with other cosmological and sacred powers that may provide some assistance in times of risk or poor harvest. As the prestige goods travel, the original meaning of those icons is

often lost or transformed, with various other regional elites reinterpreting the motifs to serve their own local, immediate purposes. Various regional variants of common Mississippian iconographic motifs have been found throughout the Mississippian extent. Most likely, the variations in designs combined with the overall similarity in motif elements indicate a prestige goods exchange network between elites, in which motifs – and their meanings – were reinterpreted locally.

While researchers have made substantial inroads into describing how Mississippian changes differ across many regions of the Southeastern United States, archaeologists do not yet understand in detail how this process of expansion and integration played out at the presumed edge of the Mississippian world, particularly in communities outside the river floodplains and valleys of the Midwest and Lower South. Kopytoff's (1987) analogous internal frontier model for the spread of African social formations has been utilized to explain the fission-fusion spread of regional Mississippian variants along the Mississippian frontier (Blitz and Lorenz 2006; King 2003b:118–119). However, if we can document the integration of Mississippian practices in non-riverine floodplain settings, we might challenge the emphasis on maize surplus production so prevalent in the literature on Mississippian society. The known integration of Mississippian practices within several limited ecological settings calls into question the necessity for maize surplus production as the foundation for a Mississippian economy, hierarchical socio-political organization, and coeval production and exchange of prestige goods. The Coles Creek culture (of Louisiana) is an example of such an emergent Mississippian adaptation that had social and ceremonial developments without the initial reliance on maize-based agriculture or long-distance trade networks (Kidder 1992; Kidder and Fritz 1993). This approach therefore challenges many of the older assumptions regarding Mississippianization and requires a reassessment of what



social processes come into play during culture contact situations. Should this phenomenon be framed in economic and political terms, or social and religious processes of integration?

## **2.2 Tradition and Transformation**

Archaeologists studying cultural encounters have conceptualized the various ways that local social structures changed or persisted during cultural entanglements by borrowing the concepts of practice theory to study social change. The emergence of new community practices involves the integration of new behavior within existing traditions, regardless of the source of innovation. Southeastern archaeologists have utilized and expanded the ideas of social theorists like Bourdieu (1977), Giddens (1984), and Sewell (2005) to understand how the daily practices of communities create and reconstitute patterns and nonlocal behaviors (Beck et al. 2007; Cobb and King 2005; Pauketat 2001a; Sassaman 2005). As archaeologists strive to explain continuity and change in the Mississippian world, the concept of tradition has proven useful for identifying dynamic and continuous practices of cultural production where change and persistence are both possible (Lightfoot 2001). Traditions are applicable to multiple scales of behavior - from the personal to the group to the community – that are consistently in a dynamic state of change and influence (Cusick 1998; Lightfoot et al. 1998; Lightfoot 2001; Pauketat 2001a)

The concept of tradition (Caldwell 1958; Pauketat 2001b) refers to any enduring pattern of behavior actively manipulated within contexts where meanings, identities, and outcomes are in flux. Using the concepts of practice and tradition in household and community activities, I will focus on targeting the various scales and tempos of change in which cultural conventions were either maintained or transformed over time. In the specific case at hand, structural transformations are archaeologically visible in contexts where people reconstituted, copied and

modified Mississippian practices in community and household domains, including the built environment, domestic activities, and foodways. Archaeologists studying Mississippian groups to the east, south, and west of the Appalachian Summit have demonstrated that structural transformations can often be inferred through patterned changes in community organization, as well as through variability in architectural patterns and domestic activities within and between households (Boudreaux 2007; Hally 2008; Polhemus 1987; Rodning 2002a, 2009; Sullivan 1995). Changes to the built environment include the creation of public spaces and public architecture, such as the Mississippian mound and plaza complex, and illuminate how communities perpetuate social relationships and inscribe new meanings at various scales (Beck et al. 2007; Bigman et al. 2011; Cobb and King 2005; Connerton 1998; Joyce and Hendon 2000; Pauketat and Alt 2005; Pluckhahn 2010). Additionally, changes in foodways coeval with the emergence of Mississippian political economies have frequently been inferred through analysis of domestic refuse, as well as feasting events in special public spaces or structures (Blitz 1993b; Jefferies et al. 1996; Rodning 2002a; Vanderwarker 1999; Vanderwarker and Detwiler 2000).

The Mississippian cultural complex was first described by archaeologist James Griffin (1967), who divided it into six regional variants. The Middle Mississippian tradition encompassed the initial Mississippian cultural expression and expansion, starting at the large multi-mound center of Cahokia, located near St. Louis. The Oneota tradition (to the north), Fort Ancient tradition (to the east), and Caddoan and Plaquemine traditions (to the south) all expanded outward from the Middle Mississippian complex along the major riverine floodplains of the Ohio and Mississippi rivers. This dissertation will be focused on the South Appalachian regional variant of Mississippian culture, which has generally been considered a rather unusual and unexpected expression of Mississippian practices given the topography of the Southeast.

### **2.3 South Appalachian Mississippian**

South Appalachian Mississippian was first defined by W. H. Holmes (1903) as a regional pottery style, called the South Appalachian stamped ware, distributed across a contiguous area that includes Georgia, South Carolina, North Carolina, Alabama, Florida and Tennessee. Identified as a Mississippian regional complex based on the presence of large villages with extensive populations, temple mounds, palisaded villages, and elements of Mississippian ceremonialism, the South Appalachian tradition began shortly after A.D. 1000 and demonstrated aspects of cultural homogeneity attributed to similar geography and frequent interaction (Ferguson 1971). In a departure from the other Mississippian cultural complexes developed by James Griffin (1967), such as Caddoan Mississippian, Plaquemine Mississippian, and Middle Mississippian, much of the South Appalachian Mississippian area offers an unlikely foothold for Mississippian lifeways given its geography and topography. Griffin (1967) noted that there was a high correlation between the large Mississippi River bottomland soils and the location of Mississippian sites, a position that Smith (1978) expanded in this Mississippian subsistence-settlement model. Hally (1994) later amended this expectation for settlement systems, given that the topographic and riverine features of the Southern Appalachians are more variable and limiting than the Mississippi, Ohio, or Tennessee River valley systems. In fact, the largest villages of the South Appalachian Mississippian tradition (Ferguson 1971) were situated near the boundaries between physiographic regions where more diverse and productive resources could be accessed and where the best floodplain soils were usually located (Ferguson 1971; Hally 1994; Larson 1972; Meyers 1995; Williams 1994).

In order to better understand the role of Pisgah sites within this region, contemporaneous South Appalachian Mississippian communities in western and central North Carolina, eastern

Tennessee, and northern Georgia need to be considered. These Mississippian sites exhibit various ways that extra-local practices were incorporated into local regional traditions and reveal information about change in village layout, households, subsistence, and artifacts that will provide valuable comparative data sets to communities in the Appalachian Summit. These neighboring Mississippian societies were also the likely source of extra-local interaction and movement of new ideas, goods, and people into Pisgah lifeways.

### ***2.3.1 Summary of Eastern Tennessee Sites***

The earliest Mississippian phase in eastern Tennessee is Martin Farm (A.D. 900 - 1000), which has larger site sizes, complexity, and permanent settlements that were not present in the earlier Late Woodland phase (Schroedl 1998; Schroedl and Boyd 1985). During the Martin Farm phase, platform mounds appear for the first time and are surrounded by villages. The following Hiwassee Island phase (A.D. 1000 – 1300) has sites with mounds, palisades and plazas, as well as community buildings (Schroedl and Boyd 1985; Sullivan 1987, 1995). The final Mississippian phase is Dallas (A.D. 1300 – 1600), a culture area comprising much of the Ridge and Valley province in eastern Tennessee. The later Mississippian phases generally contain a greater breadth of ceramic diversity and use of decorative embellishments, as well as a greater density of mound and plaza sites (Schroedl et al. 1985). While most Dallas sites possess a single substructure mound, which served as a ceremonial platform for public events, several sites had multiple mounds. The Toqua site represents one such multi-mound community, which likely served as a regional center for a chiefdom polity (Polhemus 1987). The Toqua mound site contains two mounds, a central plaza, multiple pairs of summer and winter houses, several public buildings, and a defensive perimeter utilizing log stockades with wall-trenched bastions

(Polhemus 1987, 1990). Several lines of evidence indicate that Dallas-phase centers, such as Toqua, were also internally ranked (Hatch 1975; Polhemus 1987; Sullivan 1995; Vanderwarker 1999). After the Dallas phase, later proto-historic and historic archaeological complexes show a shift in community organization towards a more egalitarian structure as a direct result of European contact (Sullivan 1995).

### ***2.3.2 Summary of Northern Georgia Sites***

The several phases grouped within the broader Lamar tradition in northern Georgia represent some of the best studied South Appalachian Mississippian settlements (Anderson 1990, 1994b; Gougeon 2002; Hally 1994, 2008; King 2003b; Williams 1994). Anderson (1994c) has described patterns of cycling among late prehistoric chiefdoms along the Savannah River Valley and surrounding areas, including the material correlates of such communities as they coalesce and collapse around shifting capital towns over the course of several generations. The evolution from the Late Woodland societies to the successive stages of chiefdoms during the Etowah, Wilbanks, Savannah and Irene cultures is well-documented at mound centers such as the Etowah site (Bigman et al. 2011; Cobb and King 2005; King 2003b, 2003a; King et al. 2011) and the Irene site (Caldwell et al. 1941), as well as from other surveys and excavations along the Etowah River Valley in north-central Georgia (Anderson 1988, 1994c; Cobb and Garrow 1996; Hally 1994; King 1996; Little 1999; Rudolph and Hally 1985). Additionally, prehistoric settlements with public and domestic structures, arranged around a town plaza with a log stockade enclosing the public space, are well represented at mound sites along the Coosa River, such as the King site (Hally 2008; Hally and Kelly 1998) and the Little Egypt site (Gougeon 2002, 2012a; Hally 1978). Similarities in mound construction and ceremonial architecture between these Lamar

Mississippian cultures and the Pisgah phase mound at Garden Creek indicate a shared cultural knowledge between the Appalachian Summit and groups to the south (Caldwell et al. 1941; Cobb 2015; Dickens 1976; Thompson 2009).

### ***2.3.3 Summary of North Carolina Sites***

Mississippian societies in North Carolina include multiple chiefdoms in the North Carolina Piedmont. Living along the Catawba River Valley in the northern North Carolina Piedmont from A.D. 1100 to 1500 are the Catawba Valley Mississippians (Moore 2002a). The early Mississippian occupations in this region are poorly understood, with the best documented being the Pitts Phase (A.D. 1200-1400), but eight late Mississippian ceramic phases are identified from A.D. 1400-1600 and indicate a dramatic increase in Catawba Valley occupation during the fifteenth and sixteenth centuries (Moore 2002a). The regional Burke and Cowans Ford pottery closely resembles the early and late Lamar pottery found in northern Georgia and South Carolina, demonstrating close trade ties with other South Appalachian Mississippian groups (Beck and Moore 2002). The Burke phase (A.D. 1400 - 1600) of the Catawba Valley Mississippian culture, defined as regionally distinct polities that built earthen mounds and are recognized archaeologically by soapstone-tempered ceramics (Moore 2002a), is the best understood phase of occupation due to robust survey data (Beck 1997; Robinson et al. 1996) and large-scale excavations at the Berry site (Beck and Moore 2002). These Mississippian groups are approximately 125 km northeast of the Garden Creek site and constitute the closest Mississippian chiefdoms in proximity to Pisgah communities, excluding the Qualla phase sites within the Appalachian Summit.

The Pee Dee people are another South Appalachian Mississippian culture that extended from the piedmont of South Carolina into the southern piedmont of North Carolina. This large, complex society flourished within the Pee Dee River Valley from A.D. 1000 -1500 and is well known from “almost mythic” extensive excavations at the Town Creek mound and village site, which was occupied throughout all periods of North Carolina’s prehistory (Coe 1995; Ward and Davis 1999:123). The evolution of Town Creek into a Mississippian civil-ceremonial regional center (A.D. 1150-1400) begins during the early Town Creek phase (A.D. 1150-1250) and aspects of Mississippian community planning and practice continue into the late Town Creek phase (A.D. 1250-1400). The site consists of a large, multi-stage platform mound and associated plaza, with special-purpose public buildings along the edge of the plaza, and a habitation zone enclosed within a defensive stockade (Boudreaux 2007, 2013). The eventual decline of the Town Creek site by Mississippian people occurs during the Leak phase (A.D. 1400-1500) and subsequently Late Woodland less hierarchical societies return to occupy the area. Recent research has taken a regional focus, studying the outlying villages without mounds, and improving the understanding of this chiefdom society and its regional settlement patterns. The Mississippian period at Town Creek provides another rich case study of a regional polity within the South Appalachian Mississippian tradition. Like other South Appalachian Mississippian cultures, the Pee Dee pottery consists of complicated paddle-stamped designs and vessel forms similar to Lamar groups to the south (Boudreaux 2010). Additionally, the chronology and history of the town mirrors the trajectory of other Mississippian communities (Boudreaux 2013:484).

In addition to the Pisgah culture, the late Mississippian Qualla culture (A.D. 1450 to 1838) is the only other Mississippian society located in the Appalachian Summit of North

Carolina. The Qualla period, broken into a ceramic chronology of Early (A.D. 1300-1500), Middle (A.D. 1500 to 1700) and Late (A.D. 1700-1838) phases, seems to share a synchronic regional cultural development with the Pisgah period (Rodning 2008). Originally the Pisgah culture was thought to be a precursor to the Qualla culture, given the similarity in artifact styles, house architecture, and mound construction (Dickens 1978). However recent revisions of the Qualla ceramic chronology indicate that the Pisgah period is likely contemporaneous with the Early Qualla phase, but the nature of the interaction between these two cultural groups is still unclear. Primarily located in southwestern North Carolina, the Qualla occupations at the Coweeta Creek site, Tuckasegee site and Townson site have provided prehistorians with information on the domestic structures and practices just before and at European contact (Dickens 1978; Rodning 2004, 2009; Wilson and Rodning 2002). Additionally, the Coweeta Creek site's multi-stage platform mound provides information on the ceremonial structures and practices of this Mississippian society (Rodning 2002a, 2004, 2013). This site's layout has the usual Mississippian community grammar, with domestic structures and activity areas surrounding a centrally located townhouse, mound, and town plaza (Rodning 2004). The one element missing from Qualla communities that is seen in most Mississippian communities is the defensive log stockade, or palisade, indicating a lack of conflict in later Mississippian groups within the Appalachian Summit.

In sum, there is a broad range of archaeological knowledge about the South Appalachian Mississippian landscape. Townhouses and plazas were present at most towns, even those without mounds. Log stockades, or palisades, formed the boundary of these towns and villages, while houses were often situated in between public plazas and the palisades at the edges of the settlements. Members of these communities were buried in and around dwellings, often with



differential burial treatment that reflects differing forms of power and leadership. These people grew maize, beans, and squash in their fields, as well as harvested and hunted local resources. How the Pisgah people living in the mountains of North Carolina compared to these groups is still mostly unknown, but the process of Mississippianization throughout this pan-regional area is well-acknowledged and studied.

## **2.4 The Appalachian Summit of North Carolina**

The Pisgah phenomenon was initially considered part of the South Appalachian Mississippian tradition due to the predominant carved wooden paddle-stamped surface finish on its pottery (Dickens 1970, 1976; Holmes 1903). Pisgah settlements range from small farmsteads to large, nucleated villages, the latter often having a palisaded, circular layout with rectangular houses surrounding a central plaza (Dickens 1970, 1976). Other features such as substructure platform mounds and items with Southeastern Ceremonial Complex motifs offer additional evidence of interaction with other South Appalachian Mississippian groups in Tennessee and Georgia (Dickens 1970, 1976; Ferguson 1974). Dickens (1976) identified two sub-phases of Pisgah occupation. The Early Pisgah sub-phase, from AD 1000-1250 (Dickens 1976:198; Eastman 1994a, 1994b), predates the Mississippian expansion into the Appalachian Summit, while the Late Pisgah sub-phase is radiocarbon dated from AD 1250-1450 (Dickens 1976:198; Eastman 1994a, 1994b), though the recent discovery of Pisgah-style ceramics in association with Spanish artifacts at the Berry site in Burke County, North Carolina, suggests that Pisgah ceramics were produced into the 16th century. The Early Pisgah sub-phase is characterized by ceramics with fine-element, rectilinear complicated-stamped designs and is culturally contiguous

with the subsequent Late Pisgah occupation, based on similarities in ceramic styles and house forms (Dickens 1976; Moore 1980, 1981).

The Late Pisgah phase of the prehistoric Cherokee occupation in North Carolina challenges our understanding of Mississippianization. While Mississippian features such as substructure platform mounds and the accompanying ceremonial complex are found at Late Pisgah sites, some have argued that the difficult terrain of the Blue Ridge Mountains would have made these highland communities more isolated and less likely to interact with neighboring, contemporaneous Mississippian groups, such as the Dallas culture in eastern Tennessee or the Etowah-Wilbanks culture in northern Georgia. This presumed isolation could explain the differences in settlement patterns and general lack of similarity between these highland communities and neighboring Mississippian societies (Ferguson 1971; Moore 1986a). In addition to the steep terrain, maize agriculture should have been severely limited in most locales by soil composition (Purrington 1983:93). The narrow floodplains likely restricted the potential for population growth and intensive exploitation of resources that facilitated the sociopolitical structures of Mississippian polities (Moore 1986a; Smith 1978).

The Pisgah culture is thus an important research focus because it represents a longstanding cultural tradition that adopted Mississippian practices at a relatively late date (after A.D. 1200) in an environment considered unsuitable for maize agriculture (Dickens 1978; Ward 1965). Given that the earliest radiocarbon dates for Pisgah ceramics begin around A.D. 1000 (Eastman 1994a, 1994b), before the Mississippian explosion and the A.D. 1050 “Big Bang” at Cahokia (Pauketat 1994), it seems necessary to explore “Mississippianization” apart from the surface decoration of ceramics. If we can disentangle the various practices that constitute Mississippian lifeways, then we might suggest that people in more peripheral areas would

incorporate selected Mississippian practices while avoiding or resisting others, particularly the economic reorganization so typical of other episodes of South Appalachian Mississippian groups.

## **2.5 Modeling the Process of Mississippianization: Scenarios and Expectations**

The Late Pisgah-phase archaeological records from Garden Creek and Cane River offer a unique opportunity to assess the nature and extent of structural persistence and transformation associated with Mississippianization. Using these comparative data, I propose to look at (1) community layout and organization; (2) household architecture and features; and (3) subsistence/foodways. These dimensions will allow me to evaluate the degree to which different Appalachian Summit communities were reliant on maize agriculture while incorporating other selected Mississippian cultural practices. I will use data recovered from Garden Creek and Cane River to evaluate a series of expectations derived from two broadly defined scenarios of regional development (Table 2.1). Rather than merely seeking support for one scenario or the other at each site, I will use this framework to evaluate whether particular aspects of Pisgah lifeways are more closely aligned with one scenario or the other and to consider the causal role of specific cultural and ecological patterns identified at each site. Taken together, these scenarios and expectations should allow me to provide new insights into variability within and between Pisgah communities in the Appalachian Summit.

	Mississippian Adaptation	Upland Continuity
Domestic Architecture & Economy	<ul style="list-style-type: none"> <li>• Material correlates of Mississippian domestic structures (i.e. rectangular posthole patterns, raised clay hearths, entrance trenches, etc.)</li> <li>• Specialized ceramic wares and production for domestic and ritual events</li> <li>• Evidence for modified storage practices (few subterranean storage pits, post hole patterns indicating corn cribs)</li> </ul>	<ul style="list-style-type: none"> <li>• Material correlates of Late Woodland domestic structures (i.e. variable circular, oval or sub-rectangular shaped house patterns) with little evidence for prolonged use/repair</li> <li>• No specialized wares and little differentiation or variation in ceramics across the community</li> <li>• Subterranean storage in pits within, or in close proximity to, structures</li> </ul>
Subsistence	<ul style="list-style-type: none"> <li>• Evidence for increased reliance on tropical domesticates (storage and consumption of maize, squash, beans)</li> <li>• Change in subsistence practices with domestic refuse indicating a variable production and consumption of foods within the community (i.e. larger proportions of deer or presence of specialized foods)</li> </ul>	<ul style="list-style-type: none"> <li>• Low reliance on tropical cultigens; broad exploitation of wild plant foods including mast seeds and acorns</li> <li>• A balanced subsistence of hunting and gathering with horticulture</li> </ul>
Community Organization & Public Events	<ul style="list-style-type: none"> <li>• Material correlates of Mississippian community organization and planning, such as complex defensive structures (i.e. double palisade perimeter, bastions) and a large centrally located plaza</li> <li>• Evidence for public space and specialized public/ceremonial practices</li> <li>• Material correlates of public activities (non-domestic refuse such as feasting deposits, large serving vessels, evidence for processing in public spaces etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence for a Woodland community structure with smaller (1-2 acre) sites containing a circular layout, surrounded by a single-row palisade</li> <li>• No evidence for specialized structures or public constructions excluding a small plaza or simple palisade</li> <li>• No material correlates of large-scale feasting or commensal events</li> </ul>

Table 2.1 Scenarios and expectations for "Mississippian Adaptation" and "Upland Continuity"

### ***2.5.1 Mississippian Adaptation Scenario***

Previous research on Mississippian groups in the South Appalachian area has extensively documented the incorporation of Mississippian practices --- changes in community structure, architecture, and domestic subsistence economy, along with the economic shift towards a more whole-scale adoption of maize agriculture and a reliance on surplus (Beck and Moore 2002; Boudreaux 2007; Hally 2008; Hally and Kelly 1998; King 2003b; Meyers 2011; Polhemus 1987; Rodning 2004, 2009; Sullivan 1995). Changes in community organization similar to Mississippian developments elsewhere have already been observed in several Pisgah communities, most notably the platform mound constructed at Garden Creek (Cobb 2015; Dickens 1970, 1976) and the double palisade fortifications surrounding the circular village at Warren Wilson (Ashcraft 1996; Moore 2002b). Mississippian palisades are more robust than earlier Woodland defensive structures, sometimes including multiple palisade rows, bastions, and variable construction methods such as trench-set posts or earthen embankment-set posts (Bigman et al. 2011; Hally 2008; Milner et al. 2013; Polhemus 1987), a trend that is consistent with pervasive warfare between neighboring polities (Steinen 1992). Additionally, changes in domestic architecture are evident with the adoption of rectangular or square house patterns (Dickens 1976; Moore 1986a, 2002b). This house form was noted at both Cane River and Garden Creek, although variation in size and form across the sites and in proximity to palisade, plaza, or mound contexts has not been considered. Further analyses will examine (1) the number and sizes of structures and palisades, (2) the spatial relationships within and between communities, and (3) the timing of occupation areas via radiocarbon dating of recovered organic materials.

Several lines of material evidence have been used to demonstrate changes in foodways and feasting that coincide with the adoption of Mississippian culture in other locales, including the presence of specialized foods (Jackson and Scott 2003; Scarry 1986; Welch and Scarry 1995); increased reliance on domesticated foods (Scarry and Scarry 2005); and the types and sizes of ceramic vessels used for food preparation and serving (Blitz 1993b; Boudreaux 2010; Welch and Scarry 1995). At Garden Creek and Cane River, dietary shifts toward an increased reliance on domesticates (such as maize, squash, beans, etc.) and variable production and consumption of food (such as larger proportions of deer) would be consistent with neighboring Mississippian communities (Jefferies et al. 1996; Vanderwarker 1999). Economic shifts toward a greater reliance on domesticates would require modifications to storage practices (Barrier 2011; Ward 1985), with communal storage and above-ground corn cribs being expected material correlates. My analysis of pit features (in Chapter 6) and their associated botanical and faunal assemblages (in Chapter 5) will be used to evaluate this scenario.

The degree to which such practices were integrated by Pisgah communities in the Appalachian Summit will further our understanding of the adoption of Mississippian economic and social patterns on the periphery and in more marginal ecological zones. Additionally, how certain aspects were incorporated, and others excluded or avoided may indicate the social mechanisms and motives for incorporating Mississippian socio-political practices into the Appalachian Summit way of life.

### ***2.5.2 Upland Continuity Scenario***

Another possibility is that Pisgah communities maintained more traditional local practices, much like neighboring and contemporaneous Late Woodland communities in the

piedmont and highlands of North Carolina (Petherick 1987; Ward and Davis 1999; Whyte 2003, 2011; Woodall and Weaver 1988). Given the higher altitudes of the mountain ecology, a balanced reliance on hunting, gathering, and horticulture might be expected over increased reliance, production, and storage of domesticates (Dickens 1986; Moore 1986b). Analysis of botanical and faunal remains will reveal whether people exploited a wide range of wild plant and animal resources (Ward and Davis 1993), with less differentiation or specialization in diet across households. Additionally, under this scenario, subterranean pits closely associated with individual structures would still be the predominant form of storage (DeBoer 1988; Eastman 1999; Ward 1985). The domestic structures would likely be circular, oval, or sub-rectangular in plan view (Eastman 1999; Ward and Davis 1993; Whyte 2003) with little evidence for prolonged use that would require extensive repair. Excluding a single-row palisade, no specialized public structures would be present, and there would be little evidence of food consumption as part of larger community events (Vanderwarker et al. 2007; Vanderwarker and Detwiler 2002). While aspects of communal Mississippian construction are present at Garden Creek (the platform mound No. 1), an examination of foodways, spatial organization, and radiocarbon dating of remains from features at both this site and Cane River will provide detailed information about the range of subsistence activities over time in domestic and public contexts.

This Upland Continuity scenario, with less emphasis on commensal practices and no specialization within households, would suggest a limited Mississippian influence in the Appalachian Summit and possible intentional resistance marked by the maintenance of local traditional practices. Certain communities located in highly variable environments, with access to more vertical ecological tiers, might have selectively incorporated, borrowed, or emulated Mississippian practices (such as ceramic ware characteristics or architectural features) but did

not adopt other community practices that required larger-scale transformations of household and community organization. This would suggest certain social mechanisms for selectively incorporating outside practices while intentionally avoiding the economic reorganization typical of Mississippian cultures.



## **Chapter 3 Pisgah and the Appalachian Summit: Vertical Microenvironments and Agricultural Potential**

*“Among other eastern tribes, mountains were incidents, borders, hunting grounds, or waste areas in their territory; among the Cherokee, the mountains were the structural backbone of their habitat”* (Kroeber 1939:95)

### **3.1 The Appalachian Summit Environmental Setting**

Social scientists have a long history of studying the interaction between humans and their environments, and how this interplay can constrain or enable social change and transformation (Steward 1956; Flannery 1969; Gremillion 2002). While the natural environment certainly does not predetermine the course of cultural development, the environment and ecology that humans interact with is an important factor to consider. Ecology can be an impetus and a limitation to the ways in which societies live, and therefore is an important variable to consider when studying how cultures change and why.

The Appalachian Mountain range stretches north to south across much of the Eastern Woodlands, from central Alabama to southeastern Canada, and encompasses a remarkable range of habitat diversity (Figure 3.1). Alfred Kroeber (1939:95) categorized the Appalachian Summit as the “southern and highest part of the Appalachian system,” a rugged section of the Blue Ridge Mountains oriented northeast to southwest across western North Carolina and adjoining areas of Tennessee, Georgia, South Carolina, and Virginia. Neighboring the Ridge and Valley and



*Figure 3.1 The Appalachian Summit landscape in western North Carolina, at 4,500 feet above sea level*

Interior Plateau provinces on the west, and the Piedmont Plateau province on the south and east, the Summit is characterized by a labyrinth of mountain ranges, narrow stream valleys, and a very inconsistent pattern of drainage and topography (Braun 1950). Given that the highest elevations often exceed 6,000 feet above sea level, the corresponding ridges and valleys tend to direct human movement along certain corridors and also structure the distribution of plant and animal life. The streams and rivers that carve the mountain terrain flow either eastward toward the Atlantic or west depending on the location of the headwaters relative to the eastern Continental Divide. For many of the major waterways in the Appalachian Summit (i.e. the Hiwassee-Valley, Little Tennessee-Tuckasegee, Pigeon, French Broad, Nolichucky-Toe-Cane, and Watauga drainages), the drainages flow west/northwest into the Tennessee River or the Ohio River (i.e. the New River). These easy avenues of travel would provide a main route of communication and interaction for inhabitants, both linking neighboring valley communities and establishing contact with inhabitants in the neighboring Ridge and Valley and Interior Plateau provinces (Purrington 1983).

Alluvial soils, of demonstrated significance to Mississippian agriculture, are limited in terms of location and coverage within the Appalachian Summit (Ward 1965). The few floodplains of the mountain stream valleys are narrow and restrict farms to a linear distribution, with notable exceptions being the intermontane “basins” such as those found around modern towns like Asheville, Hendersonville, Canton, and Murphy (Dickens 1978). Soils in these areas are moderately fertile, but still less productive than the soils of many outside areas such as those surrounding major river valleys (Zawacki and Hausfater 1969). On average, soils rated by the U.S Department of Agriculture Soil Conservation Service as being of “moderate fertility” comprise less than 10% of the Appalachian Summit (Purrington 1983:93). In comparison to

surrounding regions at the same latitude, the Summit's higher elevations produce a more temperate climate with longer periods of cold weather, which shortens potential growing seasons. On average, the climate of the Appalachian Summit produces 170-180 frost free days per year (Keel 1976). Summers average between 68-74 degrees Fahrenheit and winters average between 36-42 degrees Fahrenheit (Purrington 1983), with temperatures fluctuating more than 20 degrees from day to night (State Climate Office of North Carolina 2015). Variation in elevation will also affect temperature and weather patterns within different valleys, creating drastically different rainfall and snow levels year to year. While this pattern of climate, drainage, and topography limits agricultural potential, the benefit of this mountain landscape is the great local variability of microhabitats that would have been accessible to local inhabitants and provide an abundance of seasonally available wild food resources within a short distance.

### **3.2 Plant and Animal Resources**

In terms of its biota, the Appalachian Summit is highly diverse as a result of the extreme topographic relief. Moving from one ecotone to another - from floodplain, to cove, to mountain slope, to mountaintop – a great variety of plant and animal life will be encountered within a relatively short distance (Shelford 1978). This diversity relates back to the region's antiquity when the Pleistocene climate shift left remnant populations of various species in these remote "islands" at higher mountain elevations. For example, during the last glacial period, coniferous boreal forests dominated the Appalachian landscape, but as the warming trend began fourteen thousand years ago, the boreal forests receded to the caps of the higher Appalachian ridges (Constantz 1994). Today there is more plant diversity in the Appalachian Summit than in any other similarly sized area of North America (Black 2001). Today, much of the Appalachian

forest is deciduous, containing Appalachian oak/northern hardwood species. Distinctive forest types correspond roughly with elevation, latitude, and landform types. The oak forest biome characterizes the lower elevations, although before the 1920 chestnut blight, the oak forest was more accurately the oak-chestnut forest (Braun 1950). Northern hardwoods species occur between 3,500 and 5,500 feet above sea level, and over 5,500 feet the spruce and fir forests dominate.

After the last ice age, fewer large-bodied animals remained in the Appalachian Summit but animal species diversity was still abundant. Woodland bison, elk, gray wolf, black bear, bobcat, cottontail rabbit, raccoon, squirrel, fox, beaver, skunk, opossum, snakes, turtles and white-tailed deer – along with wild turkey, grouse, and passenger pigeon – were utilized seasonally as sources of food, hides, furs, and bone for tools (Dickens 1976; Keel 1976; Purrington 1983). Some animal remains - such as bear teeth, bird feathers, and turtle shells – were also utilized for decoration and to construct ceremonial accouterments. Aquatic species such as trout, bass, catfish, perch, pike and sturgeon were also fished from local waterways.

### **3.3 Historical Landscape of the Appalachian Summit**

The prehistoric cultural history and typological sequence of the Appalachian Summit region of North Carolina, and particularly the neighboring Piedmont region, is reasonably well known based on previous research (see Table 3.1). Although the timing and separation of some periods or sub-phases is still difficult to define, the cultural shifts defined below have traditionally been measured by changes in the lithic tool and ceramic technologies. More recently, research design and academic inquiry has turned to broader patterns of human behavior and cultural shifts that are measured by analyzing changing settlement and subsistence patterns,

<b>Dates</b>	<b>Period</b>	<b>Phase (Western North Carolina)</b>
AD 1450-1838	Protohistoric/Contact	Qualla
AD 1000-1600	Mississippian	Pisgah
AD 600-1000	Late Woodland	Cane Creek (?)
300BC – AD 600	Middle Woodland	Pigeon (300 BC – AD 200) Connestee (AD 200-800)
1000 – 300 BC	Early Woodland	Swannanoa (1000-300 BC)
3000 - 1000 BC	Late Archaic	Savannah River (3000 – 1000 BC) Otarre (1500 – 1000 BC)
6000 – 3000 BC	Middle Archaic	Stanley (6000 – 5000 BC) Morrow Mountain (5000 – 4000 BC) Guilford (4000 – 3000 BC) Halifax
8000 – 6000 BC	Early Archaic	Palmer (8000 – 7000 BC) Kirk (7000 – 6000 BC)
12,000 – 8000 BC	Paleo-Indian	Hardaway/Dalton (8500 – 7500 BC) Hardaway (10,000 – 8500 BC) Clovis (12000 – 10,000 BC)

*Table 3.1 Cultural chronology of the Appalachian Summit (adapted from Purrington 1983; Ward and Davis 1999)*

social and political organization, and even mortuary practices. Broader causal factors, such as environmental adaptations, are being considered when exploring significant changes between major cultural and temporal periods (Smith 1986). Thus this section will focus not only on the cultural chronology of the Appalachian Summit, but on broader trends and questions of the past human experience.

The first people to settle in the Appalachian Mountain range around 16,000 years ago were highly mobile hunters of the now-extinct megafauna species, such as the mammoth (Steponaitis 1986). The Paleoindian populations in the Appalachian Summit (ca. 9500-7500 B.C.) lived in an environment radically different than the one today, both in terms of habitat and also in terms of the human demography. The peoples in habiting much of the Southeastern United States carried out daily activities in a boreal deciduous forest environment, similar to the climate and environment experienced in the modern-day Northeastern North America. The landscape was sparsely populated by people, which encouraged highly mobile subsistence strategies and affected social organization. The archaeological record from this period is limited to lithic assemblages, such as fluted and semi-lanceolate projectile points and associated debitage (Purrington 1983). The hunting and gathering subsistence strategy meant that these early Native American people likely spent much of their time in pursuit of daily sustenance. Due to this highly mobile subsistence strategy, the settlement pattern and occupation of any one site was a brief event. The small size and relative infrequency of sites dating to the Paleo-Indian period is likely a reflection of both low population density and a sign of active mobility (Steponaitis 1986:370). The Appalachian Summit region in particular has very few Paleo-Indian sites on record, most of which are documented in the form of disassociated surface finds. This may support Anderson et al.'s model (2015) for colonization of the Southeast being concentrated

along the wide and fertile river valleys, as opposed to the high mountains of North Carolina and Tennessee. Beginning around 8000 B.C., the glacial period ended and climatic conditions became warmer, more like modern-day, with megafauna going extinct as their grassland environments shrank. Hunter-gatherer groups during the subsequent Archaic period (ca. 7,500 - 1,000 B.C.) would still forage for local resources, however they would be less mobile and maintain residential base camps (Purrrington 1983).

The archaeological assemblages from the Archaic period exhibit more diversity than the preceding cultural period and is by far the longest chronological and cultural complex to have existed within the Southeastern United States. For the most part, chronology in this period is defined on the basis of lithic assemblages, but the diversity of environmental and regional changes necessitates a division of the larger cultural/temporal sequence into three subunits: the Early, Middle, and Late Archaic. During the Early Archaic (8000-6000 B.C.), inhabitants used side- and corner-notched and bifurcate points (subdivided into Palmer and Kirk phase types), made on non-local raw materials from Tennessee. The Early Archaic period saw a shift from boreal forest to one of northern hardwoods and a climate characterized as cool and moist. During the Middle Archaic (6000-3000 B.C.), the regional climate warmed again to drier conditions that caused a shift in vegetation to Chestnut Oak Forest in the central and southern Appalachians (Delcourt and Delcourt 1985). Inhabitants made Stanly, Halifax, Morrow Mountain, and Guilford points primarily on local vein quartz. By the Late Archaic (3000-1000 B.C.), large, broad, quartzite Savannah River and Otter points became the dominant projectile point types (Purrrington 1983:107–110). In addition to these projectile point assemblages, stone tools such as pitted hammerstones, bifaces and unifaces of various size and use, ground stone manos, grinding slabs, and celts were also utilized throughout the Archaic period. Overall, the number and



variety of stone tools and projectile point types during the Archaic was on the rise. The climate during the Late Archaic gave way to a climate that could be considered modern, as the floral and faunal communities look more or less similar to the those at present (Steponaitis 1986:370). Late Archaic sites occasionally also had soapstone vessel fragments for processing and storing food, as well as gorgets, elbow pipes, net weights, and grooved axes (Keel 1976:231) indicating more specialized subsistence strategies. By 3000 B.C., distinct regional traditions were established through the Appalachians and this coincided with an increased interregional exchange of goods. Differences in the availability of water and floral resources trickled down to affect the diversity and availability of animal populations. While differences between Paleo-Indian and Archaic people's subsistence strategy might seem negligible across the entire Southeast, local adaptive changes characterize many regional cultural trajectories in the Archaic. For example, there was increased dependence upon or use of riverine aquatic resources, which is demonstrated archaeologically in the increase of shell middens along major rivers. By the end of the Middle Archaic, exploitation of riverine resources had come to match that of resources from forest environments. The overall population increase during the Archaic period is seen in the higher density of Archaic sites, with evidence in the archaeological record of a trend towards increased sedentism (Brown 1985). With increasingly semi-permanent sites and settlement patterns, the first cultivated plants appear in the archaeological record and the first use of stone and ceramic containers (Steponaitis 1986).

As population density increased, Woodland communities (ca. 1,000 B.C. – A.D. 1000) across the Eastern Woodlands began to cultivate garden crops and manufacture a diversity of pottery vessels (Anderson and Mainfort 2002). Throughout the Woodland and Mississippian periods, distinctions in ceramic types based on differences in temper type and surface treatment

characterize the various sub-phases of the Summit chronology. In contrast to neighboring regions, people during the Early Woodland of the Appalachian Summit continued the previous local subsistence strategy of a “broad adaptation to local resources” (Keel 1976:231), with little to no reliance on horticulture (Simpkins 1984). Deer, raccoon, turkey, turtle, waterfowl, fish, and shellfish dominated those animal forms extracted from the woods and waters of the South Appalachian region, and wild plant varieties such as chestnuts, acorns, and hickory nuts continued to be gathered. Beginning with the Early Woodland period (ca. 1000-300 B.C.), Swannanoa ceramics are characterized by thick-walled bowls and conoidal jars, often cord-marked or fabric-impressed and made with limestone temper (Hollenbach and Yerka 2011). The emergence of the Middle Woodland cultures (ca. 300 B.C. – A.D. 600) is characterized by an increase in outside influences and participation in an extra-local exchange system (Keel 1976; Wright 2014), as well as the cultivation of “quasi-cultigens” in small gardens and field plots. Recent evidence from a Middle Woodland site in Madison County, North Carolina (31MD60) indicates the inhabitants consumed corn as early as A.D. 465 (Shumate et al. 1998). Ceramic chronology is specific enough to subdivide this period into the Early Middle Woodland Pigeon phase (300 BC – AD 200) and Late Middle Woodland Connestee phase (A.D. 200- 600), based on the transition from crushed quartz to sand temper and a shift in emphasis from check-stamped and plain exteriors to brushed or simple stamped surface treatments (Keel 1976:247–255). Survey patterns indicate that settlements became seasonally sedentary and were often focused in the floodplains, with specialized use of the uplands (Purrington 1983; Wetmore et al. 2000). The social and political relationships of these groups appear to have been closely tied to activities in the ritual sphere (Byers 2011). The elaborate expressions of Middle Woodland ceremonialism, called Hopewell, coincide with a material and ideological phenomenon seen as far north as Ohio

and extending across the greater Eastern Woodlands from 100 B.C. – A.D. 400. Monumental constructions and associated ceremonial activities during the Middle Woodland period within the Appalachian Summit is described from excavations at the Garden Creek site (31Hw7) (Keel 1976; Wright 2014) and the Biltmore Mound (31Bn174) (Kimball et al. 2010, 2013). These monumental sites demonstrated three related spheres of Hopewellian ceremonial practice - the construction of massive earthen monuments, the prescribed burial of the dead in these contexts, and the accumulation of sacred objects (Wright 2014). Without any inherent social inequalities, these Middle Woodland hunter-gatherers appear to have been articulated into larger, formalized communities.

Characterizing the material culture and human lifeways of the Late Woodland period is made difficult by the general lack of sites within this period and the lack of agreement among researchers. Keel and Egloff (1984) have proposed a Cane Creek phase ceramic ware, which may be distinguished from earlier Connestee wares by the increased presence of plain surfaces in the overall assemblage. Additionally, excavations at the Cullowhee School site have identified a Late Woodland component dating to the ninth century, although ceramics recovered consist almost entirely of Napier Complicated Stamped sand tempered wares (Robinson et al. 1994). Reports on Late Woodland sites are few in number, likely due to the difficulty experienced in trying to distinguish discrete Late Woodland contexts from earlier Middle Woodland assemblages or Early Mississippian period contexts.

This overview of the pre-Mississippian occupation of the Southern Appalachians highlights the strategies necessitated by the use of geographically diverse area. Before the adoption of corn agriculture, communities subsisted primarily on seasonally available plants, mast, and game. The social landscape of the pre-Mississippian Appalachian Summit included a

tradition of inter-community contact, as well as inter-regional interaction, that likely rooted later culture contact strategies utilized by Mississippian communities.

### **3.4 Early Pisgah in the Appalachian Summit**

Roy Dickens (1970; 1976) initially identified two sub-phases of Pisgah occupation in the Appalachian Summit after studying a large collection of Pisgah ceramics. The Early Pisgah sub-phase, from ca. A.D. 1000-1250 (Dickens 1976:198; Eastman 1994a; 1994b), predates the Mississippian expansion into the Appalachian Summit, while the Late Pisgah sub-phase is radiocarbon dated from ca. A.D. 1250-1450 (Dickens 1976:198; Eastman 1994a; 1994b). The Early Pisgah sub-phase pottery is characterized by fine-element, rectilinear complicated-stamped designs and is culturally contiguous with the subsequent Late Pisgah occupation, based on similarities in ceramic styles and house forms (Dickens 1976; Moore 1980; 1981). However, data on Early Pisgah site practices, community layout, features, house forms, etc. are relatively scarce and difficult to find. Only a handful of sites have been radiocarbon dated to the Early Pisgah sub-phase or contain a majority of Pisgah ceramics with early sub-phase characteristics.

One site clearly dated to the Early Pisgah phase is the Brunk site (31Bn151), located in Buncombe County, North Carolina on a non-riverine, upland toe slope. Partially excavated in 1979-80 by David Moore, this small site at 3100 feet above sea level was radiocarbon dated to A.D. 1245 and revealed a few intact subsurface features and a single house pattern (Eastman 1994a; 1994b; Moore 1980; 1981). Originally, Dickens hypothesized that Pisgah sites outside of the main riverine settings were just temporary hunting or collecting camps, however the range of artifacts, abundance of ceramics, and evidence for a substantial structure at the Brunk site may indicate a more permanent upland settlement (Moore 1981:6). Although this site is radiocarbon

dated quite late for the Early Pisgah sub-phase, the ceramic assemblage analyzed from two of the Brunk site features demonstrates similar stylistic attributes for what Dickens defined for the Early Pisgah typology (Moore 1981). The Brunk site ceramic collection contained a much larger percentage of the fine-element, rectilinear complicated-stamped designs, a proposed trait of the early temporal sub-phase, and no examples of curvilinear complicated-stamped designs, a late Pisgah sub-phase characteristic (Moore 1981:50). Moore (1986b:78) hypothesizes that the Brunk site, and other upland Pisgah locales, may have functioned in a trade or travel network located along commonly utilized upland pathways. The posthole pattern of the house structure is described as “nearly square, with slightly rounded corners” and approximately 20 ft or 6m in length with two interior features (Moore 1981:13).

Many Early Pisgah structures and features have been recovered at the Ravensford Site (31Sw78/136) in Swain County, North Carolina, which is 60 miles southwest of the Brunk site. The Ravensford site is a large 18ha multi-component site, excavated from 2004-2008 by TRC Companies, Inc., that contains a large well-preserved archaeological record dating primarily to the Early Pisgah, Early Qualla, and Late Qualla phases (Benyshek and Webb 2008; Compton 2014; Keel 2007). This site is located along Raven Fork, near its confluence with the main branch of the Oconaluftee River, and because of its proximity just north of the modern-day town of Cherokee, the land was acquired by the Eastern Band of the Cherokee Indians and excavations were completely funded by the Eastern Band of Cherokee in preparation for the construction of a K-12 educational complex. Although a complete report of the Ravensford excavations, including a summary of the ceramic attributes and radiocarbon dates, is still in progress, a brief overview of the Early Pisgah occupation at Ravensford will be discussed here based on conference presentations provided by Tasha Benyshek and Paul Webb (2008).

The Early Pisgah occupation at Ravensford appears to represent a dispersed village composed of as many as thirteen flexed pole domestic and public structures, concentrated to the south of the site (Benyshek and Webb 2008; Keel 2007). These structures are described as bent/flexed pole structures that date between AD 1150 and 1250, and are associated with a small assemblage of ceramics (Benyshek and Webb 2008). Like Brunk, these Early Pisgah structures have no wall trenches and the surviving postholes tend to be quite shallow, small, and closely set. Very few pit features have been definitively associated with this component but the ceramics have similar attributes to those from the Brunk site (Benyshek and Webb 2008). Unlike at Brunk, it appears many of the Early Pisgah structures show no evidence for rebuilding, although two structures do overlap. What is exceptionally unique about Ravensford's Early Pisgah occupation is the variation in form of the flexed pole domestic structures and the presence of two possible large public buildings. For the domestic buildings, there is one circular structure (measuring 7.3m in diameter), two square structures (measuring 5.25 across), four rectangular structures (from 3.8 to 7.7m in length and 3.5 to 7.4m in width), and four other rectangular buildings with one or two rounded/ arched ends (7.1 to 10.3m in length and 4 to 5.8m in width) (Benyshek and Webb 2008). Two larger flexed pole structures, located 20 m apart from each other, are interpreted as public buildings based on their large size. One is square (8.4m in length) and the other is rectangular with rounded ends (12.8 m in length and 8m in width) (Benyshek and Webb 2008).

Another Early Pisgah flexed-pole structures has been identified at the village site of Nununyi in the Oconaluftee Valley, less than two kilometers south of Ravensford (Benyshek and Webb 2008). Additionally, an Early Pisgah rectangular structure was identified at the River Bend Site on the Biltmore Estate in Buncombe County (31Bn867), and radiocarbon dated to

A.D. 1270, although the few associated ceramics suggested a Pigeon phase/ early Middle Woodland period occupation (Shumate et al. 2009). This structure was similar to Ravensford's flexed pole structures, having a rectangular shape with rounded/ arched ends (measuring 6.6 by 7.5m), with small, close-set postholes (Shumate et al. 2009:23–25).

In general, these Early Pisgah sites are quite ephemeral and difficult to identify. Until the recent excavations at Ravensford, flexed pole structures were rarely recorded in western North Carolina, but it is likely that this Early Pisgah architecture is much more common than is presently recognized. Due to the low artifact densities, preservation bias, and difficulty in identifying posthole structural patterns, the Early Pisgah period remains a largely unknown and understudied phenomenon in Appalachian Summit prehistory. The house forms tend to be less robust than Late Pisgah houses, and do not contain any wall trenches; there is no evidence for fortification or nucleated site structure - however the possible presence of public buildings is intriguing. The continuity in ceramic attributes from Early Pisgah to Late Pisgah indicates a local, contiguous tradition from A.D. 1000 to A.D. 1500, however the introduction of Mississippian practices in the built environment and community practices is not evident until the Late Pisgah sub-phase beginning around A.D. 1250.

### **3.5 Mississippian Late Pisgah in the Appalachian Summit**

The Late Mississippian period is generally characterized by the increased importance of horticulture, particularly maize and beans, and by increased socio-political complexity. The new subsistence strategy adopted by each Mississippian group promoted larger population sizes, and in many groups increasingly centralized social and political organizations arose. With the increased dependence upon maize horticulture came a number of technological innovations

associated with the cultivation, processing, preparation and storage of this food item. For example, ceramic technologies were advanced with the shift to limestone and shell tempers which allowed for lighter clays that were less likely to shrink and easier to work. The result was an increased variety of forms, many of which were more functional, as vessels for cooking and storage (Smith 1986:54). With this expanding variety of vessel forms also came increased variety and complexity of ceramic surface decorations. A local manifestation of Mississippian culture to the east, in the North Carolina Piedmont, called the Pee Dee culture exemplified these cultural changes. The record of archaeological research in the Appalachian Summit, however, is often called more sporadic or scattered.

Beginning in 1964, Joffre Coe at the Research Laboratories of Anthropology, University of North Carolina at Chapel Hill began a long-term archaeological research program utilizing survey and excavation to locate Cherokee towns and collect valuable distribution and chronological data. This Cherokee Project provided a picture of the archaeological sequence of the Appalachian Summit, utilizing data sets from numerous sites spanning the entire prehistoric sequence. Between 1966 and 2000, archaeologists from the RLA and Warren Wilson College directed twenty-five summer field schools. Several of Coe's students, Roy Dickens (1970) and Bennie Keel (1972), went on to establish the typological and cultural chronology for the Woodland and Mississippian periods in the Appalachian Summit. Given the long occupational history of the sites excavated for the Cherokee Project, the Garden Creek site (31Hw1) and the Warren Wilson site (31Bn29) were the primary data sets utilized for establishing the western North Carolina archaeological chronology.

The Mississippian culture in the mountains of western North Carolina and eastern Tennessee is generally associated with the Late Pisgah culture. The Pisgah period was



categorized as Mississippian based on the presence of the “diagnostic duo”, platform mounds and rectilinear complicated stamped pottery. While both of these traits do appear in the Late Middle Woodland Connestee phase, they co-occur together for the first time during the Pisgah phase (Keel 1975:14). Roy Dickens’ 1970 dissertation on the Pisgah culture defines it as “a recurring complex of archeological remains from numerous sites in the Southern Appalachians,” most specifically excavations of the village component at the Warren Wilson site and the mound excavations at the Garden Creek site.

“Sites vary in size from about ¼ acre to about 6 acres, the more spacious portions of alluvial valleys being the favored locations for settlement. The Warren Wilson site probably is representative of a medium-sized village that at first covered about ½ acre but was later enlarged by stages to include about 3 acres. Houses were constructed of upright posts, had a square to slightly rectangular plan (about 20 feet on a side), a depressed floor, a central platform hearth, and a vestibule entrance. These houses probably were walled with bark or woven mats and were roofed with bark or straw thatch. The house floors, and areas immediately surrounding the houses, contained burials, clay borrow pits, storage pits, and additional fire basins. The villages probably also contained sweat houses, storage cribs, and other small structures. The houses and other structures were arranged around a plaza, and the whole complex was enclosed by a defensive palisade. An entrance to the village, at least in its early stages, was formed by an offset in the palisade, at the point of easiest access to the nearby river” (Dickens 1976: 206-207)

While most of the larger Pisgah village sites occur along lower floors of the main valley floodplains, Purrington (1983) and Moore (1980) have pointed to smaller Pisgah occupations and resource utilization that is not limited to large river valleys (Figure 3.2). These sites indicate that Pisgah subsistence and settlement patterns may be more diverse than those employed in the neighboring, less inimical Piedmont and Ridge and Valley settings. The difficult mountain

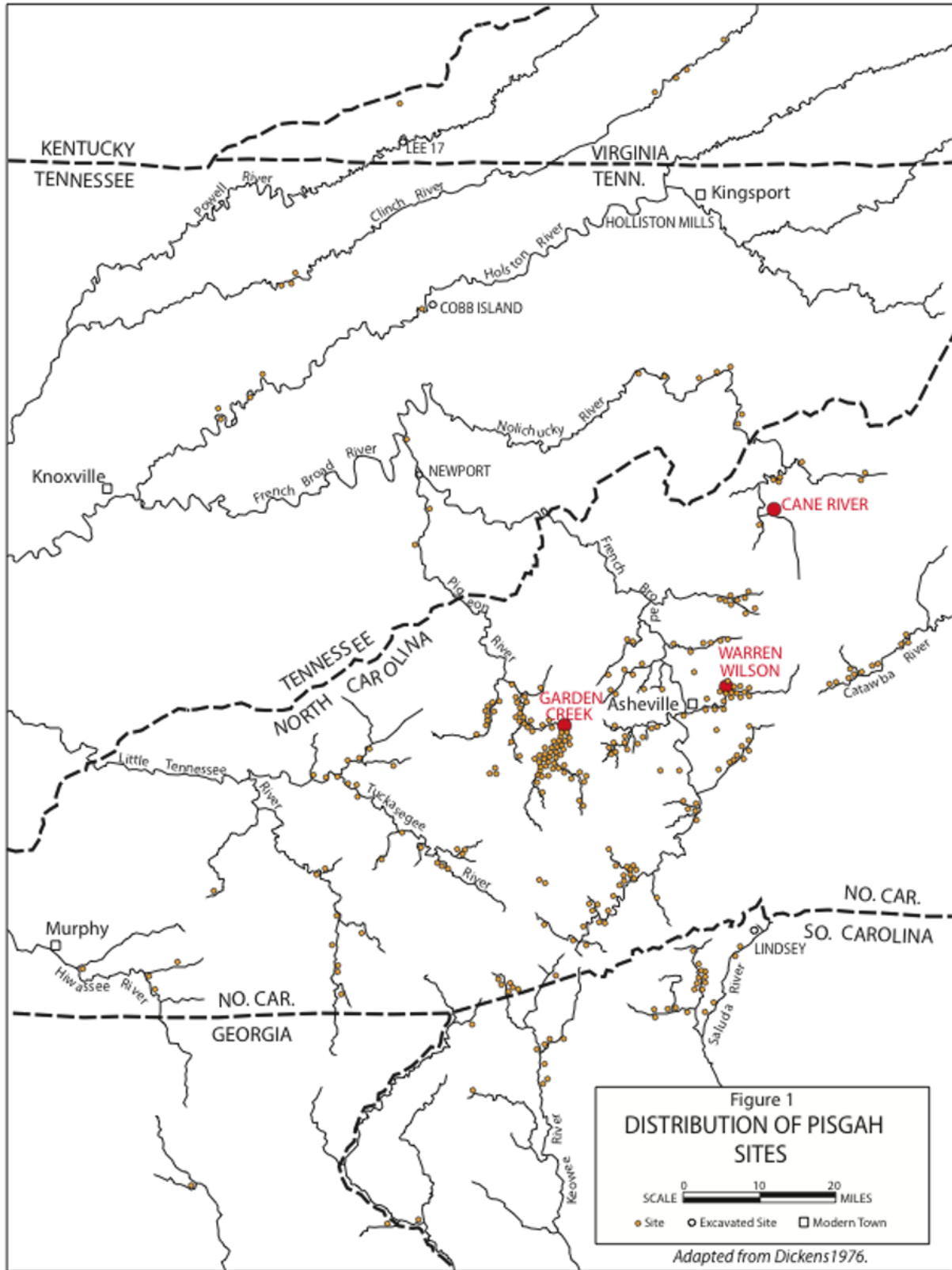


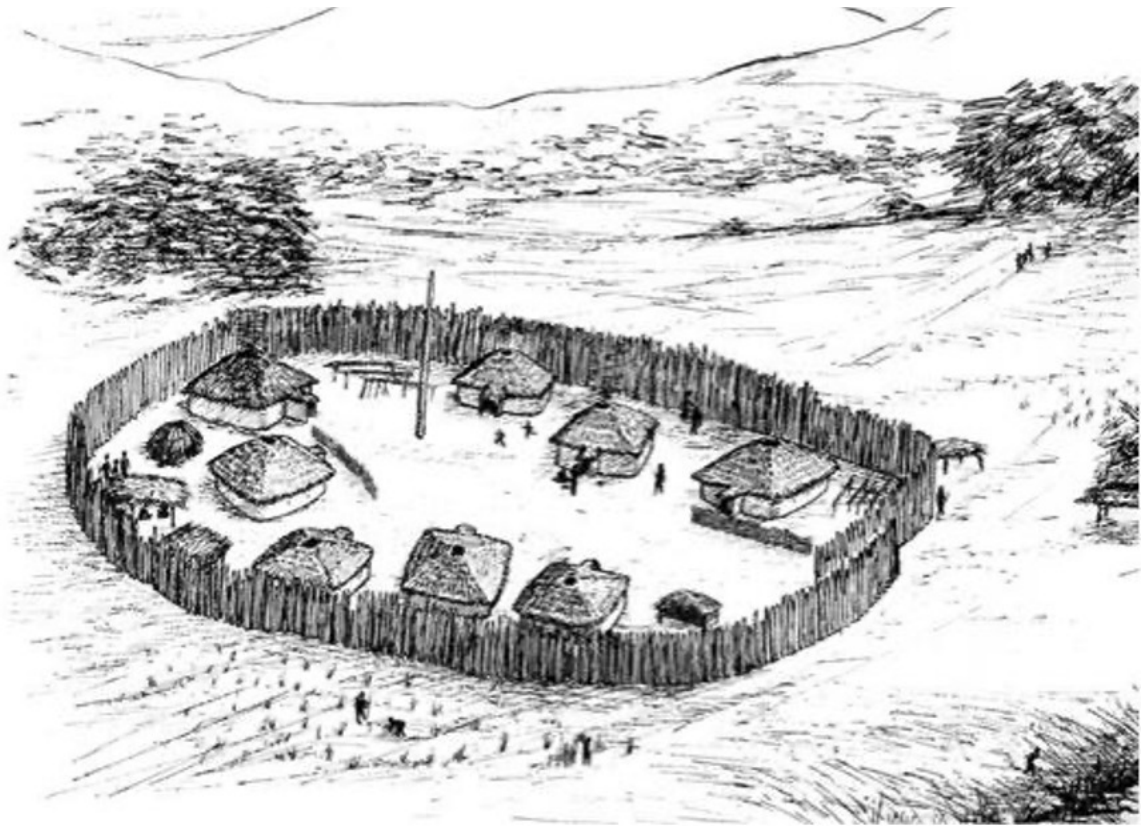
Figure 3.2 Location of Pisgah sites mentioned in text

environment may have required Pisgah residents to expand upwards to sites located at higher elevations.

The Warren Wilson site is a stratified occupation located on the Swannanoa River east of modern-day Asheville, North Carolina. Although the site contains occupations from the Middle Archaic period, the Late Archaic period, and the Woodland period, it is perhaps best known for the Mississippian period Pisgah phase occupation. To this day, the Warren Wilson site (31Bn29) remains the only Pisgah village that has been extensively studied and published on. Located in Buncombe County, North Carolina, this small, approximately 1.3 hectare, Pisgah village on a low river terrace consists of multiple palisade lines surrounding a circular village with a central plaza (Dickens 1976; Moore 2002b) (Figure 3.3). It remains the only Pisgah site to have the majority of the village plan exposed. The Pisgah village at Warren Wilson has been the subject of investigation for almost 50 years. In total, archaeologists have identified at least seventeen domestic structures, seven palisade lines, and dozens of associated burials and features, all of which constitute a relatively stable village layout similar to that of other Mississippian hamlets and farmsteads (Moore 2002b) (Figure 3.4). Warren Wilson represents one of the best understood Pisgah villages in terms of its site structure, foodways, and domestic production (Dickens 1976; Moore 1981; Moore 2002; Runquist 1979; Simpkins 1984). While Warren Wilson is a small village with no discernible public or ceremonial structures, it does provide a rich comparative data set for understanding the variability among Pisgah communities.

### ***3.5.1 The Garden Creek Site***

The large mound and village site of Garden Creek (31Hw1) is located on the floodplain of the Pigeon River in Haywood County (Figure 3.5). Garden Creek contains three mounds and



*Figure 3.3 Reconstruction of the Warren Wilson site (Dickens 1976)*

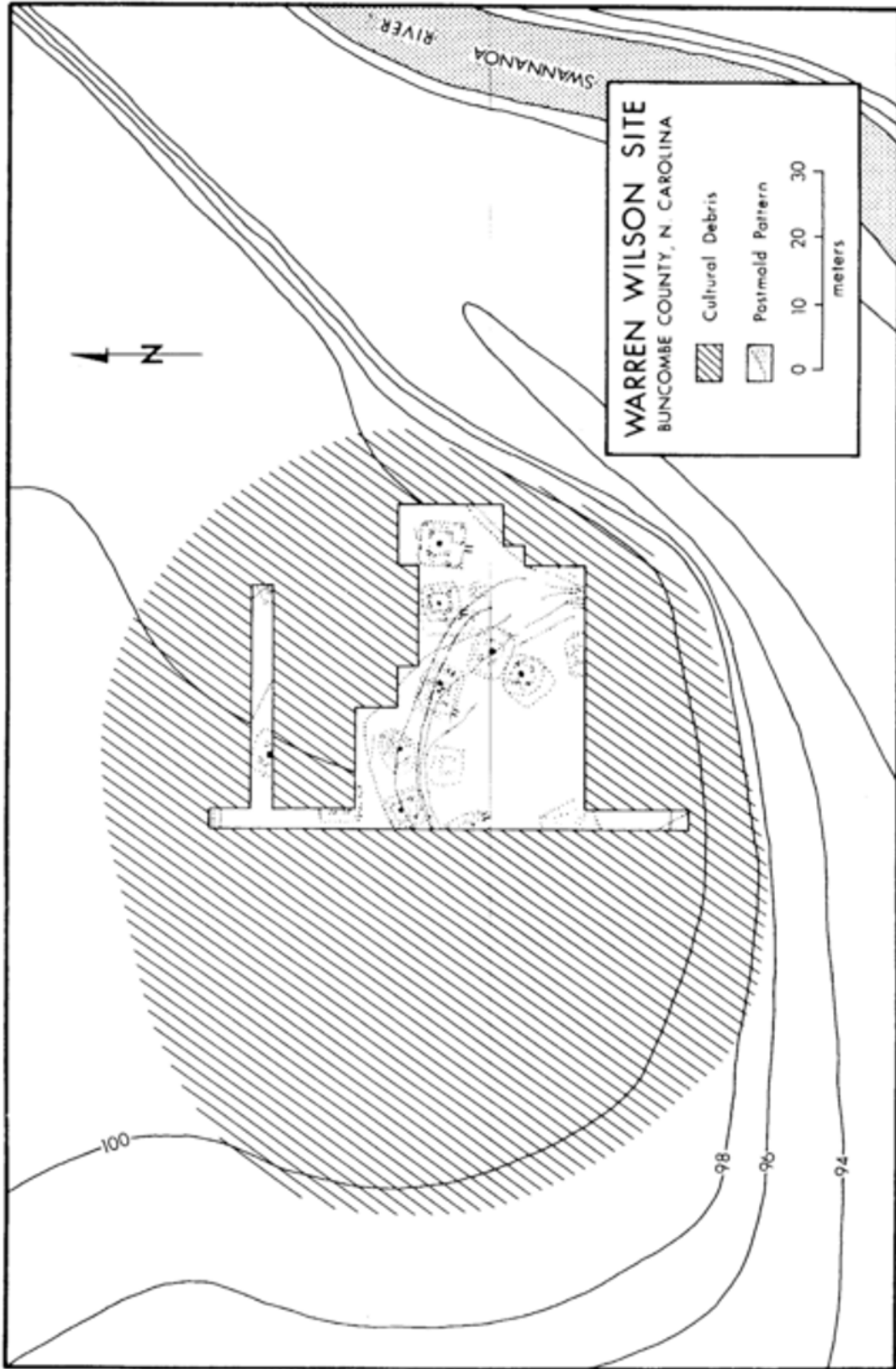


Figure 3.4 Excavated portion of the Warren Wilson Pisgah village (Dickens 1978)

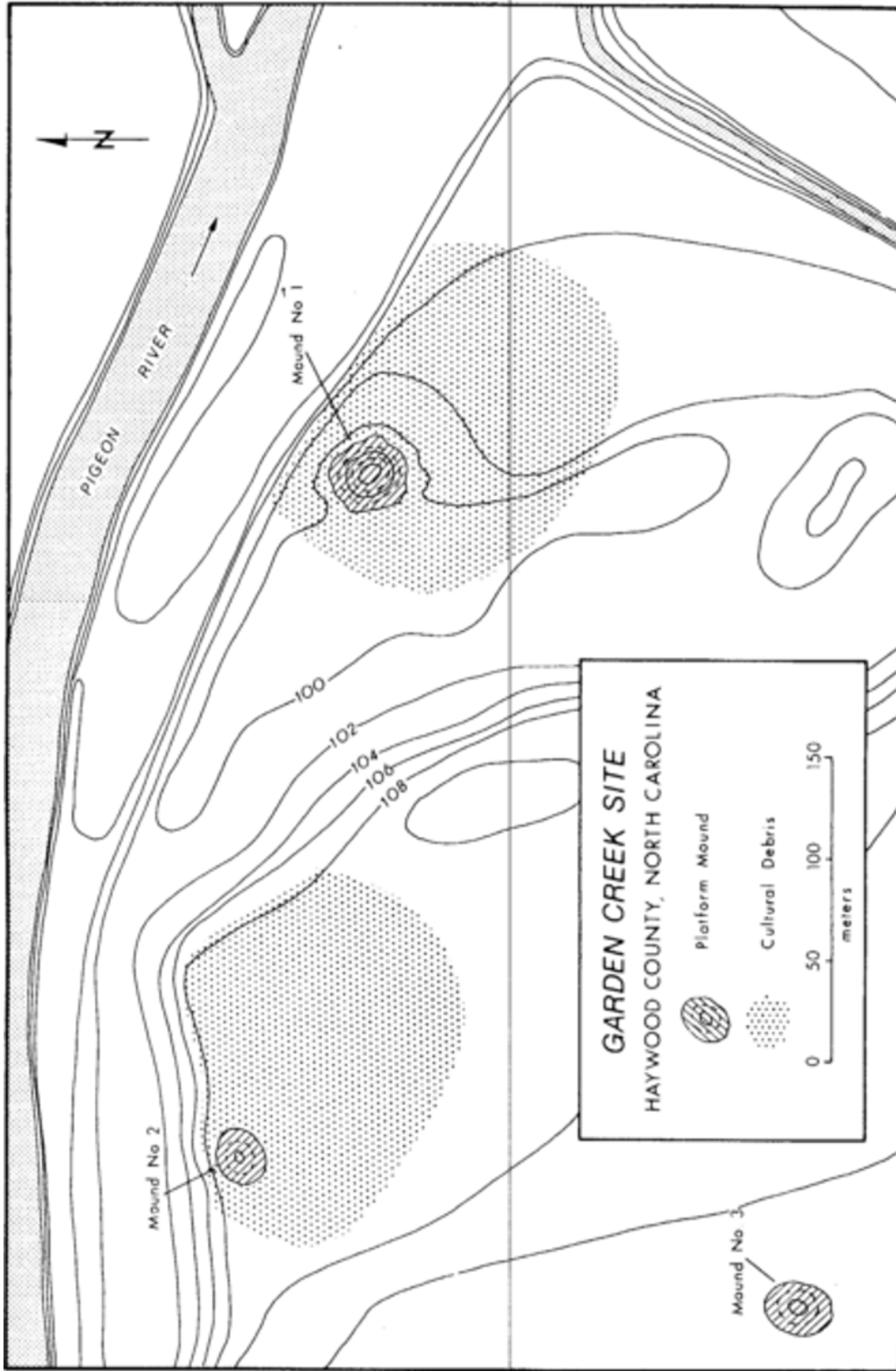


Figure 3.5 The spatial extent of the Garden Creek site components, including the Pisgah mound and village (Mound No. 1) (from Dickens 1978)

several village middens over a 4.86-hectare area that was first explored by the Valentine Museum in the early 1900s. Later excavations over three field seasons from 1965-1967 focused primarily on mound excavations and two seasons in 2011-2012 uncovered a substantial portion of the Middle Woodland (31Hw7, Mound 2) occupation (Dickens 1976; Wright 2011a; Wright 2011b). The Pisgah component of the Garden Creek occupation covers about 2 hectares and consists of at least one platform mound (Mound 1) and an associated village area and midden (Dickens 1976). The Pisgah mound (Hw1) is the largest at Garden Creek and consists of at least two construction stages and floors (Cobb 2015; Dickens 1976). This earthwork was a ceremonial substructure and consisted of two paired earth lodges that were subsequently covered by a rock mantle, after which an earthen surface was prepared that served as the base for ceremonial buildings and a log palisade. This initial capping of important public buildings with stone and earthen mantles, which in turn became the foundations of successive episodes of alternating layers of structures and soil, is a widespread Mississippian earthwork building practice adopted across multiple South Appalachian Mississippian groups (Cobb 2015; Rudolph 1984; Rudolph and Hally 1985). Beneath and adjacent to the mound was an old village surface containing a palisade with a bastion, a village midden, and two probable house patterns (Dickens 1976). While the mound construction and village architecture has been described in previous literature (Dickens 1976), the associated Pisgah artifacts have never been thoroughly analyzed or reported. Continued study of the Garden Creek Mound No. 1 and its associated village component provides my research project with a comparative sample of ceremonial and domestic activity areas. While clear evidence of Mississippian cultural practices is present at the site, the intensity

and impacts of these practices on domestic architecture, food practices and community structure remain unspecified.

### ***3.5.2 The Cane River Site***

The Cane River site (31Yc91), estimated to be about 1.6-2 hectares in extent, is located on a rise above the eponymous tributary of the Nolichucky River in Yancey County. In 1989 and 1990 salvage excavations behind a local middle school, led by Dr. David Moore with the North Carolina Office of State Archaeology, uncovered a 17x25m area of the periphery of the prehistoric village. These excavations revealed one rectangular structure, 7-8m in length and 4m in width; portions of three palisade lines, totaling 50m in length; and approximately 80 features (Figure 3.6). One burial was temporarily removed and repatriated the following year. The assortment of excavated features included several large daub borrow pits, hearths and storage pits. Recovered artifacts from the feature fill included ceramic sherds, chipped stone artifacts, and large quantities of animal bone in an unusually good state of preservation. Cane River provides a unique perspective of Pisgah lifeways given its intermediate village size and unusual upland location outside of a large river valley. Additionally, recent radiocarbon dates reveal that the site was occupied between ca. AD 1290 and 1610, making it contemporaneous with mound construction at Garden Creek (ca. AD 1423) and likely coeval with the Warren Wilson village site, roughly dated to between the twelfth and fifteenth centuries AD based on its ceramic assemblage. To examine variability in public and domestic activities across the Cane River site, I am conducting an analysis of these extant collections along with new materials recovered in 2013 and 2014. Recent geophysical survey of the site in 2013 revealed additional intact archaeological deposits that were subsequently targeted for excavations in 2013 and 2014.



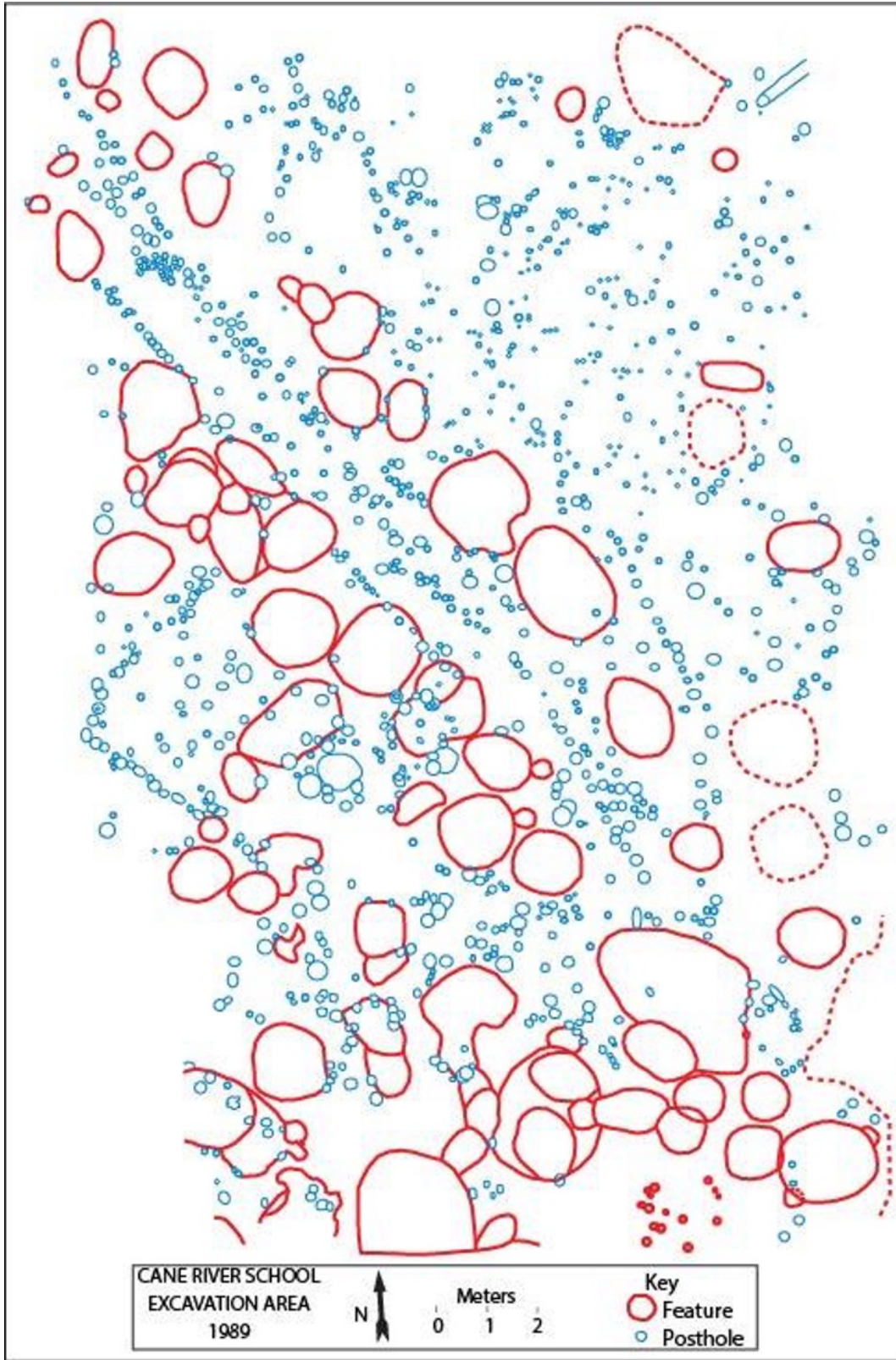


Figure 3.6 One structure, several palisade lines, and an assortment of features identified in the 1989-90 excavations at the Cane River site (map provided by David Moore)

Given the importance of the Cane River site to evaluating my research scenarios, it was essential that I conduct new excavations at the site to sample a wider range of public and domestic activities. In June 2013, I undertook magnetic gradiometer and ground-penetrating radar surveys of the known Cane River village and surrounding areas with Dr. Tim Horsley. This survey revealed that the extent of the Cane River site is much larger than previously believed and may include multiple village occupations with additional palisade lines and features. Guided by the results of this geophysical survey, from September to November 2013 and from April to May 2014, I directed excavations that exposed 53m<sup>2</sup> across the site, targeting several different types of magnetic and radar anomalies (see Figure 4.23). Excavation procedures largely followed the previous strategies employed by the Cherokee Project at Garden Creek and Warren Wilson (Dickens 1976) to maintain comparability between previously excavated Pisgah sites. Excavation team members included several trained archaeologists and 2-3 volunteers from the local community. My crew and I used shovels to remove the plowzone, below which we excavated intact deposits within the sterile subsoil in levels and features according to their natural stratigraphy. Ten percent of the plowzone sediment was dry screened through ¼ inch mesh, while all intact deposits were water screened through ¼ inch, ⅛ inch and 1/16 inch mesh. At least one 10L sample of matrix was collected from each intact features and natural level for flotation. All characteristics of soil, elevation, artifacts, profiles and spatial distribution were recorded on standardized field forms, mapped, and photographed. Given the degree of plowing across the site, no intact living surfaces were identified. However, large assemblages of Pisgah artifacts were recovered from the plowzone and multiple discrete features and postholes that had been dug into the subsoil were excavated.

These intact feature contexts, along with their associated material remains and their spatial organization within the site, provide data pertaining to domestic production and foodways, as well as to a range of community activities. Excavated features included four hearths (two of which were superimposed), one area of sheet midden, and nine borrow or storage pits (several of which were quite deep and stratified). Additionally, my crew and I excavated over a hundred postholes, many of which had clear alignments for structures and palisade walls; moreover, two pairs of overlapping entrance trenches were identified from a centrally located structure. I will analyze these architectural remains and use their organization in space to focus on the domestic organization relative to community planning and design. These features, structures, and artifacts comprise a significant sample of both domestic and public-associated activities and assemblages for comparison with those already excavated from Cane River and from the mound and village contexts at Garden Creek.

## Chapter 4 Pisgah Communities & The Built Environment

Archaeologists' understanding of social relations and spatial structure has come a long way over the years and varies widely in scale and scope, from studies of settlement patterns to the life history of a place (e.g. Ashmore 2002; Smith 1978; Tilley 1994). With the current appreciation that space is actively inhabited, the analysis of spatial organization has moved beyond just reflecting social organization; it now considers how space can reinforce and reconstitute social relationships and identity at various scales of interaction (Canuto and Yaeger 2000; Rapoport 1990). When considering a community's layout and the construction of shared architectural elements, the sense of "place" becomes "part of a socially cognized landscape" (Ashmore 2002:1178). Urban space, as created space, becomes a "field for symbolic representation of both the social and the cosmological order"(Kus 1983:279). As communities manipulate and create certain physical features on the landscape, spatially arranging different village forms, the spatial ordering becomes a reflection of human choice and the self-definition of a society. How these communities identify with the Mississippian cosmology and worldview will thus be reflected in the spatial patterning of the community's built environment.

Among Eastern Woodland archaeologists, the physical structure and layout of a Mississippian town is regarded as a reflection for how Mississippian people saw their cosmos (Lewis et al. 1998). Community organization was a metaphor for the Mississippian worldview, whereby similarities in "architectural grammar," shared across towns and linguistic lines, represent a map of how Mississippian people saw their cosmos. These key elements of a

Mississippian town: the plaza, mound, and boundary (i.e. palisades) – were most likely ritually prescribed (Lewis and Stout 1998). At the macro level, archaeologists see these similar construction episodes as evidence for widespread interaction and incorporation of similar beliefs. At the local micro level, how the built environment structured interactions between households and kin groups can also shed some light on how new Mississippian practices and structures were incorporated, adapted, or possibly even rejected by different communities.

Changes in community organization similar to Mississippian developments elsewhere have already been observed in several Pisgah communities, most notably the platform mound constructed at Garden Creek (Cobb 2015; Dickens 1970, 1976) and the palisade fortifications surrounding Garden Creek and the smaller village at Warren Wilson (Ashcraft 1996; Moore 2002b). When considering these elements of the built environment, particularly at the periphery of the Mississippian extent, the created space can illuminate the processes of Mississippianization at both the local community and regional scale.

In this chapter, I'll discuss the evolving community organization of three Pisgah villages and how this illuminates the historical trajectory of Mississippianization in the Appalachian Summit. First, I will present information on the spatial organization of the Cane River site, utilizing data collected during the 2013 geophysical survey and 2013-2014 excavations. These data are used to produce a partial map of the site displaying known features and architectural elements. Then I will compare the Cane River site community organization to another contemporary site; I will look at the village layout and extent, and palisade construction at the Warren Wilson site. Second, this chapter provides an overview of the mound-and-plaza complex in Mississippian town layouts and the construction of Mound 1 at the Garden Creek site, which is currently the only confirmed mound built during the Pisgah period. Finally, recent

radiocarbon dating at the Cane River, Warren Wilson, and Garden Creek sites provide new insights into the timing and tempo of social change, highlighting examples of continuity and variation among Pisgah sites during the Mississippianization process.

#### **4.1 Mississippian Community Grammar: Mounds, Plazas & Palisades**

In general, Mississippian palisades are more robust than earlier Woodland defensive structures, sometimes including multiple palisade rows, bastions, and variable construction methods such as trench-set posts or earthen embankment-set posts (Bigman et al. 2011; Hally 2008; Milner et al. 2013; Polhemus 1987), a trend that is consistent with pervasive warfare between neighboring polities (Steinen 1992) and competition for arable land (Larson 1972). Putting time, energy, and collective resources into the construction of these defensive walls reflects the reality that people believed they were in danger from attack, thus defensive architecture can be a proxy for the scale and intensity of military power, as well as social power (e.g. Carneiro 1970; Dye 2009; Hally 1996).

In restricting the daily movement of people, and by creating private spaces, such palisades serve as socially functional barriers within town spaces. They regulate and constrain daily activity and access to public spaces – like mounds and plazas – in addition to controlling access to the town for allies or rivals (Benson et al. 2009; Milner et al. 2013:98; Schroeder 2006). South Appalachian Mississippian villages were often bounded by defensive structures. Pisgah village palisades demonstrated some variation in construction, but the most common design was a double-palisade, or paired palisade configuration (with overlapping entryways) and single-set post or trench-set post construction (Ashcraft 1996). We see evidence for these typical Pisgah palisades at the smaller Cane River and Warren Wilson sites.

## 4.2 The Cane River Site (31Yc91)

Geophysical survey methods provide invaluable, non-invasive views and images of subsurface deposits. Geophysical prospection can help to clarify the extent of a site and show spatial relationships between structures, supplying guidance for further research and excavation (Horsley et al. 2014). When monuments and larger structures are absent, the density of features can be a reliable proxy for occupation areas and village boundaries. In order to sample a wider range of public and domestic activities at the Cane River site, we completed a magnetometry and ground-penetrating radar survey of the known Cane River village and surrounding areas in June 2013. Guided by the results of this geophysical survey, I directed four months of excavations that exposed 53 square meters across the site (in 8 different areas/units), targeting several different types of magnetic and radar anomalies. Given the degree of plowing across the site, no intact living surfaces were identified. However, multiple discrete subsurface features and postholes were still intact below the 0.3-m modern plough zone.

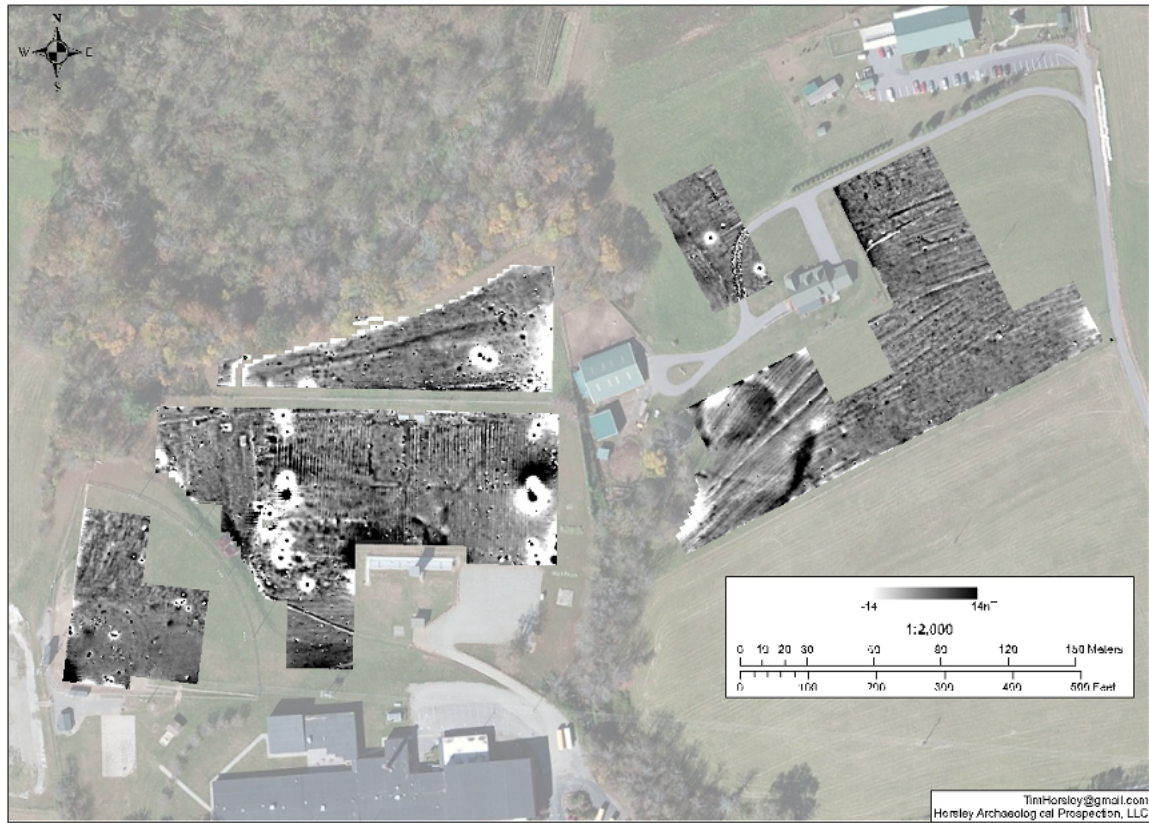
In total, the magnetic gradiometer survey was completed over ~3.5 ha (~33,450 square meters), including portions of the Cane River Middle School's baseball field, football field and adjoining areas, and on approved portions of the adjoining private property. A Bartington Grad601-2 dual fluxgate gradiometer was used to collect readings at 0.125m intervals along transverses spaced 0.5m apart. Data processing was undertaken using *TerraSurveyor* and was limited to: (i) initial clipping of the values to reduce the effect of intense ferrous responses on subsequent processes; (ii) sensor destripe; and interpolation to a resolution of 0.125m x 0.25m in order to smooth the appearance of the data and aid the interpretation of anomalies. The goals of this survey were to determine the extent and preservation of the archaeological site originally

identified and partially excavated below the football field in 1989-90. This non-invasive remote sensing technique uses highly sensitive instruments to measure the distortions in the Earth's own magnetic field caused by buried features (Gaffney and Gater 2003). Many domestic activities, specifically those involving fire and/or organic material, can locally enhance the magnetic properties of soils (see Aspinall et al. 2008:21-28), resulting in a very clear magnetic contrast of in-filled features versus the surrounding clay soils, which have a relatively magnetically homogeneous background. The size, shape, strength, and form of a magnetic anomaly can be used to make inferences about the feature causing the anomaly. In the magnetometer results presented here (Figure 4.1), strong, positive magnetic anomalies (shown in black) are likely features associated with burning (e.g., hearths and pits containing burnt material).

Negative magnetic anomalies, (white), are usually less common, indicating areas where the soil is less compact or even absent. In some areas, intense bipolar responses (due to iron metal and therefore suggesting later historic or modern activity) largely obscure the results. Overall, the areas on the recreational playing fields and landscaped areas surrounding them are heavily altered and disturbed by modern debris or plowing. The areas for the fields were likely stripped and leveled for fill in other areas. The large rectangular area from the 1989-90 excavations on the football field is visible in contrast to the lines of the irrigation system put in, (producing the distinct negative linear anomalies). Within the football field, a few areas appear to have large archaeological features still preserved beneath the irrigation system. However, accessing them for excavation or augering is difficult given the risk of damaging the irrigation pipes. However, the field to the north of the football field, currently utilized for



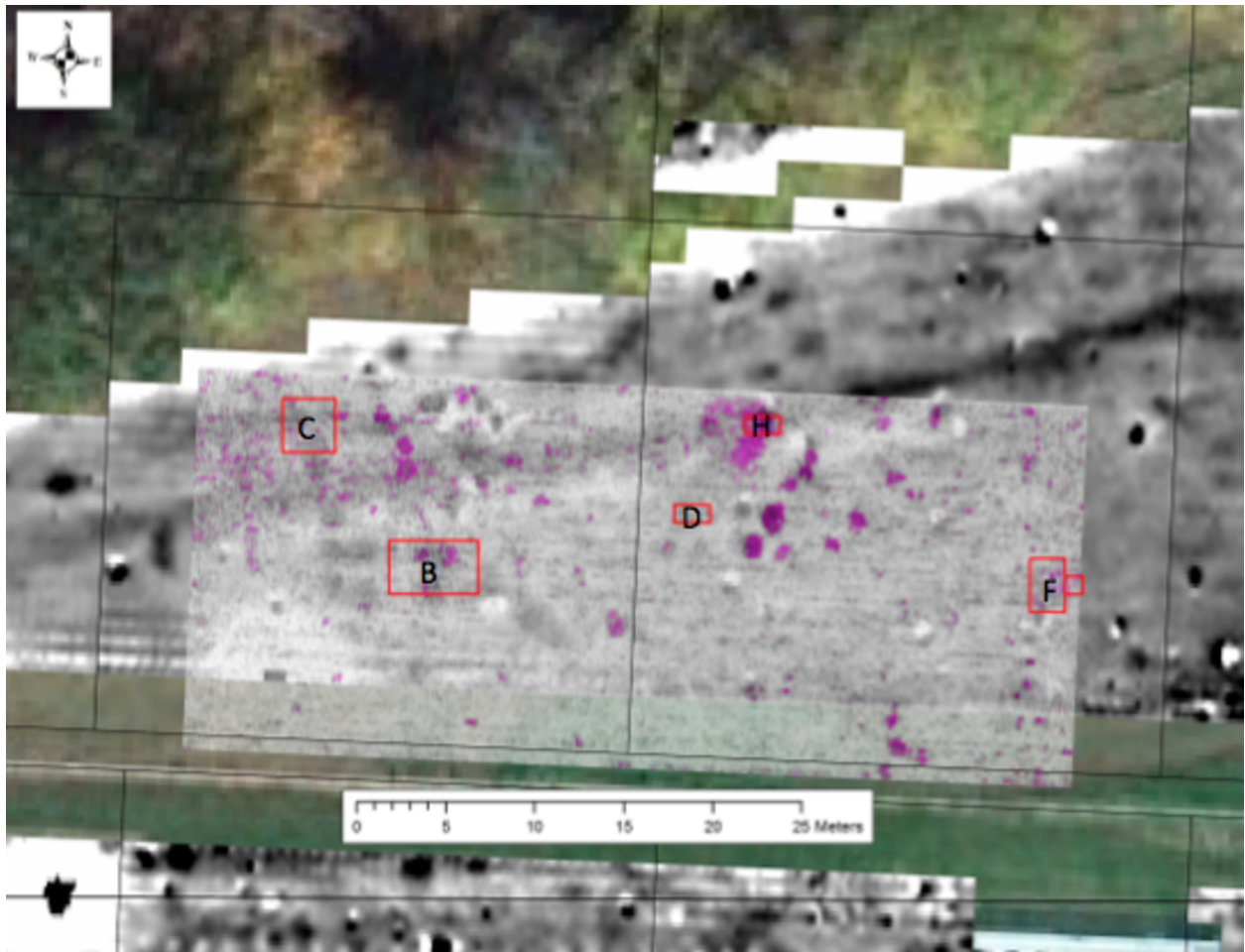
Cane River Site. Preliminary magnetometer plots. June, 2013.



*Figure 4.1 Magnetometer results of the Cane River Site survey*

pasture, has many potential archaeological signatures. This portion of the school property, along the northern edge of the football field, has the best indicators for prehistoric activity and based on these results it appears that the majority of the prehistoric village was to the northeast of the identified palisade lines from 1989-90 excavations.

For the GPR survey, a Sensors and Software Noggin and SmartCart system with a 250 Mhz antenna was used to survey a total of 60x30m area (1800 square meters). The GPR profiles were closely spaced at 0.25m apart, with individual traces recorded at 0.05m intervals. For the results presented here, data treatment comprised the application of a dewow filter, gain correction, background removal and a bandpass Butterworth filter to limit the frequency response to between 160-500 MHz, prior to the production of amplitude time-slices. This high resolution GPR survey demonstrates the additional detail and enhanced interpretation that can be made with closely-spaced profiles; however, the reduced rate of coverage meant that only five of the eight excavation areas had both magnetometer and GPR data. Those five excavation areas are outlined in this rendering, showing GPR from 40-60cmbs at 50% transparency over the magnetometer data (Figure 4.2). Comparison between the two data sets shows that some features have been detected with both methods, while others are visible in either only the magnetometer or GPR results. Since these complementary geophysical techniques are measuring different properties, these differences help inform us about the nature of the causative features. The first unit, Area A, was placed over a linear anomaly seen at the edge of a field which turned out to be a plow scar deeply cut into the subsoil due to the repetitive turning of the plow machinery. All the other units, however, exposed anomalies that turned out to be archaeological.



*Figure 4.2 Magnetometer with slightly transparent GPR 40-60cm below surface*

#### **4.2.1 Area B**

Area B is a 5x3m unit placed over several possible circular pits identified in the magnetometer survey (Figure 4.3). The magnetic anomalies measure around 1m in diameter and between 10-16nT in strength. Excavation revealed 3 circular features and one possible burial (left undisturbed) and a line of palisade postholes to the west and a palimpsest of various postholes to the east of the line of pit features (Figure 4.4). This corresponded closely with the magnetometer data. Oddly enough, these were not detected at the same location by both geophysical methods. The purple color in the GPR data indicates high amplitude reflections; this correlates to a distinct interface between materials, such as a compacted layer or change in soil type. Two of the three strong reflections correlate to boundaries of recognized pit features from the excavation, while one more ambiguous amplitude is off-set from the center pit feature (Figure 4.5). Thus, the magnetometer seemed to be responding to the more magnetic fill of these larger daub borrow pit features along the palisade line (Figure 4.6), while the GPR results reflect changes in soil composition within or along the boundaries of these pit features.

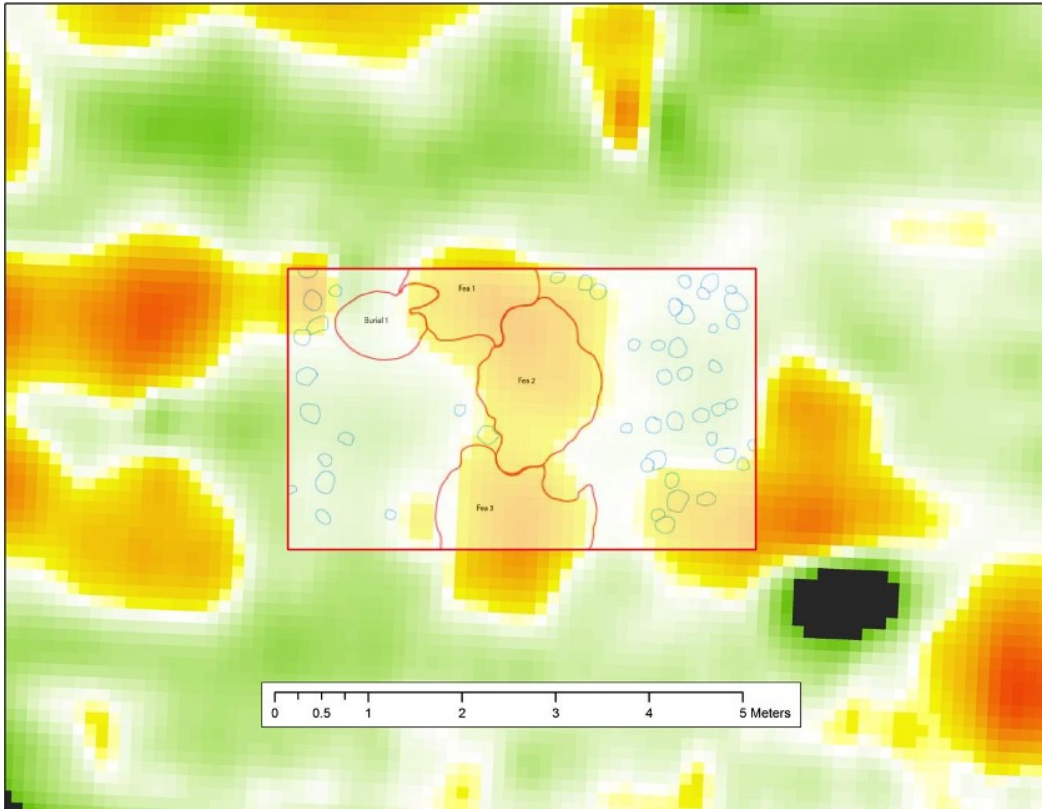


Figure 4.3 Extract of magnetometer data with Area B mapped features and postholes

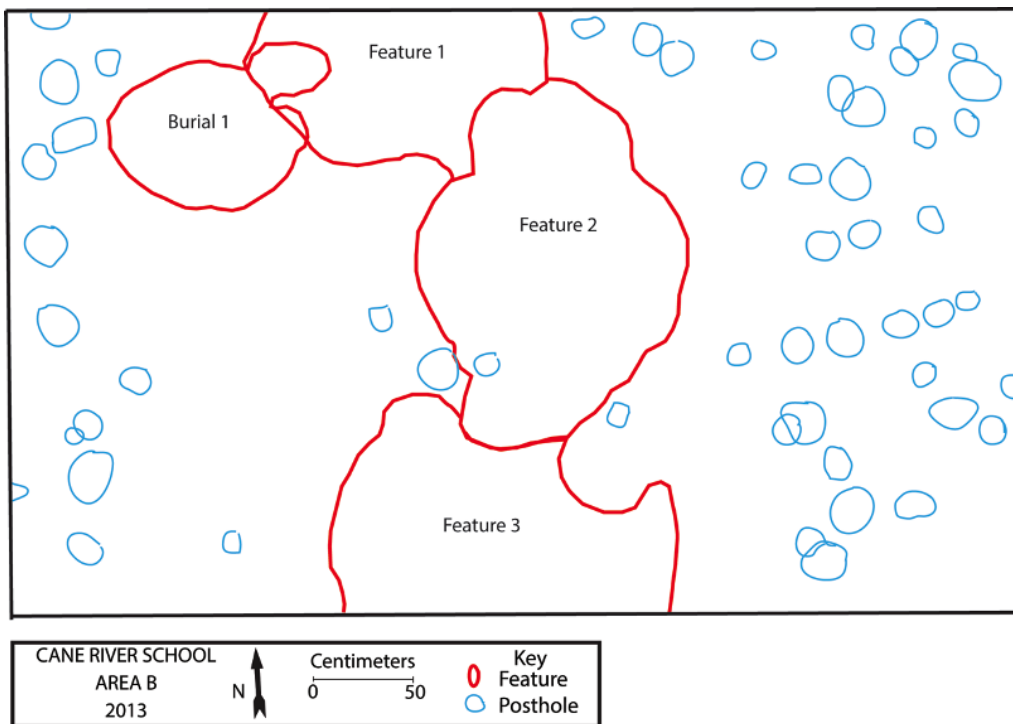
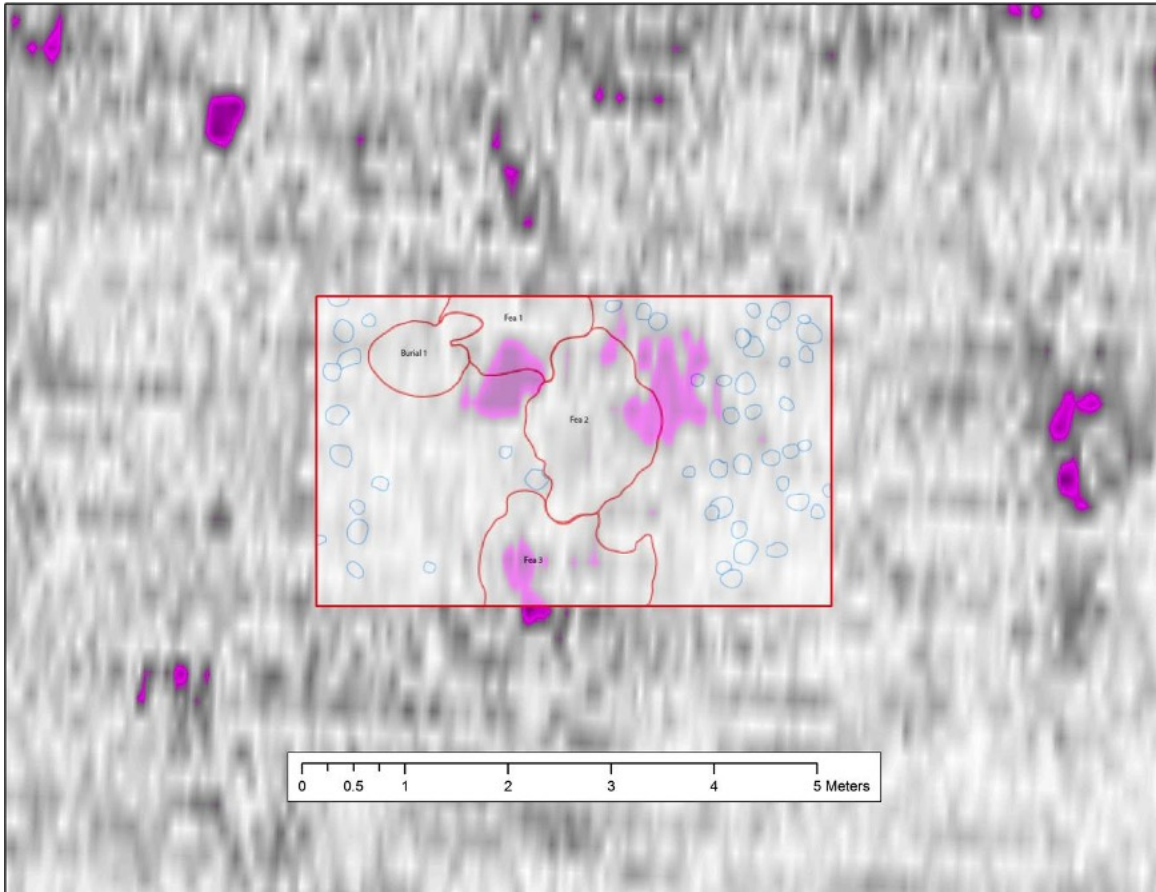


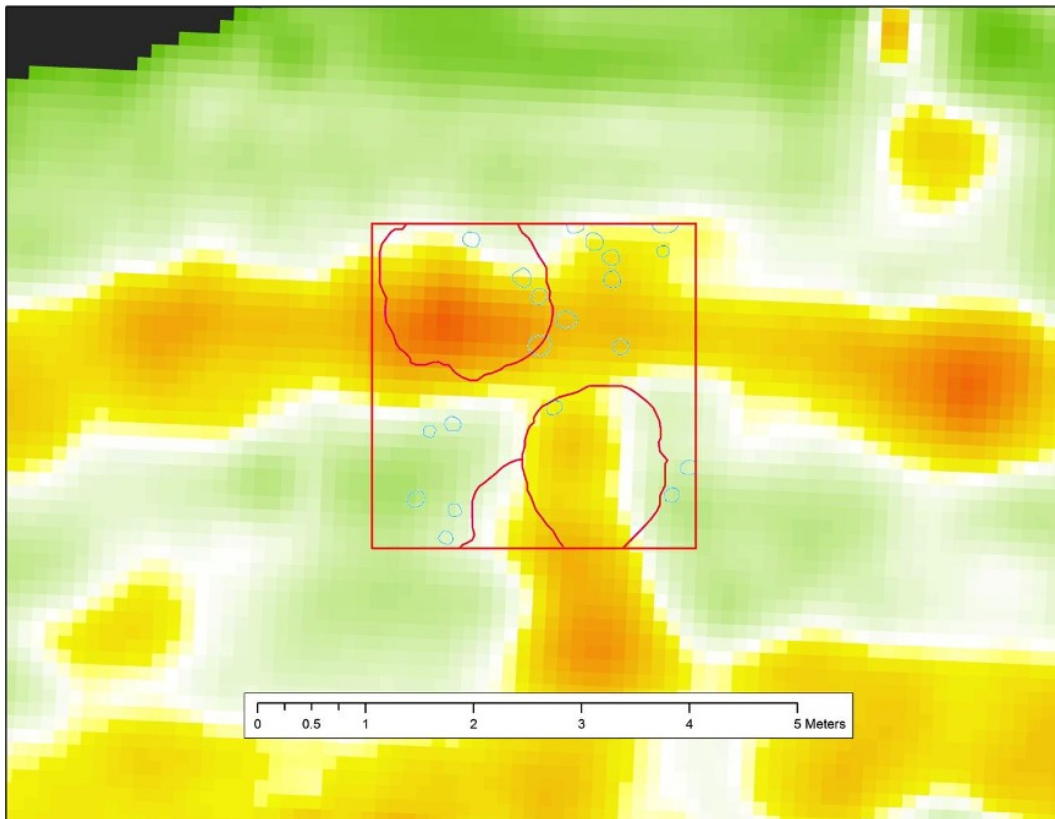
Figure 4.4 Map of features and postholes identified in Area B



*Figure 4.5 Extract of GPR data 50-60cmbs with Area B mapped features and postholes*



*Figure 4.6 Photograph of the base of Feature 3, Area B*

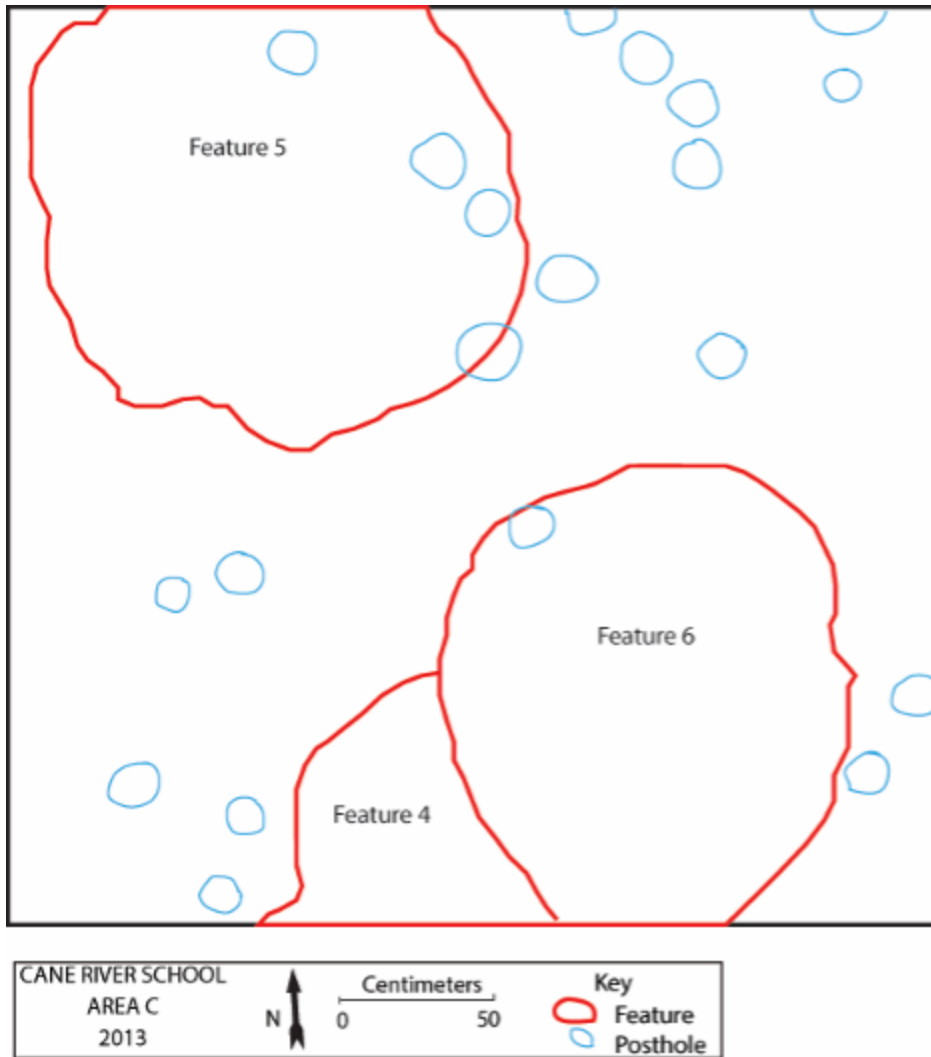


*Figure 4.7 Extract of magnetometer data with Area C mapped features and postholes*

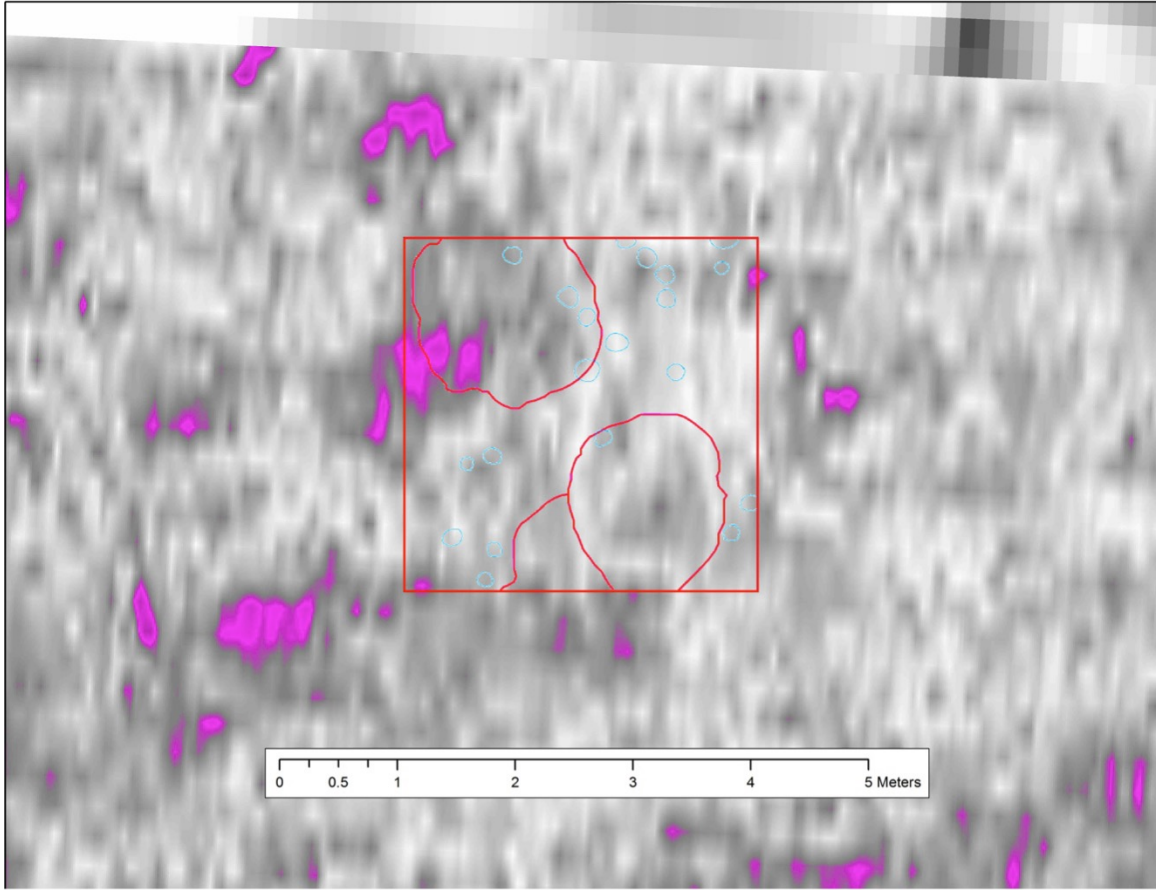
### ***4.2.2 Area C***

Area C is a 3x3m unit placed over several possible circular features identified in the magnetometer survey (Figure 4.7). These magnetic anomalies again measured around 1m in diameter and between 8-17nT. Excavation revealed three pit features, two overlapping to the south, and several postholes (Figure 4.8). At the base of plow zone (20-30cmbs in the GPR data), there is a strong radar reflection in the upper western edge of Feature 5. Again, this is likely due to a change in soil composition, but precisely how it relates to the feature is unclear (Figure 4.9). The GPR reflection may be caused by a contrast in fill material rather than the base of the pit itself. These larger pits also appear to be close to a line of palisade postholes and were likely used as daub borrow pits and then in-filled with refuse over time.

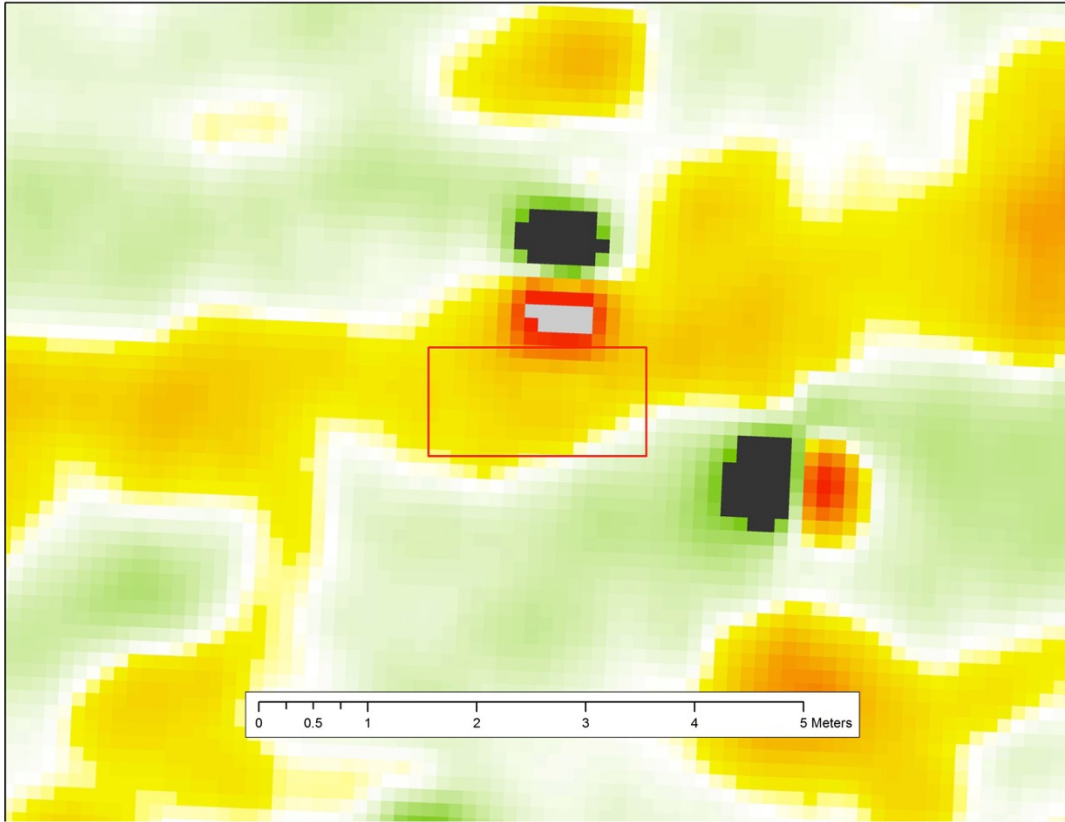




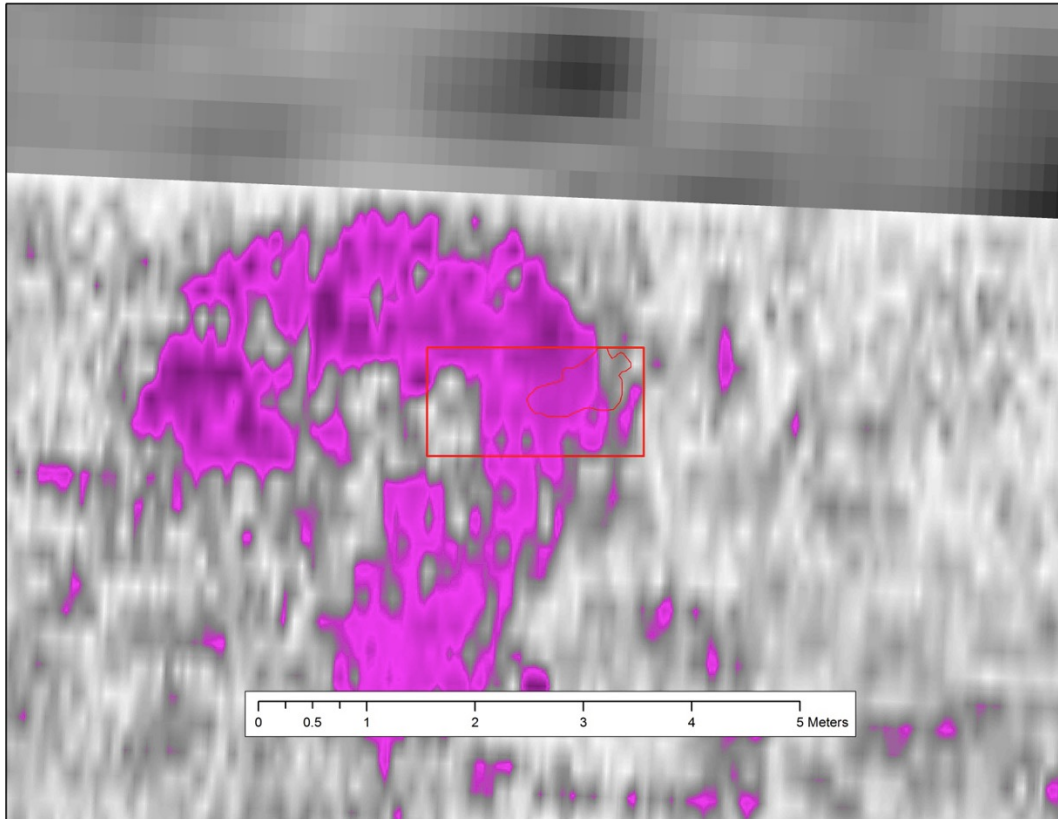
*Figure 4.8 Map of features and postholes identified in Area C*



*Figure 4.9 Extract of GPR data 20-30cmbs with Area C mapped features and postholes*



*Figure 4.10 Extract of magnetometer data in Area D*



*Figure 4.11 Extract of GPR data 30-40cmbs with Area D mapped feature*

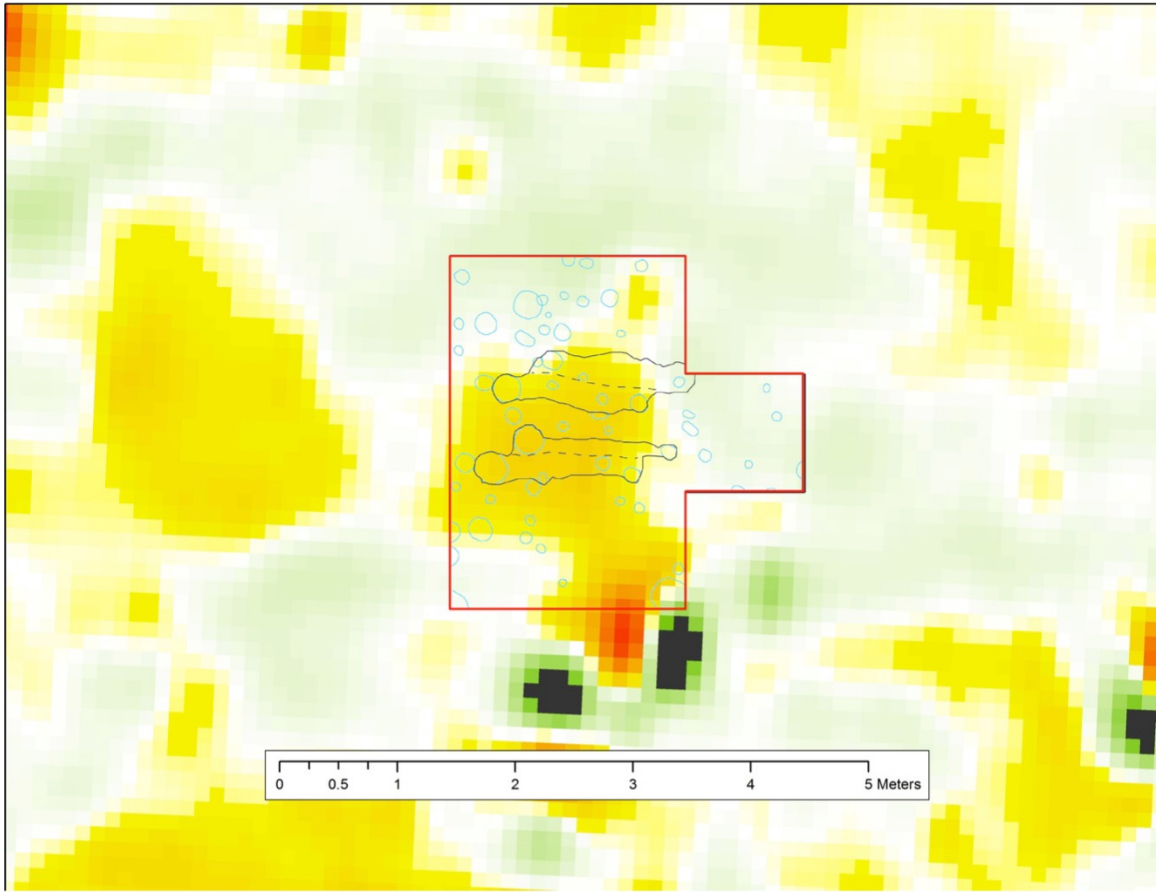
### ***4.2.3 Area D***

Area D is a 1x2m unit placed over a positive magnetometer response that was revealed to be the base of a hearth (Figure 4.10). While the magnetometer data for this feature were obscured by the linear signature of the road cut and the intense response due to near-surface iron metal, the GPR detected a broader area of compaction visible from 30-50cmbs, roughly 4m across, interpreted as the basin of a structure (Figure 4.11). Plowing destroyed most of the hearth, but the outline of the feature corresponded well with the outline of the compact soils in the ground penetrating radar survey, and likely indicates the location of a sunken floor surface.

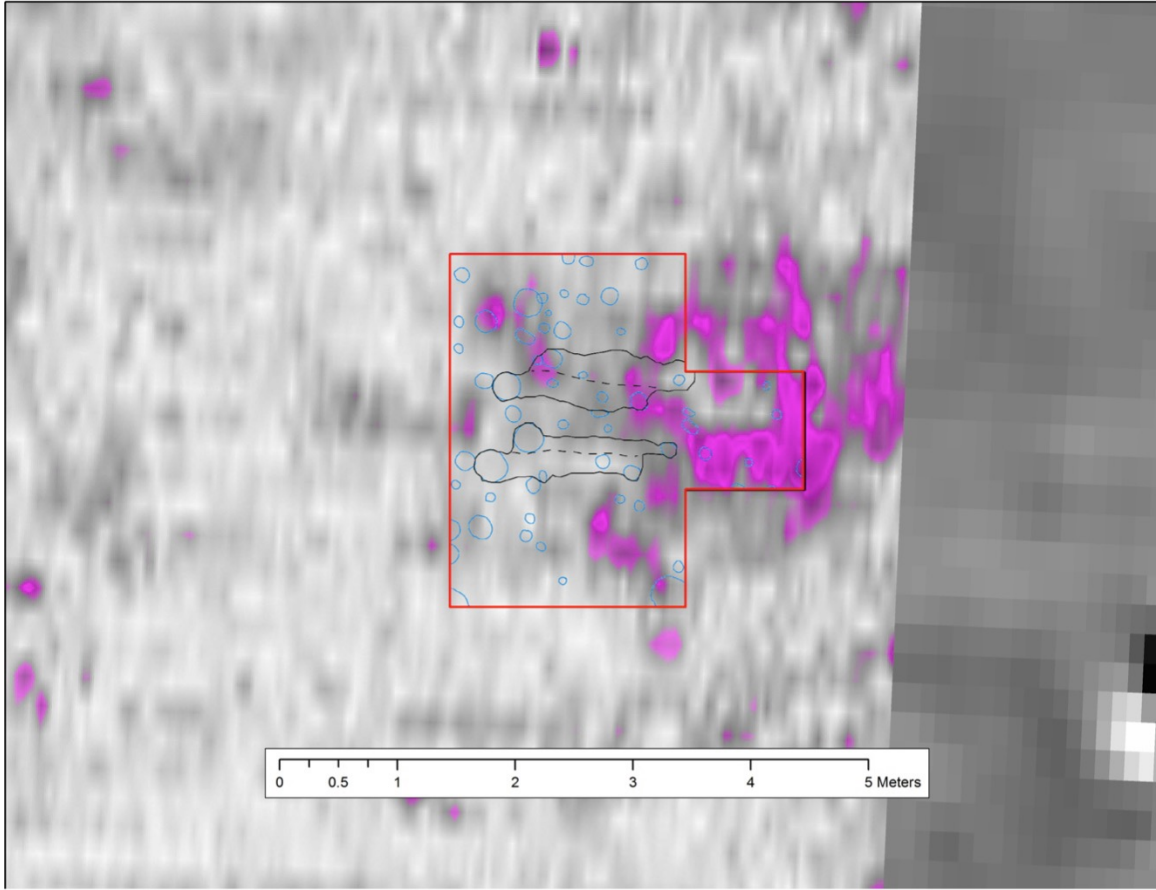
#### ***4.2.4 Area F***

Area F is a 7m unit placed over a roughly 2 meter-wide, weakly-positive magnetic anomaly (Figure 4.12), around 8nT in strength, on the western half of the unit, as well as a discrete GPR at 30-50cmbs at the eastern edge of the unit (Figure 4.13). Initially this 1x2m unit revealed postholes but it also caught the edge of an entrance trench. After exposing more surface area under the plow zone, two overlapping pairs of entrance trenches were visible, along with associated postholes (Figures 4.14, 4.15). While postholes aren't usually identifiable with the geophysical methodologies employed here these trenches are likely visible in the magnetometer data because these two sets of entrance trenches were rebuilt in approximately the same place and were in-filled with burned material. A similar, weak-positive magnetic anomaly is also visible to the west, indicating another possible structure that these entrance trenches are opening up to the central plaza. This reflection in the GPR data, (of course, on the edge of the survey area), shows the entrance trenches opening next to into a slightly subterranean structure (less than 3 m across); this is possibly a compact surface in front of the house where people were walking and there was frequent activity. No floor surface from an associated structure could be established in excavation, but the burnt material in the entrance trenches and some of the deeper postholes likely caused this broader signature in the magnetometer results, while it seems the GPR may have been detecting the compact soils surface of the adjacent house floor.

Two areas farther east, outside of the GPR coverage, were also excavated beneath the plow zone to target additional magnetic anomalies (Figure 4.16).

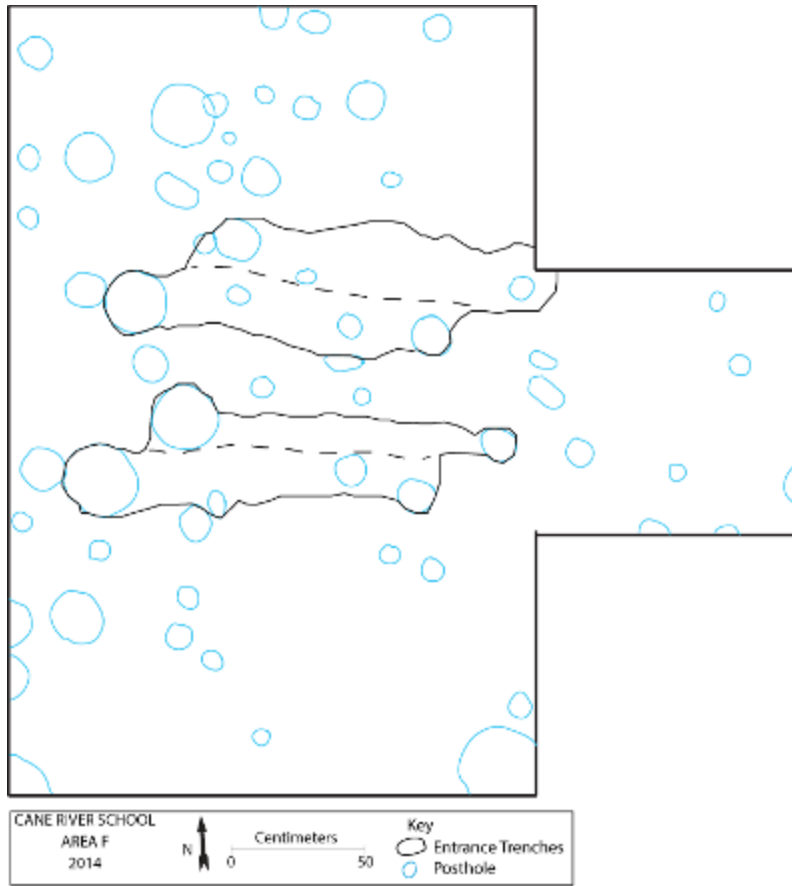


*Figure 4.12 Extract of magnetometer data with Area F mapped postholes and entrance trenches*



*Figure 4.13 Extract of GPR 30-40cmbs with Area F mapped postholes and entrance trenches*

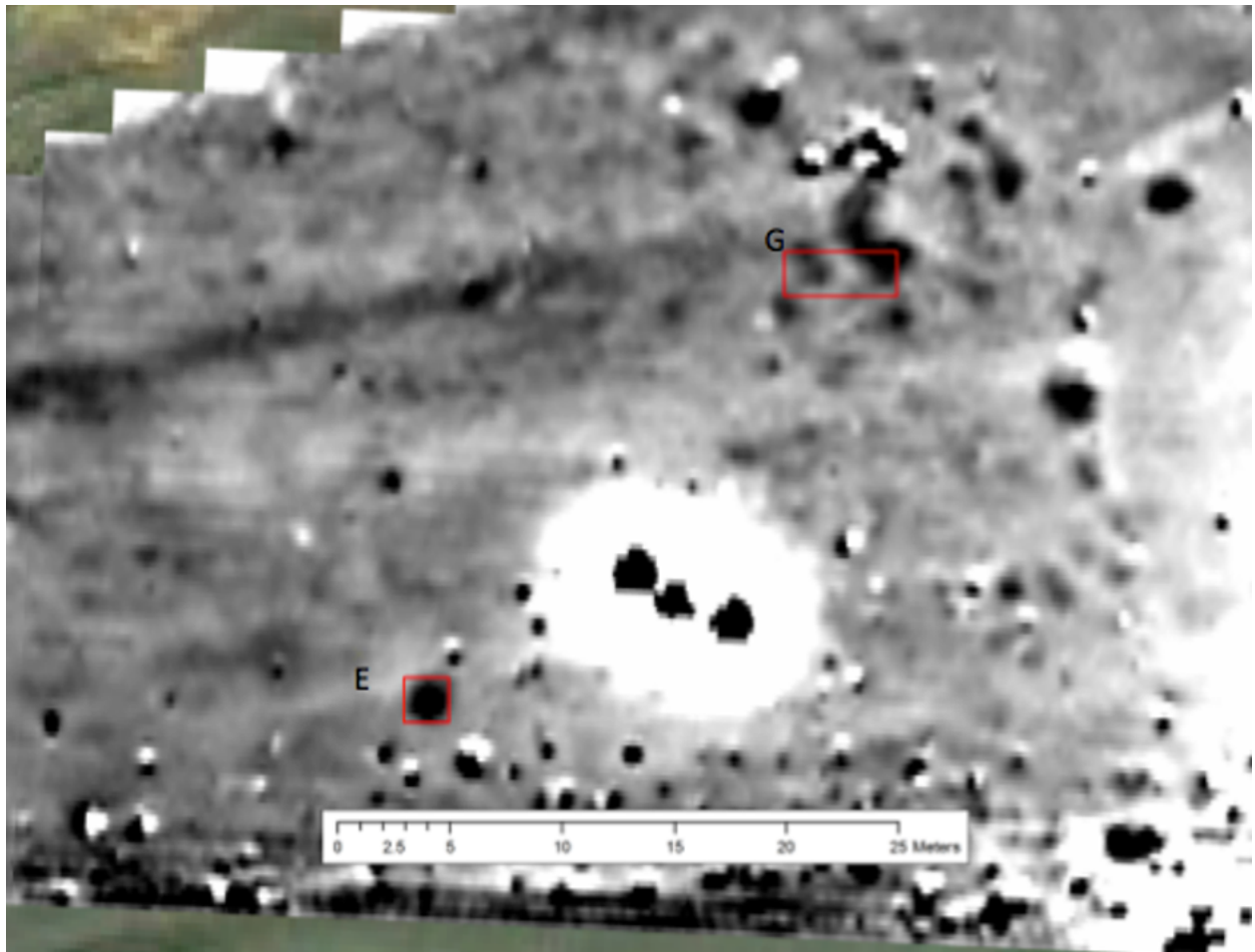




*Figure 4.14 Map of postholes and entrance trenches identified in Area F*



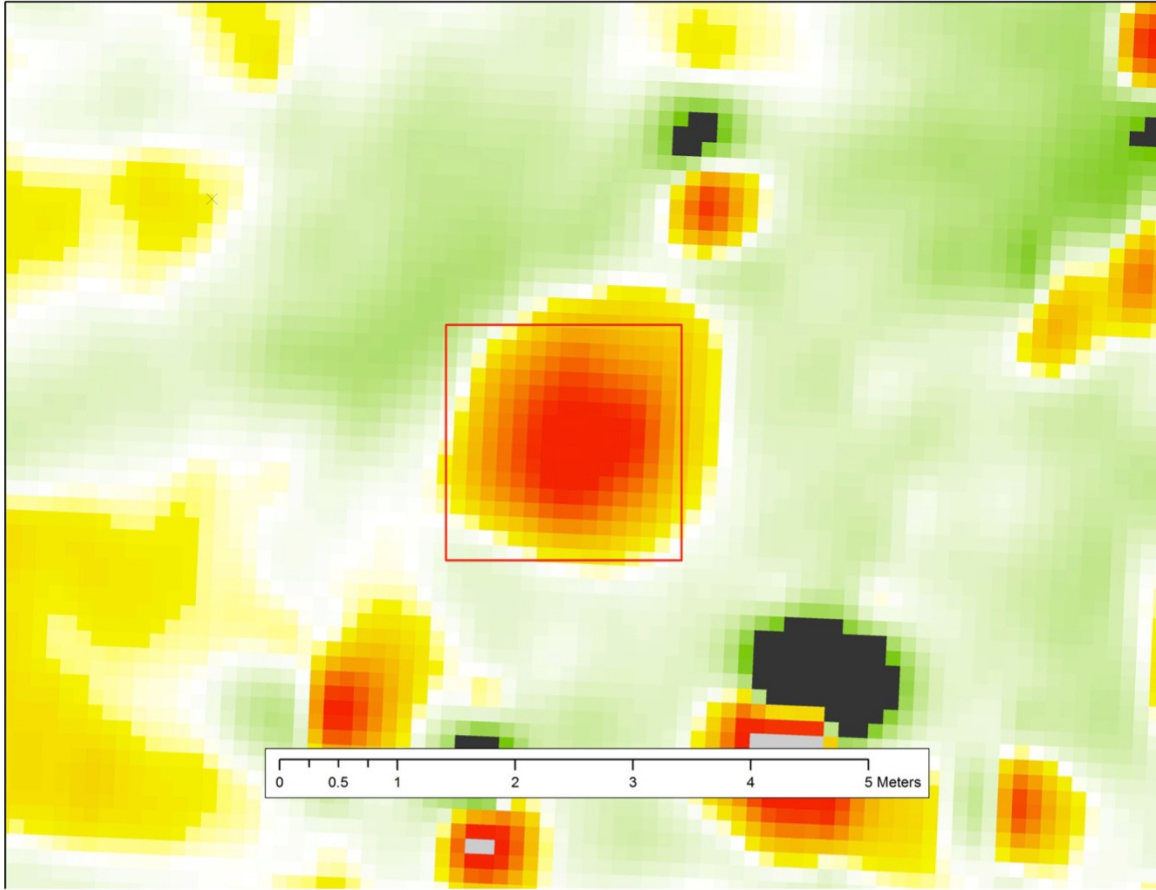
*Figure 4.15 Photograph of Area F entrance trenches at base of plow zone*



*Figure 4.16 The locations of Area E and G on the magnetometer survey*

#### ***4.2.5 Area E***

Area E is a 2x2m unit placed over one very large, strong positive anomaly in an area with few other archaeological anomalies (Figure 4.17). The anomaly measures in excess of 30nT and is roughly circular, around 1.4m in diameter. Excavation revealed a very deep (53cm below the plow zone), steep-sided storage pit with a possible burial overlapping the northern edge and a few scattered postholes (Figure 4.18). This particularly strong positive magnetic response is likely due to the thicker archaeological deposits within this pit (Figure 4.19), and such anomalies should help us to identify similar features elsewhere in the magnetometer data.



*Figure 4.17 Extract of magnetometer data with Area E*

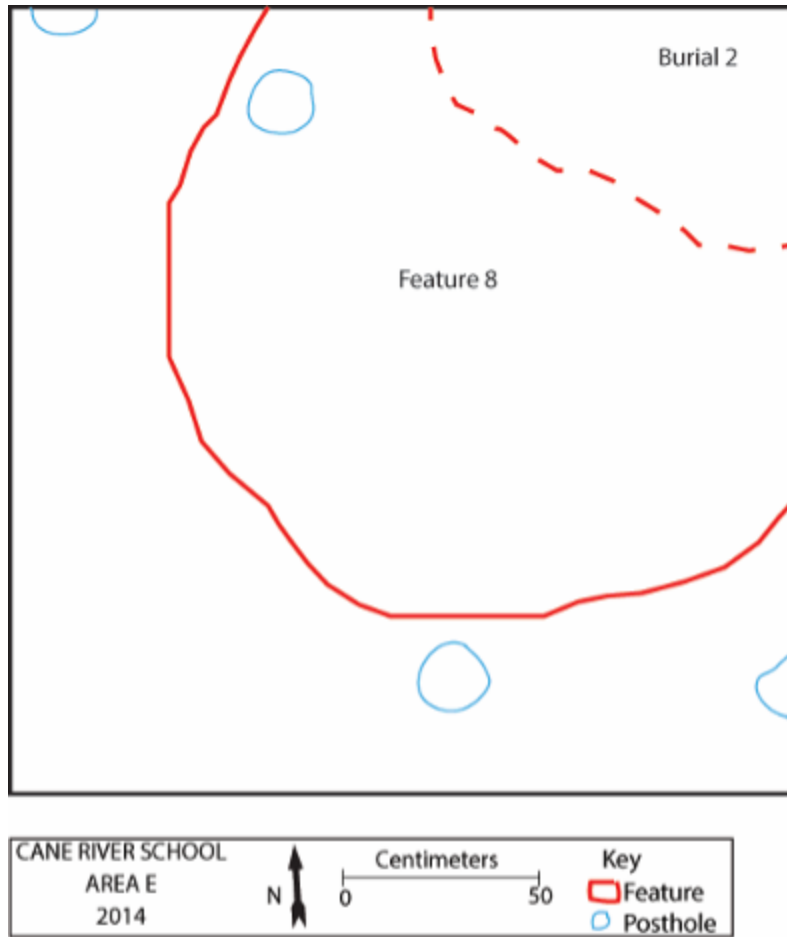


Figure 4.18 Map of features and postholes identified in Area E



*Figure 4.19 Photograph of Feature 8 bisection in Area E*

#### **4.2.6 Area G**

Area G is 5x2m unit placed over several large, strongly-positive anomalies (8-24nT in strength) in the magnetometer survey, within a generally very high activity area (Figure 4.20). Two overlapping hearth features and three overlapping pit features were identified, along with several dozen postholes (Figure 4.21). The location of these features corresponded very well with the magnetometer responses and the hearth features indicate the location of a house structure that was used long enough to warrant a rebuilt central hearth basin and deep, overlapping storage in approximately the same location (see Figure 4.22).

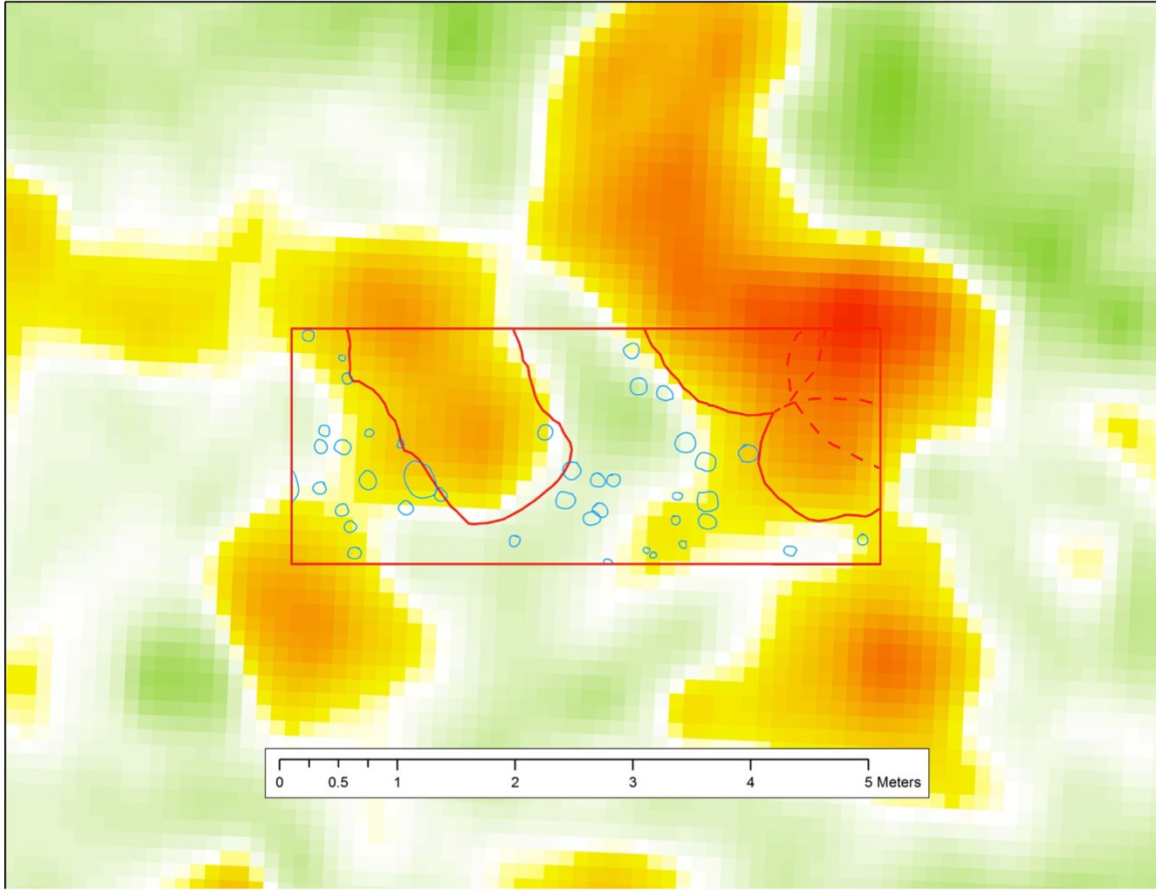


Figure 4.20 Extract of magnetometer data with Area G mapped features and postholes

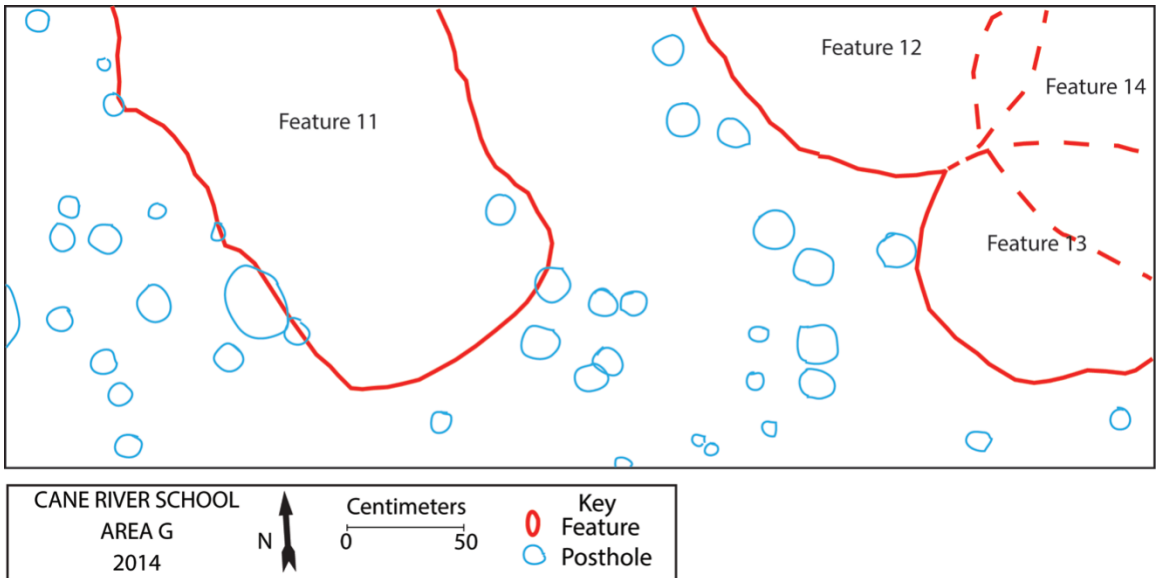


Figure 4.21 Map of Area G features and postholes





*Figure 4.22 Photograph of Area G base of plow zone, exposing superimposed hearths (foreground), overlapping storage pits, and a palimpsest of postholes*

In total, the Cane River village extends over approximately 1.5 hectares and has a semi-circular layout (Figure 4.23), similar to the Warren Wilson site and other South Appalachian Mississippian communities. Two sections of the palisade enclosures were identified – one from the 1989-90 excavations in the southwestern portion of the village and one from the 2013-2014 excavations on the western side of the village. These could be sections of the same defensive line or perhaps multiple successive palisade lines. While the southwestern segment appears to have been rebuilt or replaced in the same orientation, the space between the two palisade lines in the southwestern corner of the village is a maintained distance of 3-4m apart. Five buildings identified from posthole patterns and hearth locations surround a central area of the village that is relatively magnetically quiet, indicating a central plaza approximately 30-40m in diameter, although with such a small percentage of the site plan excavated this is a very tentative estimate. There is no trace in the augers or excavations of a prepared or built up plaza surface.

New radiocarbon dating of Cane River (nine AMS samples), Warren Wilson, (five AMS samples), and Garden Creek (nine samples) provide a new understanding of the Late Pisgah chronology in this region (Figure 4.24). To begin with Cane River, I sampled two features (Feature 23 and Feature 7) from the 1989-90 excavations, obtained from the curated collection at Warren Wilson College, and seven samples from various units and features my team excavated in 2013 and 2014 (an entrance trench in Area F, Feature 8 in Area E, Feature 11 in Area G, Feature 3 in Area B, Feature 7 in Area D, Feature 6 in Area C, and Feature 13 in Area G). The Cane River site's Late Pisgah occupation ranges from cal AD 1287 to AD 1613 (all AMS dates will be presented with calibrated date ranges within the 95% probability distribution or two sigma range). One date, from the centrally located storage pit in Area E (Feature 8), dates to the Middle Woodland period (cal AD 250-381).

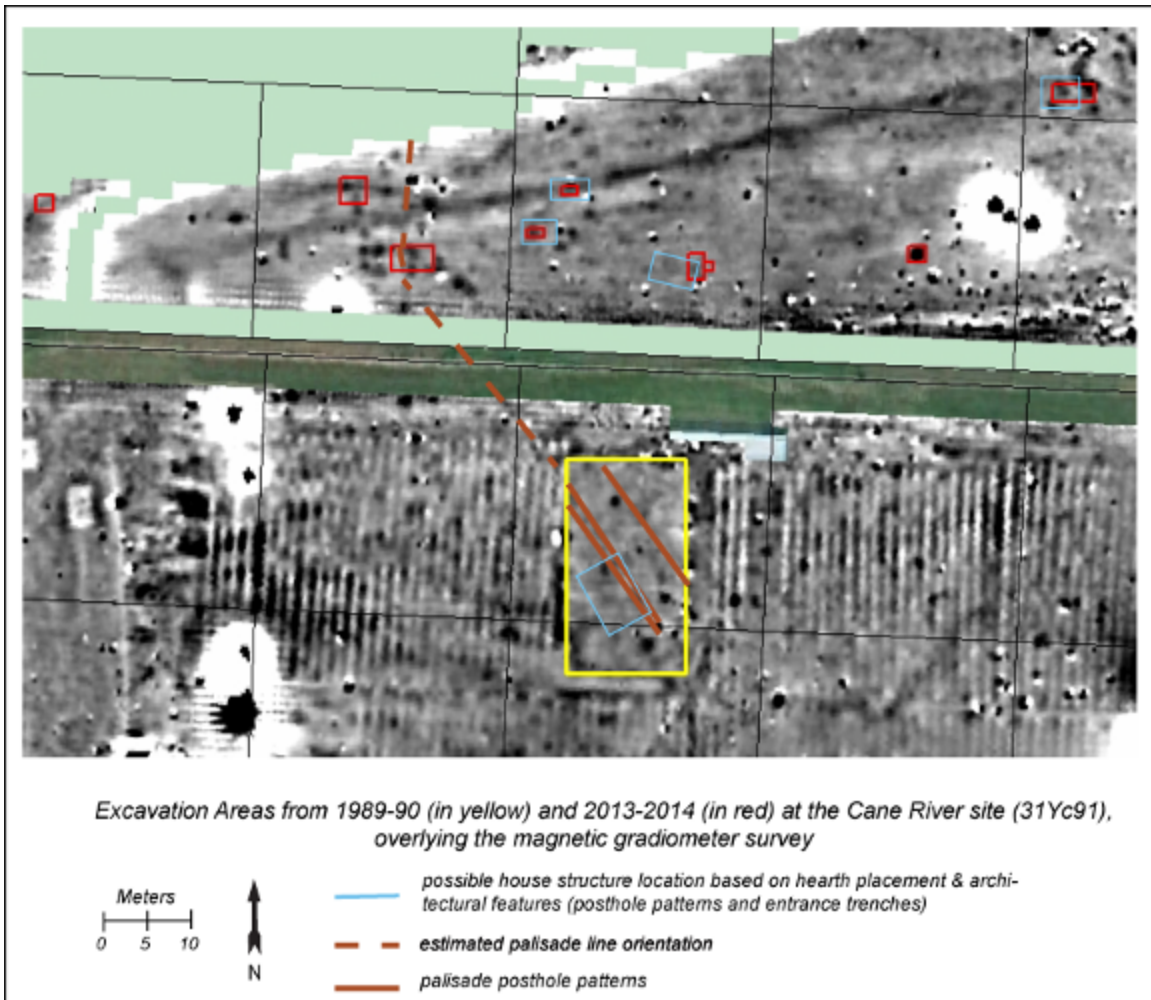


Figure 4.23 Estimated layout of the Cane River Site (31Yc91) identified structures: houses and palisade line orientation surrounding a central plaza

### Pisgah Radiocarbon Dates

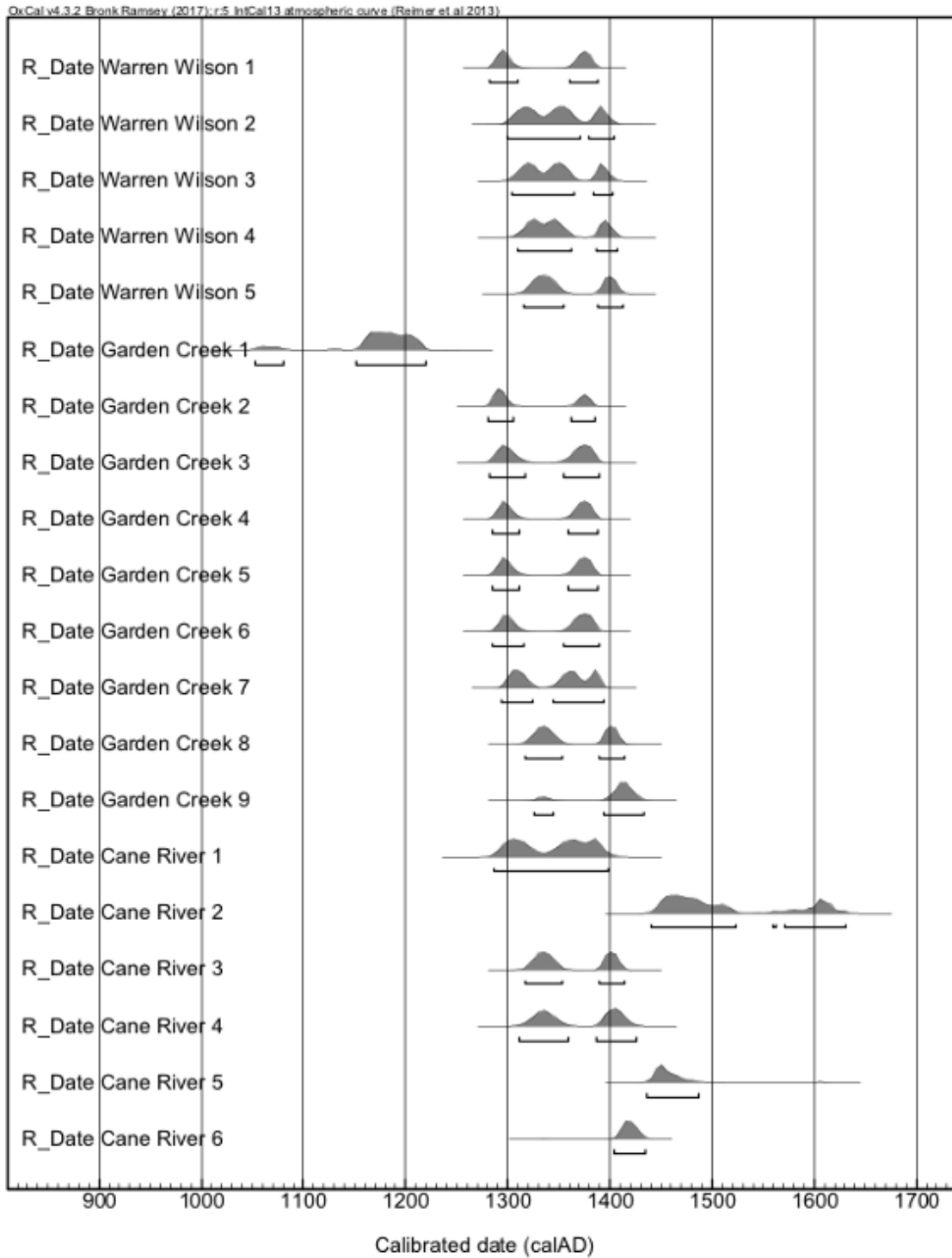


Figure 4.24 The Warren Wilson Pisgah period occupation is dated to cal. A.D. 1282 - 1412. The Garden Creek Pisgah Mound 1 and associated village is dated to cal. 1280 - 1414. The Cane River site is dated to cal. A.D. 1287 - 1631.

All of the palisade segments identified at Cane River were constructed with single set posts. Two radiocarbon dates from two separate palisade borrow pits have the same date ranges, indicating these pits were in-filled in one episode post-palisade construction for the same palisade line. Area C's Feature 6 (cal AD 1299 – 1390) and Feature 23 from the 1989-90 excavations (cal AD 1296 – 1391) indicate the double palisade surrounding Cane River was either repaired or first constructed around AD 1354. Two central structures within this palisade enclosure pre-date this mid-fourteen century construction. Area F's structure, identified by the rebuilt pairs of entrance trenches, pre-dates AD 1345. A calibrated date of AD 1326-1408 was recovered from the fill within one set of entrance trenches. Area G's structure, identified by a hearth feature (Feature 11, rebuilt at least once in the same location), predates AD 1359. A calibrated date of AD 1324-1414 was recovered from the top of Feature 11. However, the adjoining three storage pits, which intersect and overlap one another, had one fill date of cal AD 1420-1438, demonstrating this household was occupied for over 100 years. Another structure from Area D was identified by a hearth feature, which dates to cal AD 1411 -1427. Two additional radiocarbon dates were recovered from features along the outer edge of the Cane River village, in close proximity to the outer palisade lines. Feature 3's borrow pit in Area B dates to cal AD 1442-1466. This either indicates a later repair or construction of a palisade line along the exterior of the Cane River village, in close proximity and orientation to the palisade segment identified in other excavation areas. However another possibility that will be discussed in the following chapter is that not all of these shallow wide basins located alongside the palisade are dug in order to mine daub for palisade construction. In either scenario, the material recovered from this feature resulted from community practices during the mid-to-late 15<sup>th</sup> century of the site's occupation. Finally, Feature 7 from the 1989-90 excavations had a

calibrated date of AD 1447-1616. This unusually late date likely results from the rectangular structure that post-dates the palisade in the southwestern edge of the village. This structure and associated features are very unusual, because they date to the late 15<sup>th</sup> century and potentially the 16<sup>th</sup> century as well.

The earliest occupation at Cane River dates to the late 13<sup>th</sup> century and early 14<sup>th</sup> century which is contemporaneous with Warren Wilson and Garden Creek. However, the Pisgah occupations at the Warren Wilson and Garden Creek sites do not post-date the mid-15<sup>th</sup> century. Yet Pisgah style ceramics recovered in association with Spanish artifacts at the Berry site in Burke County indicate that Pisgah pottery was produced into the 16<sup>th</sup> century. Therefore it is likely that the Cane River Pisgah population was in residence until the 16<sup>th</sup> century, making it one of the longest Pisgah village occupations known to date, and possibly one that extended after the abandonment of the Pisgah sites along river ways to the south.

### **4.3 The Warren Wilson Site (31Bn29)**

In contrast to the size of Cane River, Warren Wilson's central plaza is defined by the exposed houses on either side and is approximately 25-27m in diameter (Moore 2002) (Figure 4.25). The plaza size and location are inferred by the lack of features and structures. There is no evidence for a prepared or built up plaza platform. Warren Wilson's seventeen households have little to no overlap, inviting the possibility that the site's multiple palisades represent an evolution in site size, either through expansion, contraction, or both (Dickens 1970; Moore 2002; Ward 1986). Most houses show evidence of being repaired or rebuilt in the same location, with some interior roof supports being replaced as often as 6-8 times in the same location (Moore 2002:81). With this evidence for long-standing structures and a long site occupation, another

possibility is that an inner series of those palisades served as a wall to separate the central plaza from the surrounding habitation area, possibly like the “square grounds” of historic Cherokee villages (Ward 1986; Ward and Davis 1999:161). The palisades appear in three groups: five inner palisade lines (B, C, D, E, and F), two outer lines (G, H), and two to three shorter segments (K, A, and L) extending into the central plaza or “square” (Moore 2002:77). It should be noted that palisade lines K, A, L and a portion of B and F delineate a “square” shaped interior space or possess almost-square corners, and the outer pair of defensive palisade lines also contain a square or rectangular plan view, while the majority of the middle palisades form a semi-circular village layout (Ashcraft 1996; Moore 2002:77). The outer pair of palisades (G and H) form a double-walled enclosure with the narrow distance between them (approximately 5-10 feet or 1.5-3 m apart), the similarity in posthole fill, and the fact that they run parallel to each other suggesting contemporaneous use (Ward 1986:18). Dickens argues that this outer palisade pair served to protect inhabitants and mark the largest (and possibly final) village diameter (1976:206–7).

All palisades at Warren Wilson were constructed with single set post construction, with the exception of Palisade D, which is an example of trench construction. Moore (2002) and Ashcraft (1996) suggest that this extra-expended effort to make the Palisade line D more robust indicates it may have been an outer defensive palisade at some point, as opposed to an interior wall to divide site structure. While few palisade lines overlap, six lines (A, B, C, D, E and F) intersect domestic structures and this relative chronology allowed Moore (2002) to propose several site configurations: a larger village configuration with outer Palisades G & H (see Figure 4.25) and a second configuration including the inner palisade lines (B, C, D, E, and F) (Moore 2002:80). With the possible exception of Palisade F, none of the inner group palisades

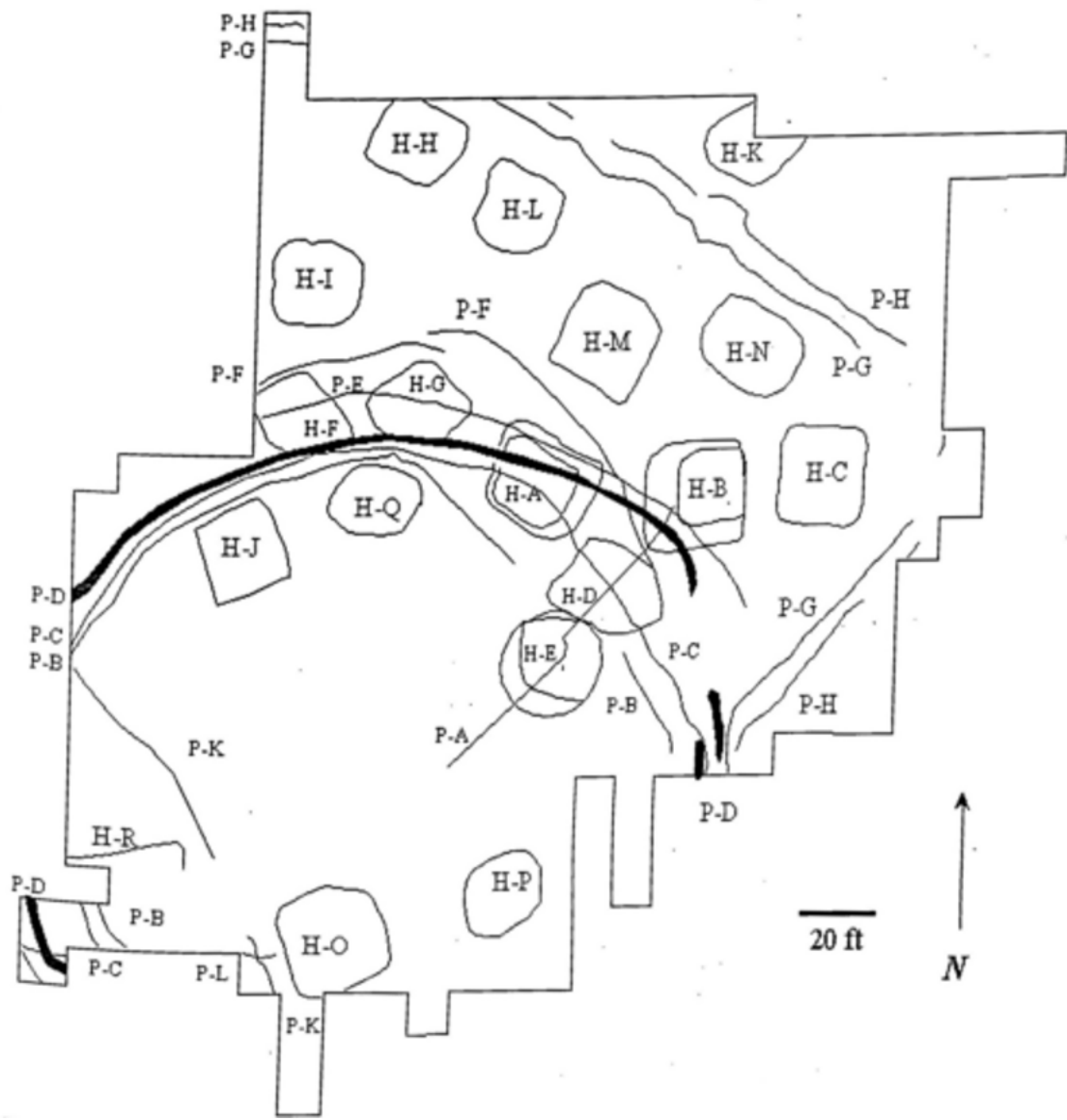


Figure 4.25 Warren Wilson Site Pisgah village layout of houses (H) and palisades (P) (from Moore 2002:77)



offers much of an increase in village area so it is likely they were repairs or replacement construction and not a result of expansion or contraction. However, with the exception of palisades G & H, no other lines can be argued to be contemporaneous at this time.

Utilizing resources for this dissertation project, I was able to obtain the first radiocarbon dates for the Warren Wilson site Pisgah occupation. This includes five samples from various features across the site (Feature 7, Feature 8, Feature 56, Burial 15 and Feature 229), obtained from the curated collections at the University of North Carolina at Chapel Hill. The Warren Wilson site's Late Pisgah occupation ranges from cal AD 1282 to AD 1412 (two sigma range). These radiometric dates from Warren Wilson are temporally quite close together and have a lot of overlap, reinforcing the prevalent hypothesis that the village at Warren Wilson maintained a relatively stable village layout throughout its occupation. Many of the domestic structures are repaired at least once in the same location, and there is very little overlap between households (Moore 2002). This consistent village plan, with a preserved central public square ground surrounded by domestic structures and palisades, is the same pattern applied to other small Mississippian villages and represents a carefully planned and organized community.

The bracketed dates for the inner palisade lines (E, C, and F) indicate they were likely constructed and rebuilt between cal AD 1297 - 1399 and AD 1313 – 1408. This is based on the AMS results from Feature 8 in House A, which predates Palisades C, D and E, and from Burial 15 in House E, which postdates Palisades E, C, and F. The outer palisade lines G and H were constructed after AD 1316 – 1412, based on the AMS result from Feature 229, which predates Palisades G and H. This chronology indicates that the outer palisades were constructed last and the larger village area was added on after the inner configuration. Although given the overlapping date ranges, these two groups of inner and outer palisade lines were also likely

utilized simultaneously, so these radiometric data do not rule out the possibility that the inner palisades were used to segregate interior space. The bracketed dates for the trenched Palisade D construction place it between cal AD 1282-1387 and cal AD 1301-1405. This is based on the AMS results from Feature 7, which predates the palisade, and Feature 56 (palisade D fill) which postdates the palisade. Again, this does not rule out the possibility that Palisade D coexisted with the outer, paired Palisades G and H. But the close chronological overlap with the neighboring single set-post inner palisade lines does suggest that Palisade D was a likely a repair of or replacement of the former construction.

The two AMS dates associated with household structures also had similar date ranges, with cal AD 1299-1404 for House A and the cal AD 1309-1406 for House E, indicating contemporaneous use. While House A was constructed with entrance trenches, House E was not, lending further credence to the hypothesis that this structural feature is not related to diachronic trends or shifts in house construction over time.

#### **4.4 Mississippian Village Planning in Pisgah Communities**

Despite the construction of multiple palisade lines, the village configuration at Warren Wilson maintained the same basic placement and a relatively stable layout during its Pisgah period occupation. This consistent village plan, with a preserved central public square ground surrounded by domestic structures and palisades, is the same pattern applied to other small Mississippian villages and represents a town evolving in a carefully planned and organized manner. This prescribed town structure is often cited in Mississippian literature as a reflection of the shared Mississippian cosmological worldview (Lewis and Stout 1998). Similar elements within the Cane River excavations also indicate a consistent or long-term site organization. The

reconstructed palisade segment along the southwestern edge of the village and the rebuilt pair of entrance trenches show architectural continuity and a consistent sense of place. Additionally, the overlapping hearth features and longer occupation dates within the northwestern structure (Area G) show at least one household was occupied in the same location for an extended period of time (~100 years). This display of a consistent village plan constructed and rebuilt around the same area of reference at both of these Pisgah sites is not unique - a central public plaza with surrounding domestic structures and palisades is a town layout recorded at other South Appalachian Mississippian communities such as the King site in northwestern Georgia (Hally and Kelly 1998) and the Town Creek site in central North Carolina (Boudreaux 2007, 2010).

Unfortunately, the overall village layout of the Garden Creek site is perhaps the least understood, primarily because excavations focused on Mound 1 and the immediate areas. Despite this, the ceremonial construction of the mound over local traditional architecture demonstrates that Pisgah people in the Appalachian Summit were altering Mississippian practices at the same time they were adopting them. This is not a transformation limited to just Pisgah communities but is part of the South Appalachian tradition of re-shaping sub-mound to mound space during the ritual adoption of new cosmological worldviews.

#### **4.5 The Mississippian Mound & Plaza Complex**

While complex site-planning and large earthwork-building is not new to the Eastern Woodlands, the advent of “towns” centered around a mound-and-plaza complex is not seen until the development of the Mississippian culture (Lewis and Stout 1998:228). Without the mound and plaza elements, a Mississippian town would be very similar in appearance to a Woodland or Archaic village. Disentangling the motivations behind the mound-and-plaza complex proves to

be a major analytical problem, given the variation in social and historical trajectories within Early Mississippian groups. Nevertheless, the significance of changing identity, and the legitimacy of changing relationships of status, are often factors when discussing the advent of platform mound building in Mississippian societies (Lewis et al. 1998a). As ranked status differences developed among and within communities, the association of persons or families to the sacred was legitimized in the spatial structure of the community. Earthworks and mounds reaffirmed status and legitimacy of certain families that would ritually sponsor mound-building events – thus spatially segregating themselves to “the sacred” and linking themselves permanently to ritual activities (Baltus and Baires 2012; Knight 1986, 1989). By tying one’s identity to the sacred-corporate identity of the community, elite groups guaranteed longevity to their status and social power (Lewis and Stout 1998:231). These motivating social factors would explain how the diffusion of ideas was manifested in widely similar community organization across various ethnic groups in the Midwest and Southeastern United States.

Mounds within southeastern Mississippian cultures were typically constructed over the course of several stages (see Cobb 2003; Beck 2003; Blitz 1993; Hally 1996; Pauketat 1994; Thompson 2009). While the mound building may have multiple social and political meanings, aspects of the mound construction and building process can indicate how leaders or elite individuals were utilizing, and possibly co-opting, these ritual spaces. Done so repeatedly, these continually recreated spaces can assist groups seeking to actively legitimize their position in society by memorializing history and social events through each stage of mound construction (Wilson 2010). Thus the mound and plaza construction is space becoming social memory, or “incorporated memory”, embodied in and transmitted over time through the regular practices on and around the mound (Connerton 1998). Several examples of Mississippian towns and polities

being founded or relocated have been linked to mound construction, marking a collective birth or rebirth for political groups (Blitz 1999:585; Hally 1996:115). Ethnohistoric research also demonstrates that mounds reflect origin stories and embody the religious narratives of the Mississippian worldview (Brown 2006; Knight 1986).

If mounds are receptacles for memory in the Mississippian world, plazas are often oversimplified as a basic architectural characteristic: an open space. However, plazas are an integral component of mound building and also reflect a long process of planning and construction that indicates a carefully crafted social space (Kidder 2004; Lewis et al. 1998:11-16). Unfortunately, most archaeological site data are rarely complete enough to determine if a plaza existed, since it is usually the absence of features and the location of the adjacent mounds that are used to define a plaza. In some instances, plazas are built up/constructed as broad platforms, in other cases they are simply defined by the absence of midden. For towns with a mound, plaza locations can be inferred by a ramp on the mound (Kidder 2004:516). However, there are many Mississippian communities without mounds where plazas were constructed as well. In these cases, it can be difficult to define the plaza extent. Occasionally, Mississippian plazas contain posts, pit features, or remains of public buildings that may indicate what social activities took place within them (Hally and Kelly 1998; Polhemus 1987; Kidder 2004). Plaza space also likely played an increasingly important role in public activities in cases where mound habitation and ritual was private and exclusive to select individuals and families (Kidder 2004:528).

#### **4.6 Garden Creek Mound 1 and South Appalachian Mississippian Mounds**

Several sites with mounds in the Appalachian Summit are associated with Pisgah phase ceramics. In addition to Garden Creek Mound 1, Pisgah phase ceramics are associated with

mounds at the Jasper Allen site (31JK562), Nikwasi (31MA2), Notley (31CE5), Nununyi (31SW3), Kituwah (31SW2) and Peachtree (31CE1). Closer to the heartland of the Pisgah cultural area and on the Qualla Boundary, several mounds have a similar size, shape and construction to the Mound 1 at Garden Creek. The Nununyi Mound has a stone mantle, and the overall shape and size are comparable with a maximum recorded diameter of 45.7m and height of 3.4m (Steere 2015:203-5). Additionally, the Kituwah Mound, which marks the most important Cherokee Mother Town in traditional Cherokee oral history, measures 43m in diameter and has a maximum recorded height of 1.5m. However, with the exception of the Garden Creek Mound 1, none of these mounds have been subject to modern, systematic excavations, and so caution must be taken when discussing their chronological associations (Steere 2015).

The Pisgah phenomenon is widely considered part of the South Appalachian Mississippian regional tradition, largely because of the one substructure platform mound discovered at the Garden Creek site. At the time of its excavation, the mound stood about seven feet high (2m) and measured 150 feet from east to west and 130 feet north to south (45 x 40 m) (Dickens 1976; Steere 2015). Excavations during three successive seasons, from 1965-1967, removed the mound in its entirety. Led by Joffre Coe from the Research Laboratories of Archaeology at the University of North Carolina Chapel Hill, the dismantling of the 7-ft mound revealed two eroded floor surfaces, the remains of a ramp, and a palimpsest of features, post molds, and burials (Dickens 1970, 1976).

Previously, the only published radiocarbon date for Mound 1 was an averaged single-point calibrated date of AD 1423 (with a high error range), from an adjacent feature that was thought to be a borrow pit for mound fill (Keel 1976; Eastman 1994). I obtained additional

radiocarbon dates for Mound 1 at the Garden Creek site from curated collections at the University of North Carolina at Chapel Hill. This includes eight samples from ceremonial structures beneath and within the mound, as well various off-mound features. These dates illuminate a tight chronology of mound-building at Garden Creek and indicate that mound construction occurred earlier than previously thought, between cal. AD 1290 –1414.

The initial field season at Garden Creek Mound 1 focused solely on the uppermost floor, Floor 2, which constitutes the final stage of mound construction and use (Figure 4.26). This revealed three structural patterns: two superimposed structures and a palisaded enclosure (see Figure 18 in Dickens 1970:204; see Figure 13 in Dickens 1976:77). The structures on this late mound stage measure 28 feet square and 15 feet square, with the smaller structure containing two pairs of entrance trenches marking two separate vestibule entrances (Dickens 1976:75). The recent AMS date from structure A, which is the larger building on Floor 2, is cal. AD 1280-1385. The palisade surrounding the mound summit and associated structures represents a privatization of the mound space, at least in later stages of mound use. Elite individuals or lineages chose to segregate this embodied ritual space, walling off the ceremonial space from public view. Given that there is no evidence for structures enclosing the lower mound levels, this restriction of access was likely a later strategy employed by the elite. A gap in the posthole pattern of the palisade enclosure indicates that the entrance to the mound summit was in line with the mound ramp, which extends down from the east side (Dickens 1976). To enter the ritual space, or be able to view mound activities, individuals would have to be located to the east of the mound.

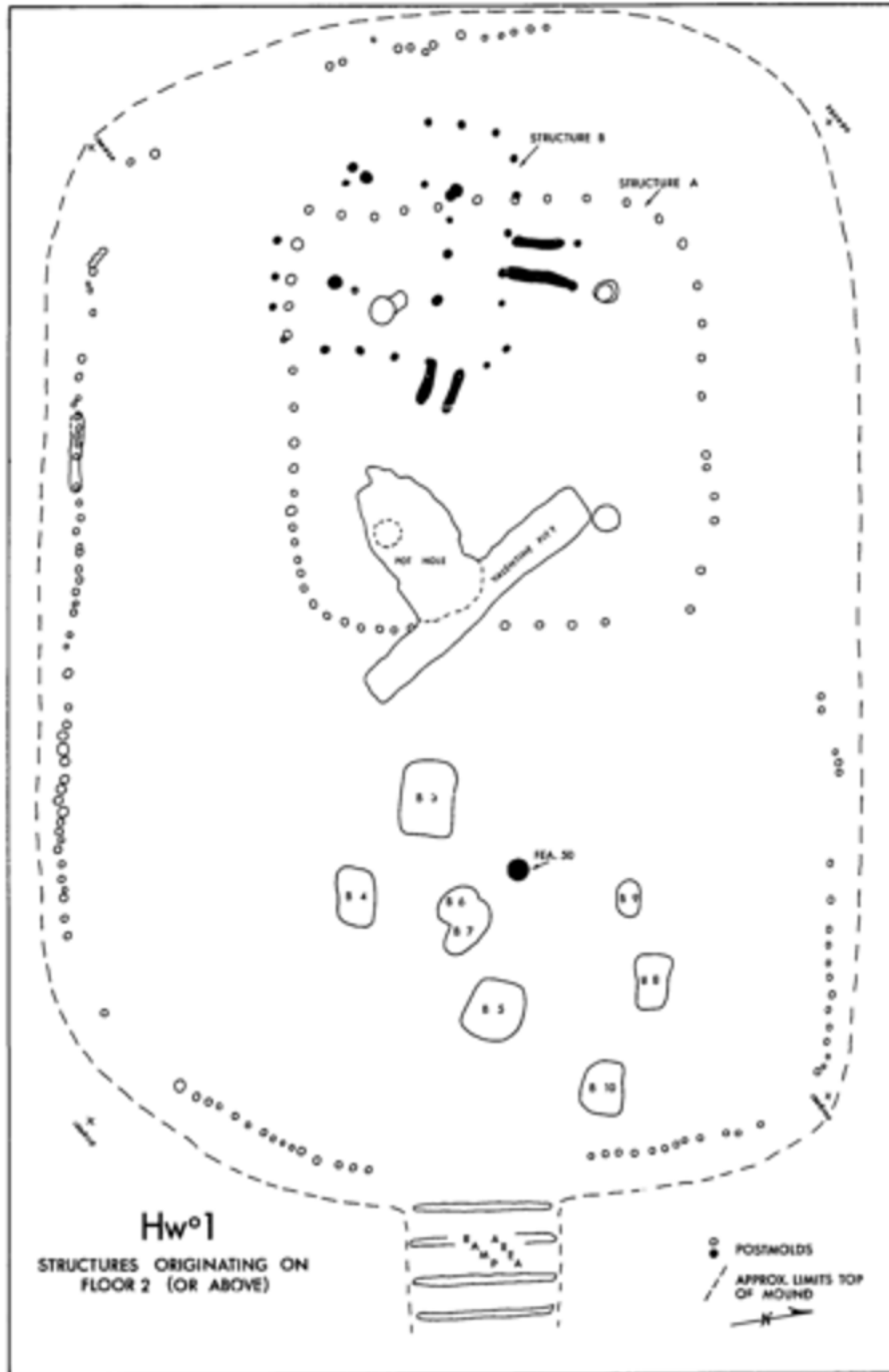


Figure 4.26 Structures originating on Floor 2 of Garden Creek Mound 1 (from Dickens 1970:204)



Thus admittance to and visibility of this ritual space would be controlled and likely restricted to a lucky few. The off-mound excavations were limited and a plaza was never identified; however, given the orientation of the ramp from Mound 1 and the east-west orientation of the structures on Floor 2, it is highly probable that the central plaza and surrounding village occupation were located to the east of the mound. Any future surveys and/or excavation could focus on exploring this hypothesis.

Further excavations in 1966 and 1967 uncovered the earlier floor (Floor 1) of Mound 1, as well as more steps from successive ramps leading up to mound surfaces (Figure 4.27). Dickens notes that while both ramps extended along the eastern side of the mound, one wider ramp likely led to additional mound level(s) above Floors 1 and 2, which was lost to historic plowing and erosion (Dickens 1976:79). The Floor 1 surface contained a wall trench but no other signs of construction beyond multiple fill episodes, due to the fact that this surface repeatedly collapsed into two pre-mound earth lodges (Dickens 1970, 1976). Below Floor 1 was the initial mound fill. While the clay cap that formed Floor 1 was noted as clean yellow clay, the initial mound construction stage was composed of dark soil, likely midden from the surrounding village (Dickens 1976:87). One AMS date from mound fill dates to cal. AD 1052 -1220, indicating that the earlier village surface was potentially from an Early Pisgah village.

Below this mound fill, an initial mound platform of river boulders was uncovered along the back two-thirds of the mound (Dickens 1970, 1976). This rock layer rested on fallen timbers and posts, which had been standing upright when the initial mound level was formed up to the level of Floor 1. These post molds, under the rock mantle, form a 50x70ft rectangular pattern with eight rows running east to west within the rectangle (Figure 4.28). This pattern creates a look of a multi-corridor "labyrinth" structure, which may or may not have been roofed (a

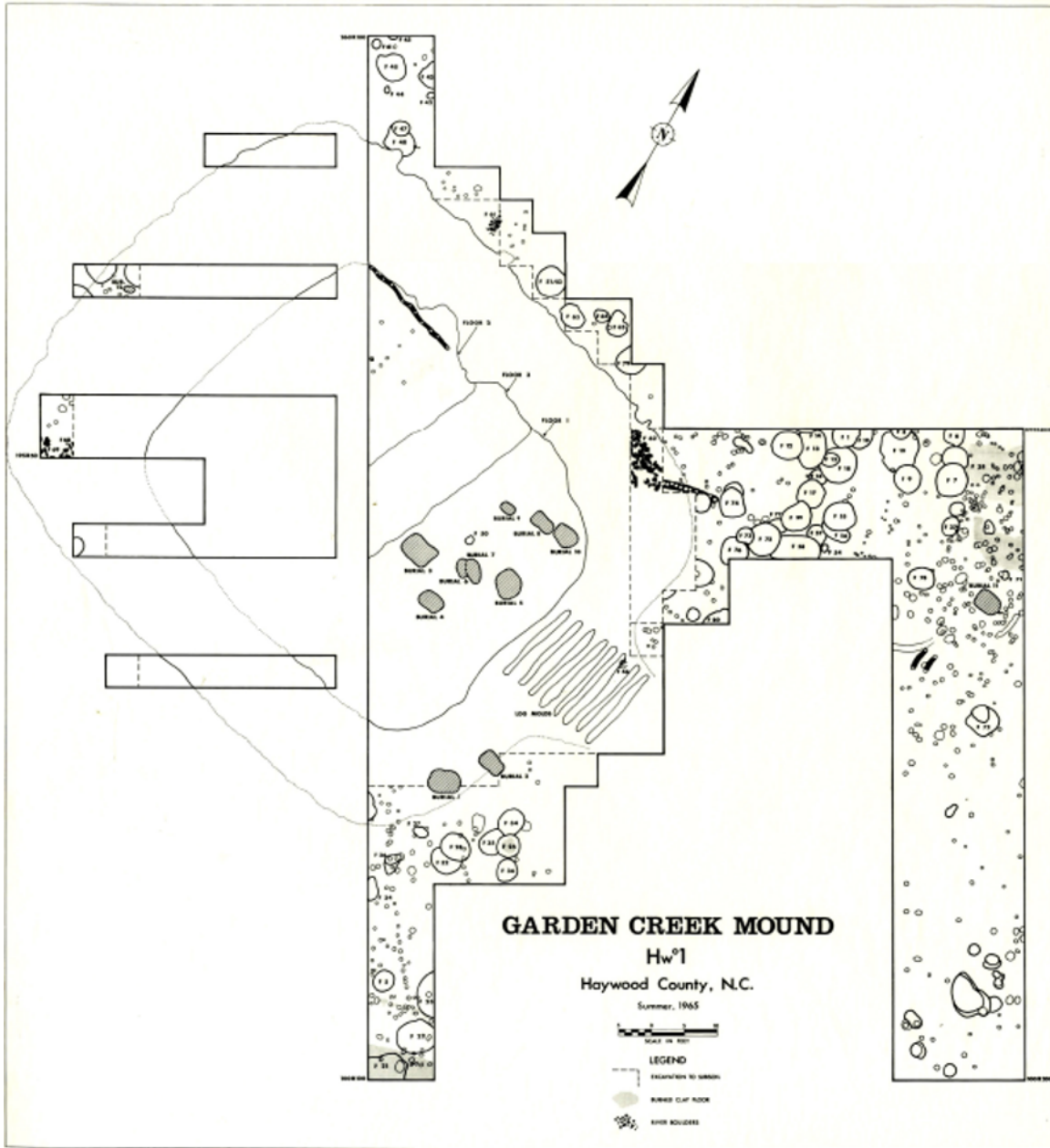


Figure 4.27 Construction stages of Mound 1 and the ramps leading to mound surfaces (from Dickens 1970:203)



Figure 4.28 The multi-corridor structure, two earth lodges, and trenched palisade with bastions that predate Mound 1 construction (from Dickens 1970:206)

possibility because the outer postholes are larger than the inner ones). Dickens provides no possible interpretation for this unusual posthole pattern.

Contemporaneous to this pre-mound structure are two earth lodges, identified as square clay ridges with depressed centers (Dickens 1976:83). These were collapsed remains of semi-subterranean earth lodges, roughly similar in size, with entrance trenches that connect the two ceremonial structures in a passageway (Figure 4.29). Dickens notes that they were used, at least for some time, contemporaneously, although the profiles of the intersection of the roof fill revealed that the smaller earth lodge to the south had been erected earlier (Dickens 1976:86). New AMS dates from the burned roof timbers of Earth Lodge 1 (cal. AD 1285-1388) and Earth Lodge 2 (cal. AD 1285-1390) show the date ranges almost precisely overlap indicating contemporaneous ritual destruction.

Finally, below these earth lodges and associated “labyrinth structure” lies an earlier portion of the Pisgah village. A sub-mound hearth feature AMS sample dates this earlier village to cal. AD 1294 – 1394. On this village surface, a line of postmolds within a wall trench marks the outline of ~100ft palisade segment, complete with two bastions (Figure 4.28). One bastion was completely uncovered (measuring 10 x 15ft) at the location later occupied by Earth Lodge 2. Part of another offset is likely at the western end of the excavations, 65 feet west of the first bastion, but it was not completely exposed during excavation. The existence of bastions suggests an expectation of violence and the need for additional defensive capabilities, as does the trench method of construction, which allows for posts to be set deeper and consequently sturdier than single-set posts.

As mentioned earlier, other mound sites in western North Carolina have been identified that contain Pisgah ceramics in surface collections or in test excavations (Steele 2015). Outside

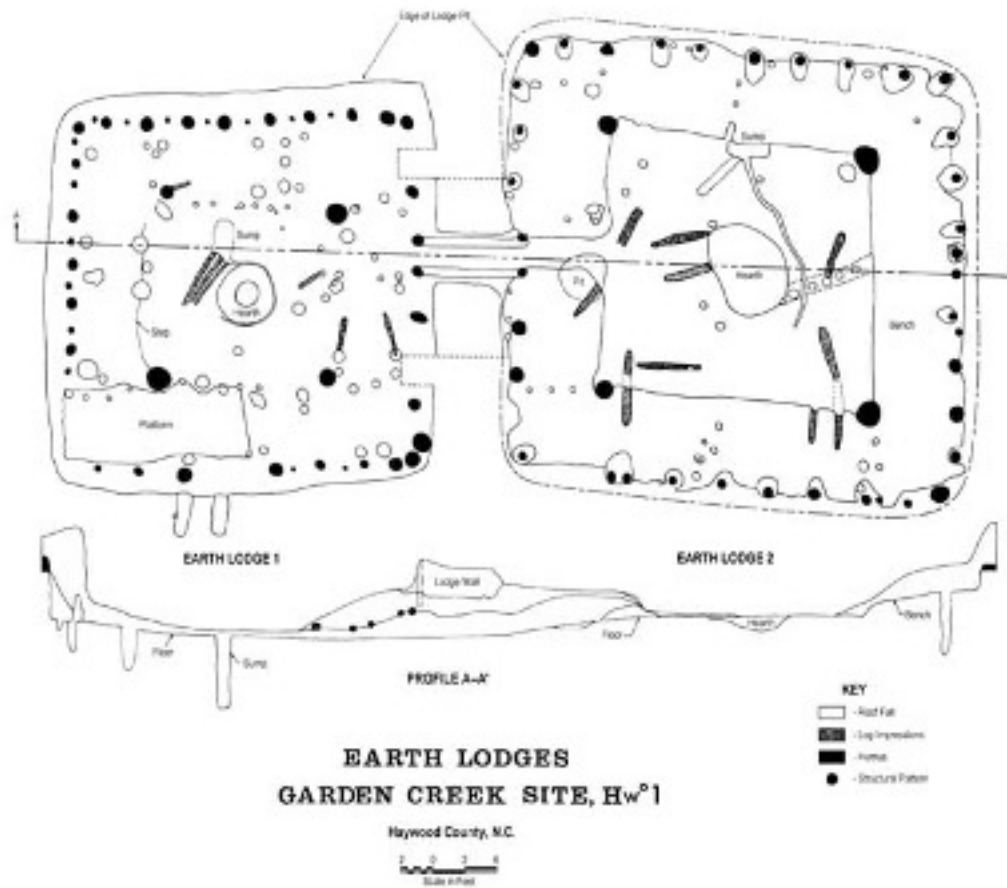


Figure 4.29 Paired Earth Lodge 1 and Earth Lodge 2 from Garden Creek Mound 1 (from Dickens 1970:209)

of North Carolina, there are examples of South Appalachian Mississippian towns and polities being founded or relocated in conjunction with mound construction, marking a collective birth or rebirth for political groups (Blitz 1999:585; Hally 1996:115). Ethnohistoric research also demonstrates that mounds reflect origin stories and embody the religious narratives of the Mississippian worldview (Brown 2006; Knight 1986). The initial capping of important ceremonial buildings with earthen or rock mantles, such as the capping of the dual earth lodges to begin construction of Garden Creek Mound 1, was a widespread Mississippian practice (Cobb 2015). This event and the architectural process represent an inflection point in the Pisgah incorporation of Mississippian ritual behaviors. Cobb notes that the tradition of paired structures reflects a “tradition of ritual purpose as well as style that may have been widely shared,” among South Appalachian groups (Cobb 2015:26). Garden Creek’s Mississippian earthwork shares several aspects of mound-building with other Mississippian mound-and-plaza complexes, such as the sub-mound paired structures seen at the Lubbub Creek site in Alabama (Blitz 1993b) and the sub-mound rectangular earth lodge recorded at the Irene site in Georgia (Thompson 2009). The initial mound construction and capping of earth lodges at Garden Creek represent the local adoption of Mississippian practices in a re-birth or renewal ceremony on a pre-existing ritual space. If these earth lodges are local to the South Appalachian region, then local communities are initially developing and retaining their traditions within the Mississippianization process.

Eventually the earth lodges and associated single-post, multi-corridor structure was erased with the erection of the mound, deliberately and precisely constructed above these pre-existing ritual places. This architectural trajectory of the Garden Creek mound is an example of “local communities continually engaged in a process of putting their own stamp on borrowed traditions” (Cobb 2015:28). This is supported by the regional co-occurrence of boulder or river

cobles as liminal events in ceremonial building closure (Cobb 2015:2; Kelly and Neitzel 1961; Setzler and Jennings 1941).

#### **4.7 Discussion: The Pisgah Built Environment**

The new AMS radiocarbon dates from Garden Creek show the rapid process of mound building, from the late 13<sup>th</sup> century to 14<sup>th</sup> century, over earlier ceremonial earth lodges and structures. Beneath these ceremonial architectural elements was an earlier village surface that contained a portion of a wall-trenched palisade. This defensive structure contained a bastion jutting out of the outer wall and was noted by Ashcraft (1996) as an extremely “robust” example of Pisgah fortification. If it can be assumed that the bastion juts out and away from the interior of the village (similar to the bastions at Toqua, see Polhemus 1987). Therefore, the main habitation area of the village and the associated central plaza would have been to the north/northwest and not to the east. Based on the location of the mound ramps and the openings of the structure and palisade on Floor 2, the location of the central plaza associated with the mound and later Pisgah villages would have been to the east. So while the extent of the plaza(s) at Garden Creek are unknown, the location of the central village social space would appear to have shifted dramatically south and east over the village’s lifetime. This suggests not just an expansion of the community space – but a complete shift in the entire planned community layout.

The Garden Creek inhabitants underwent a radical reconfiguration in community structure and identity during the 13<sup>th</sup> century – just prior to the construction of the initial earth lodges and subsequent mound building on the periphery of the earlier village. How this pre-mound community shift fits into the process of incorporating and adapting Mississippian

practices is likely an abrupt and perhaps violent response to new ideas and beliefs being introduced. The community did not simply incorporate the new mound-and-plaza complex into their pre-existing built environment, but instead constructed an entirely new village layout within a prescribed South Appalachian Mississippian ritual community structure. This began with the establishment of the paired earth lodges and multi-corridor structure, a possible inflection point in the Pisgah incorporation of Mississippian practices.

Overall, the built environment at the Garden Creek site marks a divergent Pisgah site evolution in comparison to the Cane River and Warren Wilson sites. In addition to being the only Pisgah community with a definitive mound built in the South Appalachian Mississippian tradition, it also has an unusual palisade construction, with a single trenched line of posts and bastions as opposed to the double line of single-set posts at Warren Wilson and Cane River. The highly robust defensive structure of the earlier village at Garden Creek presents a more autonomous and “huddled down” community. While we do not have any further information on this earlier occupation, at the beginning of the 14<sup>th</sup> century, the cultural entanglement with new Mississippian beliefs and ideas results in a shift in community orientation and location. Within a span of a hundred years, or just a few generations, new public spaces for ceremonial activities are constructed and ritually demolished, then rebuilt several times over as the base for new religious mound space. The presence of the second palisade around the mound summit also indicates that boundaries were utilized to segregate and co-opt ritual space within the village as well.

Also at the beginning of the 14<sup>th</sup> century, the Warren Wilson and Cane River sites are established with a similar enclosed community layout. The continuity in palisade and house location over time demonstrates a shared, prescribed community organization, similar to other



South Appalachian Mississippian villages (with and without mounds.) This inscription of new meanings at various scales of public spaces marks a long period of incorporating and adapting their local traditions within a Mississippian structure. However the variation in the Pisgah built environment across different socio-political contexts within the Appalachian Summit highlights the variation in Mississippianization of community identity. Not all Pisgah villages responded to extra-local interaction in the same manner, or at the same tempo. Why some communities responded similarly – and others did not- could be linked to variation in site function (regional centers versus smaller upland sites), variation in trade networks, and the differing degrees of isolation and resource access experienced in different upland site locations.

The fortification of all three of these Late Pisgah communities indicates interaction, and potential resistance or competition, with neighboring Mississippian groups. But the Mississippianization event at Garden Creek during the early 14<sup>th</sup> century – along with the presence of Mississippian motifs on artifacts recovered from Warren Wilson – show that some Pisgah communities or sub-groups within these communities became receptive to Mississippian influence and incorporation over time.

Towards the mid 1200s and early 1300s, the Medieval Warm Period ends (950 – 1250 CE) and the Little Ice Age (1300 – 1850) began (Mann et al. 2009). This significant cooling in the Northern Hemisphere (defined in the study by Mann et al. as persisting between 1400 to 1700 CE) likely affected energy resources available to prehistoric communities. With increasingly unpredictable weather after 1300 CE, during the onset of the Little Ice Age, groups may have been forced to intensify or diversify their subsistence economies as naturally occurring resources became unpredictable. This widespread climate shift towards cooler temperatures during the Little Ice Age has been associated with cycles of abandonment and resettlement in

other South Appalachian cultures (Anderson 1994; Hally 1994; Whyte 2003; Rodning 2004). It is entirely possible that at the beginning of this climatic shift, Pisgah people living in more mountain environments may have maintained a more diversified subsistence base rather than become more dependent on agricultural resources that were less stable in extreme environments. However there has been no indication in the food remains that the Pisgah communities at Garden Creek, Warren Wilson, or Cane River were under any kind of resource stress (see Chapter 5). Still, with long-term shifts in the climate creating more uncertain weather patterns and the increasingly frequent interactions with Mississippian groups along all sides of the Appalachian Summit, it is reasonable to assume there would be greater competition for resources over time. It seems Late Pisgah communities, like Warren Wilson, Cane River, and Garden Creek, represent a more regionalized, less-integrated culture, where communities are more autonomous and appear to have different degrees of Mississippianization over the course of their interactions with neighboring groups.

## Chapter 5 Pisgah Subsistence and Foodways

### 5.1 What are Foodways?

The term “foodways” describes the study of why we eat what we eat and what it means. Beyond basic nutritional requirements, our consumption of food is socially constructed (Douglas 1969). Even the quantity and timing of our eating is culturally programmed. For example, in Western cultures we divide our daily labor and rest periods into three primary meals a day. But this is not a cultural universal and there are many examples in the past and present of other consumption patterns. In addition to eating, surrounding these three meals a day are a number of daily activities that include procuring, preparing, serving and disposing of our food. As such, anthropologists are not just interested in the subsistence economy of food production, but also the vast number of choices people make about food. Most of these choices and decisions are contextually rooted in family, custom, history, and place.

Large gathering events are often linked to communal preparation and consumption of foods (here I am thinking of barbecues, fish fries, clam bakes, or pig roasts.) During the Thanksgiving holiday in the United States, it is widely celebrated as a time for sharing food and a table with family and friends. Individuals use family recipes for turkey, stuffing, or pie – often an indicator of the place they grew up in or their ethnic heritage. In Minnesota, we prepare our “stuffing” with wild rice, while out on the West Coast, oysters and sourdough bread are utilized in the “dressing”. If you are Pennsylvania Dutch, it isn’t called “stuffing” or “dressing” at all – it’s “potato filling”! But ultimately the food we eat is enveloped with meaning.

In our daily lives, habits regarding morning coffee, lunch breaks, and sitting around the dinner table often shape our interactions within the household and outside of it. Any number of cultural rules and guidelines shape these daily and special-occasion processes – telling us what is good to eat, when it is good to eat, and why. Previously, the study of prehistoric subsistence started and ended with the remains of what people ate: preserved plant remains and animal bones. This often was just a list identifying the quantities and types of dietary resources. However, the study of foodways can illuminate so much more than just what was consumed: how and when people gathered or cultivated plant resources, how they processed and stored them, what species of animals they hunted and fished, how they processed the meat, where they ate, when they ate, how they discard the remains, and with whom they produced, prepared, and ate alongside.

These foodway practices are not just about eating to survive, but also about the social activities that surround food. Attitudes, practices, and rituals centered in meals are the backbone of daily routines and special occasions. When considering culture contact situations, the study of foodways is an extremely helpful dimension of analysis because of how foodways structure daily social relations and reinforce shared cultural values (e.g. Bardolph 2014; Briggs 2015; Voss 2005; Wright 2000).

## **5.2 Trends in Mississippian Food Practices: Feasting Events and Specialization**

Historically, archaeologists in North America conceived of the Mississippian expansion as a culture contact phenomenon that was based primarily on agriculturally productive floodplains and valleys producing maize surpluses. These surpluses would in turn support the large regionally based polities that sprang up along the lush river networks of the Mississippi,

Ohio, and Tennessee rivers (Larson 1972; Smith 1978, 1990; Ward 1965). However, other Mississippian scholars considered the regional Mississippian adaptations to be a reflection of broad Mississippian ideas and beliefs being incorporated into new social institutions and hierarchies (King 2007; Knight 1986; Knight et al. 2001; Reilly and Garber 2007). Certain contemporaneous cultures in the Lower Mississippi Valley, such as the Coles Creek culture, demonstrate how an emergent mound-building adaptation had social and ceremonial developments without initial reliance on maize-based agriculture or long-distance trade networks (Kidder 1992; Kidder and Fritz 1993). In her recent book, Fritz (2019:5) calls this exaggerated emphasis on corn, as an explanation for the growth and florescence of Mississippian society, a “zeacentrism”. Instead, Fritz argues that both corn and the pre-existing Eastern Agricultural Complex of crops were grown in large outfields (2019). The remains of these highly nutritious, and storable Eastern Complex crops have been recovered in large quantities at many sites in and around Cahokia, thanks to improved faunal recovery techniques. This multi-crop economic base of storable resources immediately preceded Cahokia’s rapid expansion and therefore corn’s role in facilitating the socio-economic hierarchy and restructuring of Mississippian society may have been overemphasized by earlier scholars. By considering the Pisgah culture of the Appalachian Summit, we can document the integration of Mississippian practices in non-riverine floodplain settings at the edge of the Mississippian world. Changes in foodways coeval with the emergence of Mississippian political economies have frequently been inferred through analysis of domestic refuse, as well as feasting events in special public spaces or structures (Blitz 1993b; Jefferies et al. 1996; Rodning 2002b; Vanderwarker 1999; Vanderwarker and Detwiler 2000). By looking at this frontier episode of integrating Mississippian practices, we can challenge the emphasis on maize surplus production so prevalent in the literature on Mississippian society.

Additionally, we can consider how the local environmental factors relate directly to the production or reliance on maize surplus in Mississippian economies. Did these Appalachian Summit villages avoid a maize-surplus-based economy while incorporating select Mississippian cultural practices?

### **5.3 Food in the Appalachian Summit: Background**

As noted, structural transformations to an enduring pattern of behavior are archaeologically visible when people reconstitute Mississippian practices into community or household domains, such as foodways. However, this requires that archaeologists have a good record of foodway practices before new behaviors are introduced into community practices. The archaeological record preceding the Late Pisgah phase, from the Late Woodland and Early Pisgah periods, is unfortunately sparse, at best. The faunal record from several large Middle Woodland period *ceremonial* sites, such as the Biltmore Mound, does provide some context for earlier comparison -- however domestic sites or data sets from the Middle Woodland period of the Appalachian Summit are unknown. To set some expectations for changes to the diet of communities in the Appalachian Summit without a knowledge base of the pre-existing foodways, I use Mississippian groups to the east, south, and west to model possible changes in several lines of material evidence.

A greater reliance on maize agriculture and surplus was the most common change in subsistence that Southeastern archaeologists quote when discussing the adoption of Mississippian culture. To date, the only other published study of Pisgah plant remains, beyond this dissertation, was the analysis of plant remains from six pits at the Warren Wilson site (Yarnell 1976). The plant foods at Warren Wilson included a considerable quantity of corn,

hickory nuts, acorns, and lesser quantities of beans, squash, pumpkin, sumpweed seeds (otherwise known as marsh elder), walnuts, butternuts, and several fleshy fruits (Yarnell 1976:217). Specifically, the quantities of maize within these six pits totaled 11.51 grams and 21.32% of the total plant assemblage. Due to the poor preservation of the corn plant structure, compared to another species such as hickory nuts, this quantity of corn is likely under-represented in the sample of carbonized plant remains recovered at Warren Wilson. Still, the recovered corn remains were only second in quantity to the remains of hickory nut, indicating it was quite significant to that community's subsistence (Yarnell 1976: 222). The big question is whether this "significant" quantity of corn is indicative of horticultural subsistence or agricultural subsistence. Roy Dickens suggested that "the Pisgah subsistence economy appears to have been based on approximately equal parts hunting, gathering, and agriculture", based on the presence of these several kernels and cupules at Warren Wilson (Dickens 1976:210). Other scholars, such as Purrington (1983:145), seem to think the Pisgah people utilized horticulture - albeit a higher percentage of the diet came from horticulture than during the preceding Woodland period - still, "horticulture" connotes a very different level of time, labor, and resources than "agriculture". By considering the plant remains from Cane River, we can widely expand the datasets for diet during Pisgah times and further define the scale of subsistence practices within these highland communities. The difference in subsistence practices between agriculture and horticulture is in the amount grown and stored for surplus.

Methodologically, the 1960s and 1970s excavations at the Warren Wilson and Garden Creek sites were very different from more recent paleobotanical recovery methods. Feature fill was sifted through fine mesh before flotation, and this meant a lower quantity of plant remains were recovered and preserved for identification. Present excavation methods call for separate flotation

samples to be collected and left unscreened before flotation, allowing for less destruction of carbonized plant remains. This recovery strategy will likely account for some differences in comparisons between Warren Wilson and Cane River – and why the quantities of the corn cupules and kernels were so low at Warren Wilson.

Despite being the crutch of most Mississippianization arguments, the increased exploitation of maize isn't the only change in foodways that is expected within Mississippian communities. In truth, there should be many changes when the economy shifts to a greater overall reliance on domesticates such as maize, squash, and beans (Scarry and Scarry 2005), including modifications to storage practices (Barrier 2011; Ward 1985). Neighboring and contemporaneous Late Woodland communities in the Piedmont and Appalachians of North Carolina maintained a balanced reliance on hunting, gathering and horticulture, with a similar wide range of wild plant and animal resources being utilized across households. The subterranean storage pits associated with each individual structure and household would show little differentiation or specialization in diet.

In contrast, Mississippian groups often utilized communal storage of domesticates, such as above-ground corn cribs. There is often a material record of feasting and food consumption as part of larger community events. Other Mississippian locales also exhibit the incorporation of specialized foods (Jefferies et al. 1996; Vanderwarker 1999), as demonstrated by variable production and consumption of foods (such as a larger proportion of deer) and a greater variety of ceramic vessel types and sizes that would be used for preparation and serving (Blitz 1993b; Boudreaux 2010; Jackson 2015; Jackson and Scott 2003; Scarry 1986; Welch and Scarry 1995).

In order to collect data to assess household consumption and the possible role of feasting in each community, subsistence remains from feature contexts at both Cane River and Garden



Creek were sampled. When the Pisgah mound and village at Garden Creek (31Hw1 and 31Hw7) were excavated between 1965 and 1967, all soil was screened through ¼ and ½ inch screens; however, fine screening and flotation collection methods were not utilized. Therefore, preserved plant remains from the Garden Creek site are very few and poorly preserved. Except to note that “corn remains also have been identified in charcoal from Hw1 at Garden Creek,” Dickens gives no other mention of burned plant remains being quantified, or even examined (1970:271). Given this lack of paleobotanical remains, Garden Creek’s foodways will primarily focus on the animal bone recovered from the 1960s excavations.

Dr. C. Margaret Scarry (University of North Carolina at Chapel Hill) and her Ph.D. student, Gabrielle Purcell, analyzed the botanical remains recovered during excavations at Cane River in 2013 and 2014. Soil samples were collected in standard 10-liter increments from each feature context, or the entire feature was taken as a sample if it was less than 10 liters. Due to the high soil acidity and high humidity of the Southeastern U.S., most plant remains on open-air sites like Cane River are only preserved through carbonization (i.e. burning). Plant remains are often burned when cooked, or when being disposed of. In total, 33 flotation samples were collected and analyzed from 14 different features across the site, including hearths, borrow pits, storage pits, and wall entrance trenches. These features and the associated materials comprise a significant sample of both domestic and public-associated activities from Cane River. After separating out the plant remains via flotation, the plant taxa, frequencies, and ubiquities were assessed for each stratigraphic context within each feature. Using this analysis, we can evaluate how reliant the occupants were on wild plant foods in comparison to the crops they grew, as well as the degree of variability in the production and consumption of these foods.

It is important to note that differential preservation of plant materials is an issue, since some plant remains, such as hickory nutshell, do tend to preserve better through natural processes of bioturbation, and through excavation, than the more delicate small seeds. Foods such as fresh fruits are not always cooked or otherwise exposed to fire. Some plant foods, like tubers and greens, rarely preserve in a recognizable form. Therefore, while these plant foods may be underrepresented, that does not mean they were less important resources. Differential preservation does affect our analyses.

#### **5.4 Botanical Analysis: Cane River**

The Cane River samples were sorted using standard paleoethnobotanical methods (Pearsall 2015). The counts of these plant remains have been standardized by volume of soil per feature to make comparisons between feature types. The plant remains from Cane River contained a variety of crops, edible seeds, nuts, fruits, and miscellaneous seeds and taxa (Table 5.1). Corn was nearly ubiquitous in the samples analyzed, with 414 kernels, 264 cupules, and 21 glumes identified in 30 of the 33 soil samples, and within 13 of 14 features analyzed. Beans and squash rind were also present in several of the samples, providing evidence of agricultural practices at Cane River. Corn, beans, and squash were cultivated and eaten together, providing complementary nutritional and agricultural properties.

The most abundant plant foods represented at Cane River were nuts, with nearly 5,000 fragments of acorn recovered. There were also significant amounts of hickory, chestnut, and black walnut shell. Nuts were gathered in the fall and stored in underground pits for use throughout winter. Fruits identified include blackberry/raspberry, grape, plum, and possibly sumac. Some fruits were dried and stored for use over the winter, either whole or pounded into a

paste that was dried like fruit leather. Several edible seeds recovered include amaranth, chenopod, cheno/am, and sumpweed. These wild gathered resources were an important part of Southeastern diets before the introduction of corn, and although they declined after the adoption of corn agriculture, people continued to grow and use them.

Other seeds identified include tobacco, barnyard grass, legumes, Nightshade family, bedstraw, and a tentatively identified *Datura* seed, along with various weed and small grass seeds. Many of these miscellaneous seeds likely had utilitarian purposes, such as thatching, weaving, and bedding. Other miscellaneous taxa, including legumes, barnyard grass, pokeweed, and purslane, may have also come from collected plants prepared in meals. And while some members of the nightshade family are edible, most of the berries are poisonous, especially Carolina horsenettle, which has been tentatively identified as a species of nightshade from Cane River. Therefore, horsenettle likely served a non-food purpose, perhaps used as a medicine.

Both tobacco and *Datura* have special properties valued by Native people. Tobacco was often used in ceremonies or medicines and was grown in small gardens next to houses. Although *Datura* is a dangerous plant, many Native people used it for its hallucinogenic or medicinal properties. Among Cherokees *Datura* was smoked to cure respiratory problems or applied to the skin to alleviate dermatological issues.

The hearth samples contained a relatively higher number of these miscellaneous seeds. The reason for this concentration of seeds may have to do with social activities that took place around hearths, and household sweeping or movement that tended to blow these seeds into the fire more often within the confined space of the house. The exact uses of these miscellaneous taxa cannot be determined, but their presence in these samples indicates that the people of Cane River probably collected and used these plants regularly for a variety of purposes.

Table 5.1 Archaeobotanical remains recovered from the Cane River Site (31Yc91)

Taxon	Scientific Name	Seasonality	Count	Weight (g)
<b>Crops</b>				
Bean	<i>Phaseolus vulgaris</i>	Late summer/fall	4	0.22
Corn kernel	<i>Zea mays</i>	Late summer/fall	414	4.39
Corn kernel cf. <sup>1</sup>	<i>Zea mays</i> cf.	Late summer/fall	48	0.13
Corn cupule	<i>Zea mays</i>	Late summer/fall	264	1.65
Corn cupule cf.	<i>Zea mays</i> cf.	Late summer/fall	59	0.27
Corn glume	<i>Zea mays</i>	Late summer/fall	21	0.06
Corn	<i>Zea mays</i>	Late summer/fall	4	0.15
Squash rind	<i>Cucurbita</i> sp.	Summer/fall	17	0.04
Squash rind cf.	<i>Cucurbita</i> sp.	Summer/fall	1	0.00
<b>Edible Seeds</b>				
Amaranth	<i>Amaranthus</i> sp.	Late summer/fall	12	0.00
Chenopod	<i>Chenopodium</i>	Late summer/fall	24	0.00
Chenopod/amaranth	<i>Chenopodium/Amaranthus</i>	Late summer/fall	10	0.00
Chenopod (wild form)	<i>Chenopodium</i>	Late summer/fall	7	0.00
Sumpweed (small)	<i>Iva annua</i>	Late summer/fall	1	0.00
<b>Nuts</b>				
Acorn	<i>Quercus</i> sp.	Fall	4823	16.21
Acorn cf.	<i>Quercus</i> sp. cf.	Fall	1	0
Chestnut	<i>Castanea dentate</i>	Fall	37	0.13
Hickory	<i>Carya</i> sp.	Fall	897	15.33
Black Walnut	<i>Juglans nigra</i>	Fall	23	1.29
Nutmeat		Fall	3	0.10
<b>Fruits</b>				
Blackberry/raspberry	<i>Rubus</i> sp.	Summer	5	0.00
Grape	<i>Vitis</i> sp.	Summer	18	0.05
Sumac cf.	<i>Rhus</i> sp.	Fall	1	0.00
Plum	<i>Prunus</i> sp.	Summer	3	0.03
Unidentifiable fruit			3	0.00
<b>Miscellaneous</b>				
Tobacco	<i>Nicotiana</i> sp.		1	0.00
Barnyard grass	<i>Echinochola muricata</i>		40	0.00
Nightshade family	<i>Solanum (carolinense?)</i>		2	0.00
Legume	<i>Fabaceae</i>		1	0.00
Legume cf.	<i>Fabaceae</i> cf.		2	0.00
Legume pod	<i>Fabaceae</i>		2	0.01

Legume pod cf.	<i>Fabaceae</i> cf.		1	0.01
Vetch cf.	<i>Fabaceae</i> ( <i>vicia/lathyrus?</i> )		6	0.01
Bedstraw	<i>Galium</i> sp.		2	0.00
Datura cf.	<i>Datura</i> cf.		1	0.00
Composite cf.	Compositae cf.		9	0.00
Knotweed family (not erectum)	Polygonaceae		4	0.00
Smartweed	<i>Polygonum</i>		4	0.00
Smartweed cf.	<i>Polygonum</i> cf.		1	0.00
Pokeweed	<i>Phytolacca americana</i>	Summer/fall	42	0.00
Purslane	<i>Portulaca</i> sp.		45	0.00
Carpetweed	<i>Mollugo</i> sp.		3	0.00
Sedge	<i>Carex</i> sp.		1	0.00
Spurge	Euphorbiaceae		3	0.00
Grass family	Poaceae		30	0.00
Grass family cf.	Poaceae cf.		2	0.00
Wood			--	125.54
Partially carbonized wood			--	0.00
Bark			771	8.33
Bud			5	0.00
Cane	<i>Arundinaria</i> sp.		2	0.00
Gall			3	0.01
Pinecone	<i>Pinus</i> sp.		44	0.10
Pitch			118	0.81
Stem			8	0.05
Unidentified			10	0.21
Unidentified seed			45	0.00
Unidentified seed coat			8	0.00
Unidentifiable			89	0.00
Unidentifiable seed			19	0.00
Unidentified large seed			2	0.00

## 5.5 Conclusions and Inter-Site Comparisons

How important were gathered resources compared to the crops that were grown?

Although corn, beans, and squash were well represented, the archaeobotanical evidence indicates that other foods, such as nuts and edible seeds, were also very important in the diets of people living at Cane River. Starchy acorns and chestnuts may have been gathered to add variety to the diet, or to provide a secondary starchy food source to supplement a poor corn crop. Foods such as hickory nut oil and breads made with acorn and chestnut flour may have remained important to Native cuisine after the adoption of corn agriculture.

Edible seeds were not as plentiful in these samples, but that doesn't necessarily mean they were less important than other foods, since issues of seed preservation must also be taken into account. Because archaeobotanical remains do not provide a direct correlation to plants eaten by people in the past due to differential preservation, processing, and cooking, it is hard to say how reliant the people at Cane River were on corn versus other resources. We did attempt to measure the seed coat thickness of three seeds from Cane River (one chenopod and two amaranths) under a scanning electron microscope, to determine if the testa was the thinner, domesticated form, or the thicker wild form. In other words, do these seeds represent grown crops or are they background noise from the wild forms of these plants? While the chenopod seed was too degraded to get a good measurement on its seed coat, and one of the amaranths was too well-preserved to find a fissure to measure, we were able to measure the third seed, and found the testa was 3.95 – 4.02 microns thick, well within the expected thickness of a domesticated amaranth seed coat. Cultivated amaranth seed coats range from 2-15 microns, while wild/weedy amaranths measure 17-32 microns. This could mean that the people at Cane

River continued to cultivate native crops, alongside corn, beans, and squash, although measurements on additional seeds would be necessary to confirm this was the case.

Were there indications of specialized plant food use at Cane River? Food remains appear with relatively similar frequency across feature contexts, particularly corn and nuts. Amaranth, chenopod, and cheno/ams occur in borrow pits, storage pits, and hearths – all food-related features used for storage, discard, or possibly cooking. Shallow, basin-shaped borrow pits near the palisade wall were initially used to gather daub, but were later intentionally filled with refuse, as indicated most clearly in Features 5 and 6. These pits contained the most acorn nutshell of any features on the site, and their stratigraphy indicates that they were filled in single dumping episodes. It is likely that this fill was the result of acorn processing, with the debris from this processing then deposited in these open pits. Finally, corn remains were present in most of the features across the site, with no other noticeable patterns of distribution. Given the ubiquity of many plant foods across different feature contexts, it doesn't appear as though there was much variability in the types of foods consumed within the community. Any concentrations of certain plants are likely the result of daily cooking and discard activities rather than specialized consumption.

Finally, when comparing the foodways at Cane River to those at other South Appalachian Mississippian sites, the people at Cane River seem to be very similar to their neighbors. At the Warren Wilson site, there is also the same suite of corn, beans, and squash, as well as a large number of nuts and some native cultigens.

In Pisgah contexts at other small settlements, such as the Smokemont Site (31Sw393, southwestern North Carolina), the Birdwell Site (40Gn228, eastern Tennessee), and the Neas Site (40Gn229, eastern Tennessee), various nuts, native cultigens, and other edible wild seeds are

present, along with corn (Johanson 2012; Purcell 2013). Beans, however, are absent from these other upland sites, and squash remains were only identified at Birdwell. This indicates that corn and nuts are a very important combination of resources across all Pisgah occupations, although these preliminary results require further study.

Despite being in an upland setting outside of a major river floodplain, the people living at Cane River were also growing corn, beans, and squash. They likely had small gardens next to their houses where they grew native cultigens such as chenopod and amaranth along with tobacco, medicinal plants, beans, squashes, and at least one variety of corn. Larger fields of corn may have been grown elsewhere, perhaps in the lower floodplains. They also gathered a wide variety of nuts, fruits, and other edible plants, as indicated by the household trash discarded in the various features analyzed. There appears to be no specialized consumption at Cane River, as deposits reflect everyday discard activities. Archaeobotanical remains at Cane River indicate that similar foods were grown, processed, stored, and consumed throughout the South Appalachian Mississippian settlements.

## **5.6 Faunal Analysis**

Dr. Tom Whyte (Appalachian State University) analyzed the faunal specimens collected from Cane River during the 2013 and 2014 excavations. He also analyzed a selected sample of the faunal assemblage from the Pisgah village and mound at Garden Creek. Standard taphonomic analysis provided comparable interpretations of the degree to which each assemblage showed density-related bias. This representation of species and skeletal elements in different spatial and temporal contexts across each site indicates the types and cuts of meat that were processed and consumed as food. In total, 6,599 specimens were analyzed from the Cane



River village (31Yc91), 874 specimens from the village/off-mound assemblage from Garden Creek (31Hw7), and 37,707 specimens from Mound No. 1 at Garden Creek (31Hw1). As noted in Chapter 4, all of these sites are contemporaneous and overlap in the mid- to late- 14<sup>th</sup> century.

The sample from Cane River includes mollusks and all five vertebrate classes (Table 5.2). Toads, box turtles, turkeys, bears, and deer are the most numerous. These were recovered primarily from 13 features, 9 postholes, and 2 structural entrance trenches. Many of the toad bones, especially those from an entrance trench, exhibit staining indicative of decomposition in the flesh or in a water-saturated context. Compared to assemblages from other sites where the population was struggling in terms of subsistence prior to increasing their maize consumption, the Pisgah people at Cane River did not have a shortage of meat. There is little to suggest that they needed to rely on secondary meat sources or that they were breaking down large animal bones into very small pieces for grease extraction. People ate very well at Cane River and had an abundance of meat sources to utilize for their diet, as well as special purpose items (turtle shell for rattles, bird bones for tools, etc.)

The village assemblage from Garden Creek (Hw7) is similar to that from Cane River, although the sample size is the smallest. The sample of archaeofaunal remains includes only 873 vertebrate specimens, including 13 native species and all vertebrate classes except fish (Table 5.3). The most abundant species include box turtle, black bear, and deer. About 70% of the bones were recovered from the plowzone and surface contexts using ¼-inch mesh, while the remaining quantities were found in fill and floor contexts of a burned domestic structure. These

Table 5.2 Archaeofaunal remains recovered from the Cane River site (31Yc91)

<u>Scientific Name</u>	<u>Common Name</u>	<u>%NISP</u>
Unionidae	Freshwater Mussel	0.10
<i>Moxostoma erythrurum</i>	Golden Redhorse	0.91
<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	0.20
<i>Moxostoma</i> sp.	Redhorse	-
Catostomidae	Sucker	-
Osteichthyes	Bony Fish	-
<i>Bufo</i> sp.	American/Woodhouse's Toad	5.13
<i>Lithobates catesbeianus</i>	Bullfrog	0.40
<i>Rana</i> sp.	Frog	0.20
<i>Cryptobranchus alleganiensis</i>	Hellbender	1.40
<i>Natrix</i> sp.	Water Snake	0.10
Crotalinae	Pit Viper	1.60
Colubridae	Non-venomous Snake	1.60
Serpentes	Snake	-
<i>Chelydra serpentina</i>	Common Snapping Turtle	0.10
<i>Terrapene carolina</i>	Eastern Box Turtle	14.69
<i>Trionyx</i> sp.	Softshell Turtle	0.10
Testudines	Turtle	-
<i>Bonasa umbellus</i>	Ruffed Grouse	0.50
<i>Meleagris gallopavo</i>	Wild Turkey	3.22
Aves (large)	Large Bird	-
Aves (small)	Small Bird	-
<i>Ursus americana</i>	Black Bear	5.94
<i>Procyon lotor</i>	Raccoon	0.10
<i>Felis concolor</i>	Mountain Lion	0.30
<i>Sciurus carolinensis</i>	Eastern Gray Squirrel	0.20
<i>S. niger</i>	Eastern Fox Squirrel	0.10
<i>Sciurus</i> sp.	Tree Squirrel	-
<i>Marmota monax</i>	Woodchuck	0.10
<i>Castor canadensis</i>	Beaver	0.20
<i>Oryzomys palustris</i>	Rice Rat	1.10
Cricetidae	Mouse/Rat	-
<i>Odocoileus virginianus</i>	White-tailed Deer	61.47
Mammalia (large)	Large Mammal	-
Mammalia (medium)	Medium Mammal	-
Mammalia	Mammal	-
Vertebrata	Vertebrate	-
	<b>Total Specimens:</b>	<b>6599</b>

Table 5.3 Archaeofaunal remains recovered from the Garden Creek village site (Hw7)

<u>Scientific Name</u>	<u>Common Name</u>	<u>%NISP</u>
<i>Busycon</i> sp.	Marine Whelk	-
<i>Bufo</i> sp.	American/Woodhouse's Toad	0.4
Crotalinae	Pit Viper	1.7
Serpentes	Snake	1.7
<i>Terrapene carolina</i>	Eastern Box Turtle	7.3
Testudines	Turtle	-
<i>Bonasa umbellus</i>	Ruffed Grouse	0.4
<i>Meleagris gallopavo</i>	Wild Turkey	3.4
<i>Gallus gallus</i> *	Domestic Chicken*	-
<i>Ectopistes migratorius</i>	Passenger Pigeon	0.4
Aves (large)	Large Bird	-
<i>Ursus americana</i>	Black Bear	6.0
<i>Procyon lotor</i>	Raccoon	0.9
<i>Canis familiaris</i>	Domestic Dog	0.9
Canidae	Fox	0.4
<i>S. niger</i>	Eastern Fox Squirrel	0.4
<i>Sciurus</i> sp.	Tree Squirrel	-
<i>Sylvilagus</i> sp.	Cottontail	0.9
<i>Cervus canadensis</i>	Elk	1.3
<i>Odocoileus virginianus</i>	White-tailed Deer	74.0
Mammalia (large)	Large Mammal	-
Mammalia	Mammal	-
Vertebrata	Vertebrate	-
<b>Total Specimens:</b>		<b>234</b>

\*Surface only.

Table 5.4 Archaeofaunal remains recovered from Garden Creek Mound No. 1 (31Hw1)

<u>Scientific Name</u>	<u>Common Name</u>	<u>%NISP</u>
<i>Crassostrea virginica*</i>	Virginia Oyster*	-
Unionidae	Freshwater Mussel	0.20
<i>Helicodiscus parallelus</i>	Compound Coil Snail	-
<i>Hawaiiia miniscula</i>	Minute Gem Snail	-
<i>Neohelix</i> sp.	Terrestrial Snail	-
<i>Triodopsis</i> sp.	Terrestrial Snail	-
Pulmonata	Terrestrial Snail	-
<i>Nocomis</i> sp.	Chub	0.10
<i>Moxostoma carinatum</i>	River Redhorse	0.30
<i>M. erythrurum</i>	Golden Redhorse	0.02
<i>M. macrolepidotum</i>	Shorthead Redhorse	0.07
Catostomidae	Sucker	-
<i>Noturus</i> sp.	Madtom	0.02
<i>Micropterus</i> sp.	Bass	0.02
<i>Sander</i> sp.	Sauger/Walleye	0.02
Osteichthyes	Bony Fish	-
<i>Bufo</i> sp.	American/Woodhouse's Toad	9.64
<i>Saphiopus holbrookii</i>	Eastern Spadefoot Toad	0.13
Mesobatrachia	Toad	-
<i>Cryptobranchus alleganiensis</i>	Hellbender	0.26
Crotalinae	Pit Viper	0.04
Colubridae	Non-venomous Snake	0.45
Serpentes	Snake	-
<i>Chelydra serpentina</i>	Common Snapping Turtle	0.15
<i>Sternotherus odoratus</i>	Stinkpot	0.06
<i>Trachemys</i> sp.	Slider	0.02
<i>Terrapene carolina</i>	Eastern Box Turtle	12.70
Testudines	Turtle	-
<i>Podilymbus podiceps</i>	Pied-billed Grebe	0.04
<i>Anas acuta</i>	Pintail	0.02
<i>Cathartes aura</i>	Turkey Vulture	0.09
<i>Colinus virginianus</i>	Bobwhite	0.09
<i>Bonasa umbellus</i>	Ruffed Grouse	0.06
<i>Meleagris gallopavo</i>	Wild Turkey	4.06
<i>Ectopistes migratorius</i>	Passenger Pigeon	2.10
<i>Colaptes auratus</i>	Common Flicker	0.02
<i>Cyanocitta cristata</i>	Blue Jay	0.02
<i>Toxostoma rufum</i>	Brown Thrasher	0.02
Fringillidae	Finch/Sparrow	0.02
Aves (large)	Large Bird	-
Aves (medium)	Medium Bird	-
Aves (small)	Small Bird	-
Aves	Bird	-
<i>Scalopus aquaticus</i>	Eastern Mole	-
<i>Ursus americana</i>	Black Bear	6.00
<i>Procyon lotor</i>	Raccoon	0.17
<i>Urocyon cinereoargenteus</i>	Gray Fox	0.04
<i>Canis</i> sp.	Dog/Wolf	0.04

<u>Scientific Name</u>	<u>Common Name</u>	<u>NISP</u>
Canidae	Fox	-
<i>Lynx rufus</i>	Bobcat	0.02
<i>Felis concolor</i>	Mountain Lion	0.06
<i>F. sylvestris</i> *	Domestic Cat*	-
Carnivora (small)	Small Carnivore	-
<i>Sciurus carolinensis</i>	Eastern Gray Squirrel	0.94
<i>S. niger</i>	Eastern Fox Squirrel	0.09
<i>Sciurus sp.</i>	Tree Squirrel	-
<i>Marmota monax</i>	Woodchuck	0.06
<i>Castor canadensis</i>	Beaver	0.11
<i>Microtus sp.</i>	Vole	-
<i>Peromyscus sp.</i>	Mouse	-
Cricetidae	Mouse/Rat	-
<i>Sylvilagus sp.</i>	Cottontail	0.02
<i>Cervus canadensis</i>	Elk	0.84
<i>Odocoileus virginianus</i>	White-tailed Deer	59.05
Cervidae	Elk/Deer	-
Mammalia (large)	Large Mammal	-
Mammalia (medium)	Medium Mammal	-
Mammalia (small)	Small Mammal	-
Mammalia	Mammal	-
Vertebrata	Vertebrate	-
	<b>Total Specimens:</b>	<b>5344</b>

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\*Found in surface contexts only.

discrete context samples were then floated through 1/16<sup>th</sup> inch mesh. The smaller sample size likely explains the absence of fish. Additionally, the difference in mesh size for the majority of this village assemblage could account for some of the differences between the mound and village assemblages (most mound contexts were screened through finer 1/16<sup>th</sup>-inch mesh).

The sample from Garden Creek Mound No. 1 includes mollusks and all five vertebrate classes (Table 5.4). A minimum of 39 species are present, excluding the likely intrusive remains of mammals such as mice, voles, and moles. The most abundant species are toads, box turtles, turkeys, passenger pigeons, black bear, squirrels, and deer. Compared to the village assemblages from Hw7 and Yc91, the mound has proportionately more fish, toad, turtle, passenger pigeon, and squirrel remains. Three bones were initially classified as bones from American bison (*Bison bison*) by B. Miles Gilbert from the University of Kansas. Dr. Whyte reexamined them and these specimens are unquestionably bones of elk (*Cervus canadensis*).

While the higher taxonomic diversity of the mound sample is a product of sample size, the mound contexts have many more unbroken bone elements of large mammals. These contexts also contained paired elements of the same individual deer and bears, and the associated epiphyses and diaphysis of individual bones. The presence of unbroken bone elements from large mammals – and paired elements from the same individuals- are classic indicators of primary deposits resulting from feasting (see Hayden 2001).

Additional evidence for feasting includes the large samples of toad remains and passenger pigeons from Mound No. 1, although Dr. Whyte is wary of labeling these as such given the recovery methods. Of the 566 toad remains, more than half were recovered from the Earth Lodge 2 on the “Hearth Midden Heap on Southwest Bench”. This large deposit of remains accounts for a minimum of 19 toads deposited in Earth Lodge 2, with the remaining toad bones

spread across 26 other mound contexts. Most of these toad bones exhibit staining indicative of decomposition “in the flesh” or deposition in a moist matrix. However, only one cranial element was identified among the 566 bones. Could this indicate decapitation? Compton (2014) makes a case for this practice at sites in southwestern North Carolina (see Beisaw 2006)

Whyte is hesitant to label this as a ceremonial deposit of decapitated toads for several good reasons. First, toad cranial elements are quite small and delicate. Therefore, they are less likely to remain preserved in an identifiable condition. Second, the staining suggests that all or most of these toads may have naturally intruded in the deposits, and the lack of detailed notes regarding the excavation of the earth lodges makes it difficult to know if these sub-mound deposits had evidence indicative of bioturbation. Still, it is not out of the realm of possibility that whole toads were sacrificed or deposited as offerings as a subterranean or aquatic symbol of fertility or world renewal (Claassen 2015).

A stronger argument can be made for this last scenario, given the additional presence of passenger pigeon bones from Posthole 49 of Earth Lodge 2. Given the fragility of these avian bones, the fact that most of the bones of 6 pigeons were recovered indicates that they were not processed and consumed – but instead were deposited whole together. At other South Appalachian Mississippian sites, such as at Toqua, the elite were provisioned with more “choice” cuts of meat and smaller amounts of more “specialized” species like waterfowl, fish, and passenger pigeon (Rees 1997).

Another deposit within the mound includes 48 plastron fragments, but only one carapace fragment, of eastern box turtle. Carapaces are valuable as rattles, often attached to legs and adorned on clothing. Cherokee women wore these turtle shell rattles during dances, and other community events, during the 18<sup>th</sup> century. The placement of the turtle plastrons, however, may

represent ritual deposits related to the turtle's role in the Cherokee creation myth (Mooney 1902). Knight (1989: 283) notes that large earth mounds in the Mississippian form held symbolic significance to historic southeastern Indians, including the Cherokee. Mounds possessed symbolic associations with autochthony, birth, and emergence, as metaphorical mountains, navels or "earth mother" representations. These symbolic associations with the mound context, the preservation of the avian bones and placement of the turtle remains indicate ritual placement and activity.

When comparing the faunal assemblages across both domestic contexts and the mound sample, the taxonomic composition is not remarkably different. Given that these are contemporaneous sites, this similarity is not entirely unexpected. White-tailed deer and eastern box turtles are very abundant in all of these assemblages. When comparing these data with the Warren Wilson site's faunal assemblage, which was analyzed by Jeannette Runquist (1979) as part of a biology Masters thesis, there is a similar taxonomic composition across all known Pisgah sites. Most abundant are the remains of deer, box turtles, toads, black bear, turkey, and squirrels. However, the assemblage of the "sacred" from Garden Creek Mound No 1 was only subtly different from the secular contexts. These differences could be attributed, to some extent, by the recovery methods. The village assemblages have more turtle remains, while the mound assemblage has more amphibian remains (because of the interesting deposit on the bench of Earth Lodge 2.) The mound assemblage also includes many more fish remains and passenger pigeon bones (again, because of the one deposit in Posthole 49 of the Earth Lodge 2). Still, bear and deer remains exhibit similar relative abundance among all Pisgah sites and contexts (Table 5.5).



When considering large mammal skeletal completeness, no whole cranial, axial, or limb elements were found in the Garden Creek village assemblage. This is likely due to the fact that those contexts are only from house floors, which are swept and kept clean of larger debris, and other surface contexts. Overall, the Garden Creek Mound No. 1 assemblage includes a significantly greater frequency of whole deer elements than those recovered from Cane River. In fact, over a third of vertebrae are complete, which means that large mammal bones at the domestic sites were processed more extensively for nutrition, while the extravagant feasting at Garden Creek Mound 1 would result in more waste. The village assemblages did have more evidence of carnivore gnawing (i.e. village dogs), but the resulting bone breakage from this behavior would be slight. At the Garden Creek mound, most marrow-rich long bones were broken for marrow extraction, but not further reduced for boiling. The lack of evidence for post-depositional scavenging and dispersal suggests that these remains represent a single event of deposition, followed by immediate burial. The deer remains associated with the mound include more delicate axial parts (vertebrae and ribs), while the village assemblages include proportionally more of the denser foot bones. This pattern is consistent with other South Appalachian Mississippian sites, such as Toqua on the Little Tennessee River (Polhemus 1987). The quick burial of bones and meat has been indicative of world renewal at other Mississippian sites (Kassabaum 2013; Kelly 2001).

Table 5.5 Archaeofaunal remains recovered from Garden Creek (31Hw1, 31Hw7) and Cane River (31Yc91)

<u>Taxa</u>	<u>31HW1</u>	<u>31HW7</u>	<u>31YC91</u>
Fishes	287	0	29
Amphibians	580	1	71
Snakes	41	8	37
Turtles	805	69	453
Wild Turkey	217	8	32
Passenger Pigeon	112	1	0
Black Bear	321	14	59
Squirrels	89	3	7
Deer	3156	173	611
Elk	45	3	0
Total Species	40	13	22
Total Specimens	37707	874	6599

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Excludes exchange items (whelk), historic surface items (chicken and house cat), and likely intrusive fauna (snails, mice, etc.)

## 5.7 Pisgah Subsistence: Summary and Conclusions

Previous studies of Late Woodland and Mississippian assemblages note that taxonomic faunal diversity decreases as a response to deforestation and scheduling conflicts associated with maize agriculture (Muller 1997; Smith 1974). Bogan and Bogan noted an increase of black bear remains on Mississippian sites along the Little Tennessee River in eastern Tennessee post-AD 1300, along with a decrease in passenger pigeon remains relative to turkey remains (Schroedl et al, 1985). These differences in meat consumption were not explained in terms of maize dependence or changing socio-political structure.

During the Pisgah phase, there is no indication from any of the site assemblages that people were specializing in the exploitation of certain faunal species. Faunal taxonomic diversity is similar to the earlier Woodland period, utilizing the Middle Woodland mound assemblage at Garden Creek and the Middle Woodland assemblage from the Biltmore mound located to the east (Kimball et al. 2010, Whyte 2011). Deer, black bear, wild turkey, and box turtle were the dominant species identified in previous Woodland assemblages, although the Biltmore mound did have a greater proportion of fish and turtle remains. Therefore, there is no evidence from the faunal evidence to suggest a restructuring of subsistence around maize agriculture. There is, however, evidence that would suggest the Middle Woodland occupants of the region were under more subsistence stress than those from later Pisgah sites. This is indicated by differences in the degree of mammal bone fragmentation, specifically at the Biltmore village midden. Despite the defensive architecture surrounding all of these Pisgah sites, there is no evidence of faunal resource stress that might indicate increasing human populations in the Appalachian Summit or a shift in subsistence focus or scheduling due to an

increase in maize gardening and consumption. The increased competition among human groups in the region is likely due to some other social factor and not resource stress.

At the Garden Creek Mound No. 1, there are multiple lines of evidence to support the conclusion that the occupants were feasting during the use, construction, and/or closing of the mound. Specifically, deposits of whole toads and passenger pigeons during the ceremonial closing of Earth Lodge 2, just before the initial capping and construction of the base layer of Mound I, denotes a participation in a renewal ceremony that is also observed at other Mississippian mound sites (Kassabaum 2013; Kassabaum et al. 2014; Kassabaum and Nelson 2016).

## Chapter 6 Pisgah Houses, Features and Pottery

### 6.1 Introduction

As stated in the first chapter, home and identity are one and the same. While the built environment is the end result of large-scale group behavior, the patterns within individual houses or household clusters reflect the activities and choices of family units. Thus, the study of household archaeology has a long and rich history of providing archaeologists with information on kinship, social organization, household production and domestic activities (e.g. Beck 2007; Blanton 1994; Joyce and Gillespie 2000; Rapoport 1969). Anthropologists, such as Levi-Strauss, historically separated the idea of the social house (a general kinship category) from the concept of the physical household, the latter being the minimal unit of economic production and consumption (Levi-Strauss 1969). For archaeologists, dealing with the physical remains of the house and household means the key features of each social house are the material correlates of property and wealth, assessed from everything including the architecture, the subsistence remains, and the potsherds. For my purposes, when I use the term *household*, I am referring to a group of people that co-reside in residential dwelling(s) and who share household activities and decision-making. This composition varies dramatically across cultures.

Within Cherokee communities, historic and ethnographic accounts describe a matrilineal and matrilocal society where the most common form of the household is the nuclear family and the mother/wife's extended family (Hudson 1990; Mooney 1902). A larger household is usually the result of a decision by one or more couples to remain within the wife's parental house or

residential compound after marriage. In some cases they may stay a short period of time until they are able to establish an independent household or they stay an extended period of time, sometimes until the parents are deceased. While archaeologists should be cautious in extending historic and ethnographic accounts too far back into prehistory, these accounts do demonstrate how family composition can fluctuate over time within a single household or household cluster.

Identity and place are closely associated with the physical form and architecture of the house because this physical space is not only the everyday domicile but is also the location or dwelling where the bones of ancestors are often buried and/or curated (e.g. Duncan 1982; Helms 1998:50; Hodder 1990; Rapoport 1969:116). Thus “the architecture of the house anchors its members both to place and past” (Beck 2007). Burying the dead in this manner legitimizes the household occupants’ claims on the land and landscape, linking families and households to resources and this constitutes another part of the household’s wealth.

When rebuilding structures or monuments continually in the same place, the social implication of recreating the axis mundi or center of the world reflects the leaders’ decisions and dispositions to reproduce the social, political, and moral order. Repetitively rebuilt houses have been attributed similar implications, re-creating the world by commemorating place and social continuity on a domestic scale. This kind of social reproduction within domestic space and place has been inferred for many societies around the world, by both ethnographers and archaeologists (e.g. Joyce and Gillespie 2000). Safeguarding an established place, whether a building or open space, may also signal a place’s importance and value, commemorating historical or mythical events and people associated with that place (Ashmore 2002). Thus when we consider architecture size and shape, permanence, orientation, organization, and even destruction, it is both the material and immaterial wealth of these houses that is being examined and how this

influences social practices both within and between each household. Another aspect of analysis is the transfer and change of such household practices over time.

In terms of architecture and use of space, the physical form of the house will create boundaries and causeways, and the type of space created by these partitions will range from various divisions of interior versus exterior and public versus private. This architecture and spatial ordering are often suggestive of certain behaviors and used as a device for reminding users of particular domestic rituals and types of behaviors (Rapoport 1990, 1969). Although it is important to note that the architectural ordering, arrangement and construction of a home is not pre-determining the behavior but is highly influential.

Of all the classes of material culture to be contemplated, household architecture and spacing can be one of the most useful for understanding how broader social trends are affecting domestic life (Blanton 1994; Moore 2012; Rapoport 1969). Houses are functional and utilitarian. Families use them as shelters, domiciles, and workshops. However, they can also be symbolically charged. People frequently built their homes according to cosmological principles. People make conscious choices about how to build their homes, selecting their materials and design. Yet we need to recognize that those choices are often constrained by broader cultural and social forces. This chapter will focus on detailing the evidence for household construction, design, and use, as seen through structural remains as well as feature classifications. It will also discuss the ceramic analysis on sherds from Cane River and Garden Creek, and how variation in surface treatment, rim form and temper may indicate affinity with a regional Pisgah identity or “brand” within the Southern Appalachian region.

## 6.2 Household Archaeology in the Southeast and Mississippian “Grammar”

Within the Southern Appalachian region, there have been major changes in prehistoric houses and households since the Woodland period and all the way up to the Historic period. These major changes in domestic architecture include going from round to rectangular houses, more open to divided interior spaces, and various shifts in construction methods and spacing of houses or household clusters. Recent work by Steere (2017) has attempted to understand how prehistoric houses and households changed across the Southern Appalachian region of the southeastern United States, during the Woodland, Mississippian, and Historic periods. Steere (2017) considers architectural features such as domestic structure size, shape, orientation, spacing of the houses, as well as size and spacing of postholes, number of interior features, burials, interior partitions within each structure, and rebuilding episodes. Structures are broken down into four general categories: domestic, nondomestic (such as large public buildings or smaller special purpose buildings), storage structures (whose primary use is for storing maize), and other (usually of unknown function). Storage structures can be identified by their smaller size and clear association with one or more domestic structures in a household structure. In early Spanish accounts, these are frequently referred to as “barbacoas” or corncribs and are especially well documented at sites such as King, Toqua, and Coweeta Creek (Hally 2008; Hally and Kelly 1998; Rodning 2004).

Looking at this large database of structures in the Southern Appalachians across multiple time periods, Steere (2017:17) identifies several major architectural trends: greater architectural investment over time, a general continuity in building design, and several changes that suggest households become increasingly autonomous over time. In terms of architectural investment, there is higher quality materials and more labor embodied in these structures, which peaks in the



Late Mississippian period. However certain architectural traits, such as the use of four central posts and semisubterranean basins, have a deep history and remain unchanged through time.

In terms of structure shape, there is a general shift from circular domestic structures in the Middle and Late Woodland periods to rectangular domestic structures in the Late Woodland and Early Mississippian, to finally square and rectangular structures in the Late Mississippian. In addition to structure shape, structure size or area covered by the house have historically received the most attention in archaeological studies of households because it is a highly visible exterior trait that can signal individual and/or household status (Blanton 1994; Wilk and Rathje 1982). In the eastern part of the Southern Appalachians, the average size of domestic structures increases from the Late Woodland to the Early Mississippian period to the Late Mississippian period. During the Late Mississippian period, which includes the time of Late Pisgah settlement, there is a common pattern of settlements with small storage buildings, larger domestic buildings, and a few larger public buildings. The median size of domestic structures during the Late Mississippian period is 41 m<sup>2</sup>, with a minimum size of 6.6 and a maximum of 126 (Steere 2017: 26). Structures greater in size than 90 m<sup>2</sup> appear to be non-domestic in function. Most domestic structures are around 40 m<sup>2</sup> and are winter houses: square with rounded corners, including internal traits such as shallow basins, central hearths, and four interior roof supports (Gougeon 2007; Hally 2002; Polhemus 1987). Often interior posts create internal walls or partitions that radiate from the center to the exterior walls.

The orientation of many Late Mississippian domestic buildings was toward the southeast, at approximately 130 degrees (Steere 2017). Although determining the orientation of many structures is difficult unless there are entrance trenches present, as multiple gaps in exterior walls can appear as many possible candidates for entryways. This orientation in Late Mississippian

houses is noteworthy given its change from the Early Mississippian period, when more often the long axis of buildings would be aligned with the cardinal directions. Parallel entry trenches commonly occur in Late Mississippian domestic and nondomestic structures in the Southern Appalachians and are recognizable as a parallel pair of trenches that run perpendicular to the exterior walls of the house. Within these trenches, boards or saplings would be placed to make a low, sheltered entrance or entrance passageway. Steere (2017:36) notes that these entry trenches are a defining feature of Late Mississippian domestic structures and in addition to their functional purpose in keeping out the elements, they may also be a symbolic feature. Sixteenth-century Spanish accounts often describe houses as cave-like (Clayton et al. 1993) and may have given Late Mississippian houses a similar appearance to earth lodges and even platform mounds (Hally 2002).

In terms of house construction, wooden poles and posts, wattle and daub, reed and thatch were the primary building materials of the Native Southeastern houses. Single-set posts, as opposed to wall trenches, are used continuously through the Middle Woodland period to the Historic period. Single-set posts can be used in two types of wall construction: small (9-14cm diameter), closely spaced poles set in wall trenches or larger (18-24cm diameter), posts set farther apart (Lewis 1995; Lewis and Kneberg 1946). While Early Mississippian structures have walls with trenches and small, closely set posts, by the Late Mississippian this construction method was abandoned and replaced with larger posts set farther apart (Steere 2017: 41).

Within the domestic structure are many architectural features that can affect internal organization and activities, indicating changes in social, political, or ritual practice. House basins, or semisubterranean floors, are another defining feature of Late Mississippian winter houses in the Southern Appalachians. House basins are unfortunately difficult to identify due to

preservation issues caused by deep plowing and erosion. However, other similar features shared among Pisgah structures and other Late Mississippian neighbors suggest they were a likely architectural feature within Pisgah houses. Looking at interior post holes, Late Mississippian winter houses exhibit a consistent pattern of four large, deep interior roof supports placed in a square around the central hearth (Hally 2002; Moore 2002b; Polhemus 1987). These four primary roof supports are generally easily distinguished from smaller posts that hold up benches or make up interior walls and partitions.

Anthropologists and archaeologists have carefully researched division of space within buildings to make inferences about changes in storage (Kelly 2005), sedentism (Flannery 2002), division of labor (Flannery 2002; Gougeon 2002), and political complexity (Kent 1991). Changes in architecture, such as the shift from round, mostly open structures in the Middle Woodland period, to rectangular, segmented structures in the Late Mississippian period, likely reflect the privatization of storage and increasing tendency to do domestic activities inside. During the Woodland periods, the basic open floor plan likely caused a central vs. peripheral division of space, with most of the focus being on the hearth as the central feature of the house. During the Late Mississippian period, there is a substantial increase in the segmentation of interior space within winter houses, although it is interesting to note that rectangular barbacoas, summer houses, and small circular storage buildings were not generally subdivided into smaller rooms (Steere 2017:51). The discovered post holes and remains of partitions within winter houses were constructed of wattle-and-daub, and the walls would radiate out 90 degree angles from the four central support posts, essentially dividing the interior into as many as eight or nine discrete activity areas for sleeping, storage, and domestic tasks (Gougeon 2006:185-188; Hally 2008; Polhemus 1987, 1998). This more formal division of interior Late Mississippian houses

using partitions, as well as subsequent studies of floor debris, demonstrates that different types of activities often took place in these eight or nine small rooms (see Gougeon 2012b). This practice of using interior partitions continues into the Historic period, with partitions or walls being used not only in the circular, octagonal, or square winter houses, but in rectangular summer houses as well (Bartram 1995).

While the presence of interior hearths is a traditional and common element to many domestic structures through time in the Southern Appalachians, they become increasingly common and better defined during the Mississippian and Historic Indian periods (Steere 2017: 52-53). Hearths evolve technologically from fire basins to earth ovens during the Woodland period, then finally are clearly defined as prepared clay hearths during the Mississippian period. This increasing investment in hearth features dovetails with other interior features. Prior to the Late Mississippian, people are not commonly buried inside their homes (see Hally 2002). However the shift to interior burials, along with greater investment in prepared clay hearths, house construction and rebuilding/repairing, strongly suggests the emergence of the household as an important unit of social organization during the Late Mississippian period. This contrasts with previous social organization, when the larger corporate kin group may have been the more important group identity. Burials have long been thought to signify a territorial claim and a tool to better define group membership (see Charles and Buikstra 1983; Hodder 1984). In lieu of large cemetery burials that signify membership in a large corporate group, burying your family members within your house signifies your household identity as the more important locus of social organization.

The repair or rebuilding of both domestic and nondomestic structures, as well as storage buildings, can be rather inconvenient for archaeologists, who have to sift through the palimpsest

of superimposed posts to look for patterns. Structures are oftentimes repaired in place, completely rebuilt in place, or rebuilt after being shifted slightly from the original position. Yet there is analytical value in seeing evidence for rebuilding or repair as it shows architectural investment, occupational duration, stages of the domestic cycle, and architectural symbolism. Rebuilding of structures is practically nonexistent in the Middle Woodland period, and there is very limited evidence of it during the Late Woodland (Steere 2017). During the Mississippian period, rebuilding becomes more commonplace with twenty-one percent of Early Mississippian structures showing evidence of being rebuilt. Across most time periods in the Southern Appalachians, domestic structures were not repaired or rebuilt very often so it is highly significant that during the Late Mississippian period it is common to find structures repaired or completely rebuilt. Forty-one percent of Late Mississippian structures show evidence of multiple building stages or repairs or of being entirely rebuilt (Steere 2017: 58).

Some elements of building tradition do remain more constant and stable, such as the types of building materials used in construction and the break in structure size distribution between 80 and 100 m<sup>2</sup>, which represents the division that helps us distinguish between domestic structures and larger nondomestic structures (Steere 2017). However, noting these changes and variation in architecture diachronically and spatially within the Southern Appalachians inevitably brings up the question of why there is a general increase in architectural investment over time and a trend towards greater household autonomy during the Late Mississippian period. Before we consider those questions of the role classic prime movers (such as domestic production and consumption, architectural symbolism or status differences) have on household architecture and form, let's turn to the evidence for Late Pisgah houses in the Southern Appalachians.

### 6.3 Pisgah Structures at the Warren Wilson, Cane River, and Garden Creek Sites

The Warren Wilson site's seventeen domestic structures provide the largest sample of household architecture from the Late Pisgah period. As previously noted in Chapter 4, there is little to no overlap in the households, yet palisade lines A, B, C D, E and F all intersect or overlap the posthole alignments and features of some domestic structures (Moore 2002).

Dickens (1976) carefully details eleven of the Warren Wilson structures' size, shape, posthole patterns, and associated features, noting that Houses A, B, D, and E were rebuilt or repaired in their same general location and orientation. Although not commented on by Dickens, his measurements show that Houses A, B and E were completely rebuilt at least once, and the earlier house area is always larger in size indicating the domestic structures actually decrease in size and footprint over time. House C also experienced significant posthole repair and replacement but did not contract or expand in size over time. Unlike Houses A, B and E which are rectangular in floor plan, House C is square (see Dickens 1976: 34-44). At the time of publication, Dickens also had the entire posthole patterns for Houses G and F also available to him, as well as partial exposure of Houses J, I, H and K. He notes that these other household patterns have limited details in terms of dimensions or structural details because of the confusion of overlapping posthole patterns with palisade lines or the incomplete nature of partial exposure (Dickens 1976:43).

In Ward's 1986 paper on "Intrasite Spatial Patterns at Warren Wilson", he was able to expand on some of Dickens' conclusions given the twelve years of excavations between their publications. Ward had fourteen fully or partially exposed domestic structures to analyze (Moore 1986b; Ward 1986). He notes that entry trenches are present in seven of the fourteen structures and that all fourteen structures have central roof supports. Additionally, he

hypothesizes that there are two distinct configurations of house patterns: houses with “straighter walls, entry trenches, sharper corners, and overall are more distinct” versus houses that “are more rounded, sometimes exhibit only vague wall outlines, lack entry trenches, and overall are more ephemeral” (Ward 1986:15). Ward was able to use the benefit of the expanded excavations at Warren Wilson and the added horizontal exposure over House I, J, and K, plus newly uncovered posthole patterns for House L, M, and N, to interpret these two household configurations are contemporaneous house forms and not a result of temporal differences as the site was enlarged outward (Ward 1986). Based on the seasonal house pattern noted for Historic Period Cherokee communities, Ward goes on to conclude that the “sturdier” structures were winter houses and the more “flimsy” ones the summer houses (Ward 1986). Based on Ward’s classification, the winter houses that contain entrance trenches, sharp corners, and straighter (unbowed) walls include Houses A<sub>1</sub>, A<sub>2</sub>, B<sub>2</sub>, C, I, J, K, and M. The summer houses at Warren Wilson are constructed without entryway trenches, have rounded corners, and contain walls that bow or curve slightly outward: Houses D, E, F, G, H, L and N. Based on Dickens’ maps and house descriptions, plus Ward’s maps, Table 6.1 compiles all the known domestic structures at the Warren Wilson site and their dimensions, general shape, corner angle, presence or absence of entryways, orientation (based on entryway trenches), episodes of rebuilding, trench length, and interior posthole density (if known). Recent AMS radiocarbon dates associated with household structures at Warren Wilson also bolster Ward’s interpretation that these two household structure forms are contemporaneous in use. House A (a winter house) dates to cal AD 1299 – 1404 and House E (a summer house) dates to cal AD 1309 – 1406.

Moore’s (2002) follow-up work at the Warren Wilson site focused on the spatial evolution of the Warren Wilson site, exploring whether overall site contraction, segregation, or

expansion could be explained by the known palisade lines' orientation and alignment to houses. Moore's work was able to incorporate three more uncovered household patterns: House O and House P along the southern edge of the central plaza, and House Q along the northern edge of the plaza. Although these published maps and descriptions of the Warren Wilson site did not include posthole patterns or the presence absence of entry trenches (see Figure 4.25), the dimensions of the structures was estimated in Table 6.1.

Dickens (1976: 75, 77) details the dimensions and features of the two non-domestic structures on the upper level (Floor 2) of Mound 1 at the Garden Creek site, providing a map (see Figure 4.26), dimensions, and posthole diameter estimates. However, he dedicated space to only a brief description of the two off-mound domestic structures and one house floor uncovered east of Mound 1, without any accompanying maps (Dickens 1976:88). Therefore, the information on the Garden Creek domestic and non-domestic structures included in Table 6.1 is limited to their dimensions, general shape, presence/absence of entryways and estimated orientation.

Excavations at Cane River from 1989-90 uncovered one complete posthole pattern for a domestic structure, and subsequent excavations in 2013-4 revealed the partial remains of four more structures' postholes, central hearth features, and accompanying storage pits. Due to the nature of the recent excavations and the lack of broader horizontal exposure, the structure data included in Table 6.1 for the Cane River site are limited to Structure 1 (uncovered in 1989-90) and the rebuilt entryway trench data for Structure 3 (found in Area F).



Table 6.1 Late Pisgah domestic structures at Warren Wilson, Cane River, and Garden Creek

Site/ Structure	Type	Shape	Size (in feet)	Entrance Trench Present	Orientation (degrees from N/0)	Trench Length (ft)
Warren Wilson H-A <sub>1</sub>	Winter	Rectangular	20 x 24	Y	200	3
Warren Wilson H-A <sub>2</sub>	Winter	Rectangular	20 x 20	Y	100	2.5
Warren Wilson H-B <sub>1</sub>		Square	24.5 x 24.5	N		
Warren Wilson H-B <sub>2</sub>	Winter	Square	18 x 18	Y	180	2.5
Warren Wilson H-C	Winter	Square	22 x 22	Y	180	4
Warren Wilson H-D	Summer	Rectangular	18 x 25	N		
Warren Wilson H-E <sub>1</sub>	Summer	Rectangular	20 x 17	N		
Warren Wilson H-E <sub>2</sub>	Summer	Square	18 x 18	N		
Warren Wilson H-F	Summer	Square	18 x 18	N		
Warren Wilson H-G	Summer	Square	15 x 15	N		
Warren Wilson H-H	Summer	Rectangular	20 x 18	N		
Warren Wilson H-I	Winter	Rectangular	20 x 17	Y	40	3
Warren Wilson H-J	Winter	Square	19 x 19	Y	130	2.5
Warren Wilson H-K	Winter	Rectangular	18 x ?	Y	200	5
Warren Wilson H-L	Summer	Square	20 x 20	N		
Warren Wilson H-M	Winter	Square	22 x 22	Y (2)	40 130	3 2
Warren Wilson H-N	Summer	Rectangular	18 x 25	N		
Warren Wilson H-O		Square	25 x 25			
Warren Wilson H-P		Square	20 x 20			
Warren Wilson H-Q		Square	20 x 20			
Garden Creek Off Md Structure 1	Winter	Square	20 x 20	Y	180	
Garden Creek Off Md Structure 2	Winter	Square	20 x 20	Y	0	
Garden Creek Off Md House Floor	Winter	Rectangular	18 x 20			
Cane River Structure 1 (1989-90)	Summer	Rectangular	13 x 25	N		
Cane River Structure 3 Area F	Winter			Y	100	3.6

## 6.4 Discussion of Late Pisgah Domestic Architecture

Looking at the domestic structures for Warren Wilson, Garden Creek, and Cane River, there are similar elements of household architecture at all three sites that signify a similar pattern of greater household autonomy in the Late Mississippian period, as similarly noted by broader regional data for other Late Mississippian communities (Steere 2017). In the Southeast, recent studies of household architecture in Mississippian communities have broadened our understanding of their composition and social organization. Household clusters of two or three square, domestic structures, along with a rectangular storage facility, arranged around small, open work areas were identified at the King Site (Hally 2008; Hally and Kelly 1998). Combined with the ethnohistoric record, Hally and Kelly (1998) surmise that these household clusters were used by matrilineal and matrilocal extended families, with each square structure being occupied by nuclear families. At the Warren Wilson site, we can also surmise that corporate matrilineal descent groups likely formed the economic core of Late Pisgah societies given the presence of similar Mississippian household clusters, as have been identified at other Late Mississippian sites. Steere (2017) has argued, using broad spatial and temporal trends in household architecture in the Southern Appalachians, that social organization and economic factors will affect the size, shape and interior layout of houses and their spatial arrangement in communities.

A broad trend towards increasing in household size is seen from the Early Mississippian to Middle Mississippian to Late Mississippian period (Steere 2017). The median size of domestic structures in the Late Mississippian period is 41 m<sup>2</sup> or 400-450 ft<sup>2</sup> (Steere 2017:95). For the twenty-three Late Pisgah domestic structures that have length and width measurements, the medium size is 36 m<sup>2</sup> or 400 ft<sup>2</sup>, aligning with the broader regional trends of other Late

Mississippian architectural construction in the Southern Appalachians. Along with this rise in size, we also see a transition from more open floor plans to divided floor plans. Steere notes that interior partitions become even more common in domestic structures during the Late Mississippian period, with forty-one percent of the Late Mississippian domestic structures having between one and seven interior walls (2017:103).

Another broad trend in architectural change over time is the increased investment in domestic structures, which reaches a peak during the Late Mississippian period. Compared to the Early Mississippian period, house walls in the Late Mississippian are constructed of more distantly spaced, and larger, single set posts (Steere 2017: 106). Additionally, there is an increase in frequency of in-place rebuilding that dovetails with this greater labor investment in domestic structures. Early Mississippian domestic structures in Southern Appalachian villages most often have a single building stage, but in the Late Mississippian period domestic structures were often rebuilt in place (Steere 2017: 127). Four structures at the Warren Wilson site (House A, B, C, and E) show evidence for either complete rebuilding (A, B and E) or individual post repair (C) at least once, in the same approximate location and orientation (Dickens 1976). Cane River's two structures show evidence for being rebuilt in the same place and orientation at least once: Structure 3 (pair of entrance trenches rebuilt) and Structure 4 (hearth rebuilt).

Archaeological estimates of use-life indicate houses in the Eastern Woodlands, which were typically constructed of oak, hickory, pine, cedar and locust, would last approximately 10 – 20 years before needing to be repaired or rebuilt (Hally 2008; Warrick 1988; Wilson 2008:79-80).

Steere notes that “the winter houses of the Southern Appalachians represent the greatest labor and material investment of any domestic structure type recorded in this study” (2017: 106). Winter houses are considered more architecturally complex and labor-intensive than their

predecessors or contemporaneous summer houses due to the four large interior support posts, and the number and quality of the interior features: deep house basins, prepared clay hearths, daubed interior partitions, earth-embanked sides and entryway tunnels. Summer houses may include some interior furniture elements such as benches, but in general the interior space is less complex in how space is subdivided and delineated, compared to winter houses. Comparing the published map of a winter house (House M) at the Warren Wilson site (Figure 6.1, provided in Ward 1986:16) with a summer house (House H) at the Warren Wilson site (Figure 6.2, provided in Ward 1986:17), Ward's speculation that the "ephemeral type" used in summer and the more "distinct type" was used in winter can be quantified by comparing the number of exterior and interior post holes as a proxy for the level of investment in structure type and complexity of interior spaces. House M (winter) has ninety exterior posts and fifty-eight interior posts, while House H (summer) has fifty-one exterior posts and twenty-five interior posts, despite being the larger structure. Considering how winter houses at Cane River, Garden Creek, and Warren Wilson have evidence for many of these more complex and labor-intensive architectural traits (multiple rooms created with interior partitions, entryway tunnels, and rebuilding episodes), it indicates the economically driven changes in household organization seen at other sites during the Mississippian period were occurring among these communities as well.

However, one puzzling trend among the three houses rebuilt at the Warren Wilson site does warrant additional thought. House A decreases in size when it is rebuilt in the same location, going from a rectangular winter house structure 20 x 24 ft (480 ft<sup>2</sup>) to a rectangular structure 20 x 22 ft (440 ft<sup>2</sup>). The entrance trenches are also reconstructed, and moved in their orientation, going from 3ft long to 2.5 ft and shifting from opening towards the southwest to opening towards the east. House B decreases from a square house structure 24.5 x 24.5 ft (600

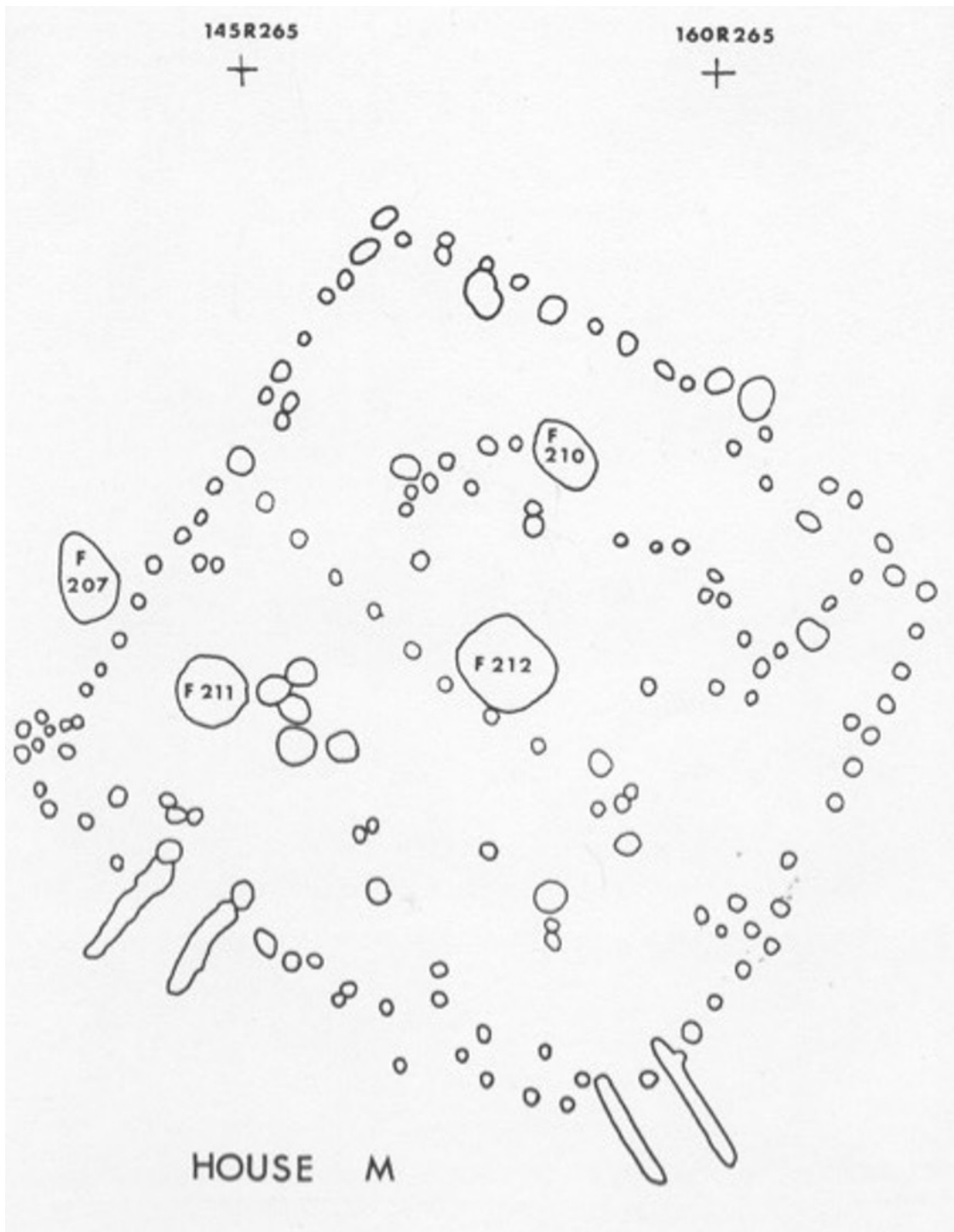


Figure 6.1 Example of Winter House Pattern (House M) at the Warren Wilson site (map from Ward 1986)

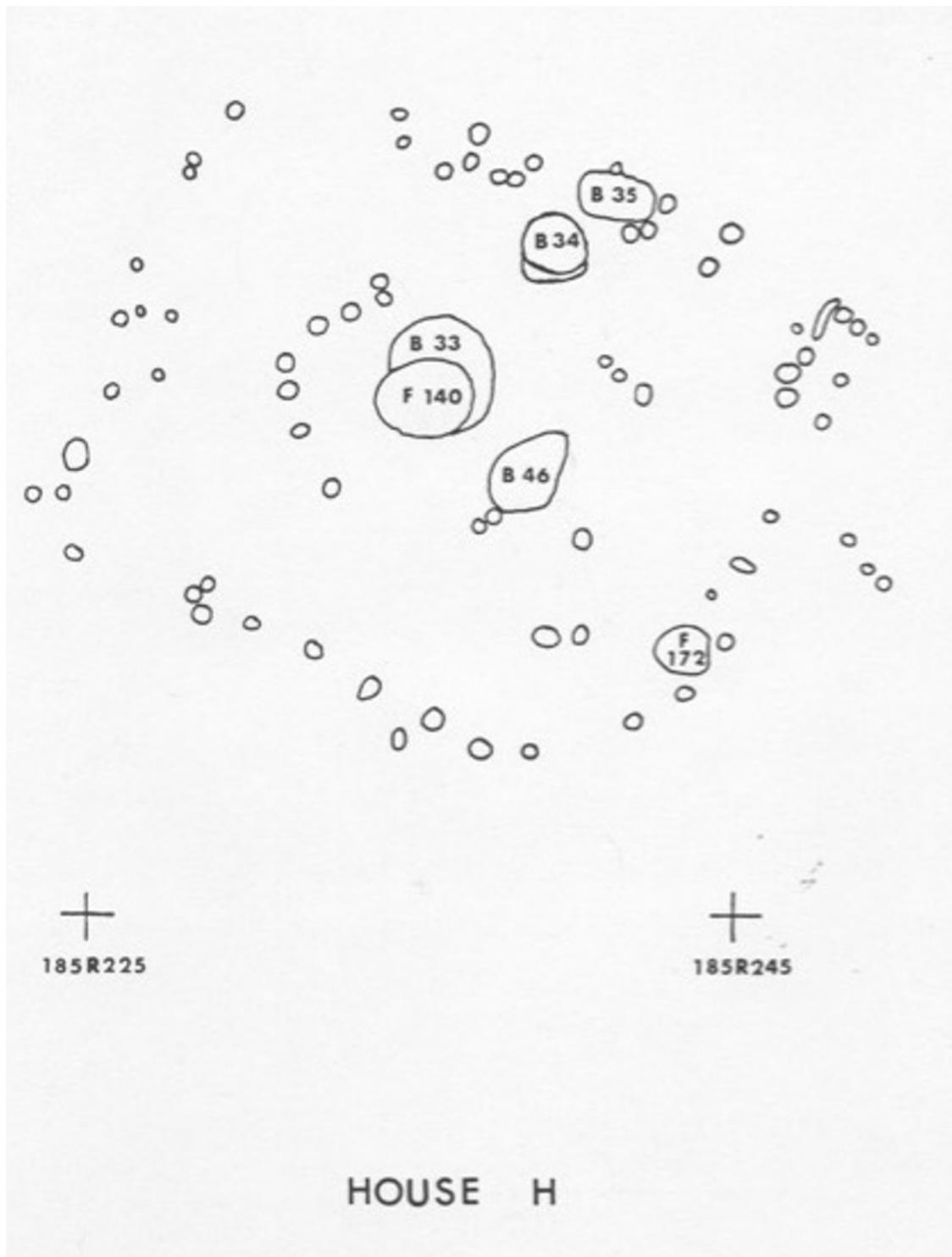


Figure 6.2 Example of summer house pattern (House H) at the Warren Wilson site (map from Ward 1986)

ft<sup>2</sup>) to a square winter house structure 18 x 18 ft (324 ft<sup>2</sup>). House B<sub>1</sub> also did not contain any entryway trenches so it may have originally functioned as a summer house before being rebuilt with some of the more robust and intensive features, such as increased interior partitioning and entryway trenches seen in House B<sub>2</sub>. Due to the intersecting palisade lines and being rebuilt in place, it is possible that the earlier form of House B was more like a winter house but interior posthole patterns were obscured along with earlier entryway trenches – yet the decrease in overall structure size is very clear. Finally, House E decreases from a rectangular summer house 20 x 17 ft (340 ft<sup>2</sup>) to a square summer house 18 x 18 ft (324 ft<sup>2</sup>). These changes in winter and summer house size over time at Warren Wilson may be due to changes in household composition and the domestic cycle over the span of 20+ years. As young couples marry and establish their new households, new structures within a matrilineal household cluster may need to be constructed adjacent to existing ones – creating the impetus for a decreased footprint in existing structures in order to combat crowding, and/or due to the decrease in kin living within a structure. Without knowing which structures were contemporaneous, considering the orientation of entryways on winter houses may help in identifying paired winter and summer houses within each household cluster and their associated shared open work areas and storage facilities.

Along with economic factors that often correlate to structure size and spacing, ritual beliefs and symbolism can also be strong forces in constraining a community's choices for domestic and nondomestic architectural design. Structure shape, alignment or orientation, and floor plans are often linked to religious beliefs and cosmology. While the tendency in the past may have been to treat nondomestic structures as the only realm for symbolic expression, ethnographic and archaeological studies show that ritual and domestic contexts are often not mutually exclusive. Southeastern archaeologists have already linked certain features of native

architecture to the religious and cosmological symbolism of Southeastern Indian groups, recorded during the historic period (Hally 2002, 2008; Sullivan 1995). Some of this possible religious and cosmological symbolism includes the separation of opposite categories, like summer/winter or male/female, the concept of the quartering of the earth, a below-world and above-world, the symbolic importance of the cardinal directions, and the symbolic importance of the numbers four and seven (see Hally 2002; Hudson 2009; Mooney 1902; Steere 2017). Case studies within archaeology and anthropology show a strong trend for houses to be divided into male and female spaces (Cunningham 1973; Gougeon 2002; Hanson 2003; Lyons 1989). This could be supported through distinct distributions of artifacts and debris associated with males and females (Gougeon 2002; Hill 1968; Longacre 1968), but is highly unlikely for sites such as Cane River or Warren Wilson, where plow scaring cut deep into the pre-existing house basins and obliterates any debris that could have remained on the house basin surface. We must rely on the features and postholes that intrude below the house floor surface to reconstruct household behavior.

Other elements of domestic architecture may have reinforced the same Mississippian cosmology and principles of social order as the non-domestic architecture. Gougeon (2007) states that Late Mississippian structures in northwestern Georgia shared an underlying architectural grammar, accounting for their similarity across the region. Hally (2002:108-9) sees the square, semi-subterranean winter houses as a symbolic expression of cosmological and mythological beliefs: the square floor plan may correspond to the shape of the earth, the four walls and four interior support posts correspond to the cardinal directions and sacred number four, and finally the seven posts in each wall correspond to the sacred number and the number of Cherokee clans.



Steere (2017) notes that changes in house orientation and alignment from the Early Mississippian period to the Late Mississippian period occur in tandem with major changes in community organization, which indicates different emphasis on mythological or cosmological principles between these two periods. During the Early Mississippian period, mound summit structures are often rebuilt, and show the elaboration and investment in architecture; however orientation of domestic houses is often to the north or east/southeast, adhering to an orderly, planned community layout. There are few episodes of domestic structure rebuilding, little interior partitioning, or subfloor burials (Steere 2017:123-127). The promotion of a shared community or communal ideology in Early Mississippian sites is reflected in the architecture, and by the emphasis in cosmological principles among non-domestic structures, with household identity being generally played down. In contrast, there is a greater degree of mortuary and architectural symbolism in Late Mississippian domestic structures within the Southern Appalachians.

By the Late Mississippian period, the layout of individual household clusters is formalized as is the spatial organization of the site as whole (Steere 2017:128). Many of these elements are reflected in the domestic architecture of Late Pisgah sites as well: a higher degree of architectural investment and rebuilding, patterns of interior segmentation, regular patterns of subfloor burials, and a clearer division of public and private space. All of this evidence suggests that household identity within Pisgah communities was emphasized in domestic architecture and may have reinforced the same Mississippian cosmologies and principles of social organization that are manifested at the community-wide level. At the Warren Wilson site, we can see that the entryways of winter houses are arranged to provide access to small open areas within household clusters, rather than uniformly facing the larger plaza or conforming to just two directions (see

Steere 2017:34 description of Early Mississippian domestic structure orientation). Comparing the orientation of all known entrance trenches within domestic structures at Warren Wilson, Garden Creek and Cane River (n=12) shows a much more diversified pattern, with five modes of orientation: north (360 degrees), south (180-200 degrees), southeast (130 degrees), east (100 degrees), and northeast (40 degrees) (Table 6.1). While this is a small sample size, at the King site orientation of primary domestic structures was an important clue in grouping buildings into household clusters (Hally 2008:269-330). This variation in entryway orientation shows a tendency to prioritize household orientation and household cluster social organization, over the previous Early Mississippian pattern which entailed having domestic houses conform to a site-wide plan.

Late Mississippian non-domestic structures, in contrast, tend to be strictly oriented toward the southeast (Steere 2017:129), and we see that reflected in some of the Pisgah non-domestic structures identified at the Garden Creek site. One set of entryway trenches for Structure B, on Floor 2 of Garden Creek's Mound 1, opens to the southeast (120 degrees). However, a second pair of entrance trenches opens to the northeast (30 degrees). The only other set of entrance trenches for non-domestic, ceremonial structures at Garden Creek is the outer entrance for the pair of sub-mound earth lodges, Earth Lodge 1 and Earth Lodge 2 (see Figure 4.29). Earth Lodge 1 was the smaller square subterranean structure, at 24 x 24 ft. The outer 3ft long entrance trenches to Earth Lodge 1 are described by Dickens (1970:208) as being located along the *west* wall of Earth Lodge 1, however the map of the earth lodges (Dickens 1970:206) shows the main entry to/from the earth lodges to be on the *east* wall of Earth Lodge 1. Dickens does describe an interior feature of Earth Lodge 1 as a clay platform, 4.5 x 11ft across, that is located within the southeast corner of Earth Lodge 1 (Dickens 1970:208). This clay platform is

clearly outlined on the map and located in front of the entrance trenches along the east wall, leading me to interpret that the original text description of the entryway trenches in Earth Lodge 1 was incorrect and Pisgah people would enter and leave the earth lodges via an entrance on the east side of the ceremonial structure. Additionally, they would enter the northern Earth Lodge 2 by way of Earth Lodge 1, via a connecting entryway tunnel oriented north/south and measuring 7ft in length. Earth Lodge 2's larger square size is noted by Dickens (1970), but no measurements are given so the map was used to estimate its size at 28 x 28 ft. The observed continuity in entryway orientation to the southeast or east direction is observed between the earlier Earth Lodge 1 and later Structure B atop Mound 1's Floor 2, indicating a stable and continuous architectural grammar for nondomestic structures.

Late Mississippian domestic structures in Southern Appalachians have a relatively similar architectural grammar that has been argued to correspond to shared symbolic associations: square floor plans that correspond to the shape of the earth (Gougeon 2007:137), four walls and four interior roof support posts that may correspond to the cardinal directions and sacred number four (Gougeon 2007; Gougeon 2002), and interior posts that demonstrate partitioning of interior spaces into as many as eight or nine small areas. Steere (2017:129) also argues that the division of space within the house, by the four interior posts and partitions radiating outward at ninety degrees, symbolically reference the quartering of the earth which is another underlying cosmological principle shared among Southeastern Indian groups (Hudson 1976). Thus it can be concluded that Pisgah people at Warren Wilson, Garden Creek and Cane River also had increased value and emphasis attached to individual households and household clusters, as reflected in their increased architectural investment, subfloor burials connecting kin within

households to lineages, orientation of individual structures towards household courtyards, and household patterning that reinforced a shared cosmological symbolism.

Some of these elements of house construction, such as the four central interior posts, can be argued to have both functional and symbolic meaning (having strong central supports is necessary for structural integrity), but when combined with the cross-cultural studies of houses and symbolism in the historic and ethnohistoric literature, along with the wide datasets available to us among many other Late Mississippian communities across the Southern Appalachians, it is clear that domestic structures were icons representing important cultural beliefs central to Pisgah mythology and cosmology, along with non-domestic structures. The incredible similarity of Pisgah houses with other Late Mississippian houses in the Southern Appalachians also indicates that these western North Carolina communities had a high degree of integration and exchange with other communities in eastern Tennessee and northern Georgia such as at the King site, the Toqua site, and the Little Egypt site (Gougeon 2002, 2006; Hally 2008; Hally and Kelly 1998; Polhemus 1987, 1998; Steere 2017).

### **6.5 Feature Analysis at Pisgah Sites**

In addition to the architectural and structural remains of domestic structures, non-domestic structures, and palisades, spatially contextualized features can be used to also infer activity attributed to domestic and community-wide activities. Earlier work at the Warren Wilson and Garden Creek sites have attempted to designate feature categories on excavated and recovered remains such as borrow pits, storage pits, midden deposits, hearths, house entrance trenches, burials, and individual segments of palisades (Dickens 1976; Keel 1976). Later artifact analysis may benefit from being done according to the feature categories, as well as looking at

site, structure or household-specific contexts, in order to better understand different formation processes.

## **6.6 Feature Analysis at the Cane River Site (2013-2014)**

After the 2013-2014 excavation season at the Cane River site (31Yc91), a feature designation was placed on the larger pits and the associated garbage fill. These feature designations included: borrow pits, storage pits, hearths, house entrance trenches, and burials. Burials were identified in the field once the plow zone was removed and the fill color and texture could be examined. Little midden or associated garbage material is deposited in burial pit fill, and the color is usually a much lighter mottling, with the immediate in-filling episode containing larger amounts of the yellow subsoil clay. Burials were not excavated and were actively avoided. Any features found to be abutting or near burials were only partially excavated, in order to avoid and mitigate the risk of disturbing any human remains. Feature classification followed Dickens' (1985) categories, using form, function, associations, and pit contents to understand the cycle of feature function, abandonment and infilling with refuse. Some features contained a dense mixture of refuse including pottery sherds, animal bone, wood charcoal, charred plant material, mollusk shell, heat-fractured rock, debitage from tool-making, and tools of clay, stone and bone.

## **6.7 Borrow Pits**

Dickens (1985:38) referred to this feature as “a pit with a relatively large (160 – 280cm) circular or oval orifice; is shallow (20-60 cm); has a basin-shaped profile; and has no lining or

other structural associations.” Later work by Ashcraft (1996) and Moore (2002) highlights that many of these borrow pits frequently are found associated with structures; typically borrow pits are alongside palisade lines at Pisgah sites, where clay was conveniently mined for wattle-and-daub construction and repair of buildings or structures. Over time, these pits would then slowly in-filled with refuse. This type of pit is rare to find on sites that predate sedentary village habitation in the Southeast and is frequently found in sites from the Late Woodland period up to the Historic period (Cobb and Faulkner 1978; Dunnell et al. 1971). Since these pits were dug for clay sources, and not for primary use as garbage receptacles, they would have likely started filling with refuse immediately after their excavation, but the shallow and open design would have made them susceptible to scattering by animals and mixing with surrounding surface material by erosion and/or human traffic. Therefore, the fill in these features tends to be less homogeneous and have more lensing and intrusions than storage pit fill. Dickens hypothesizes that borrow pit fill should exhibit seasonal patterning since clay being mined would be used for summer and early fall construction and repair, prior to the onset of cold weather (Dickens 1985). He found in a study of Historic period borrow pits that ethnobotanical profiles exhibit summer deposition (Dickens 1985).

### ***6.7.1 Area B Features***

Area B (see Figure 4.23) is a 5x3m excavation unit located on the western edge of the Cane River site and contained four features. The plow zone over Area B was approximately 30 – 35 cm deep. A line of palisade postholes was identified running north-south along the western edge of the unit, aligning with the palisade line from the 1989-90 excavations. The northwestern feature in Area B was immediately classified as a likely burial pit (Burial 1) based on the mottled

fill, which included a higher proportion of subsoil inclusions than the other three features that had a much darker, more homogenous fill. The surface of Burial 1 measured 100 cm by 70 cm and was an oval pit with a longer east-west axis. Feature 1 abutted Burial 1 to the east and intersected another pit feature, Feature 2. Feature 1 was only partially exposed by Area B, but it measures 130 cm across at the top and coring the center revealed it was approximately 45cm deep. The fill was relatively homogenous and appears to have been in-filled in one episode. Due to its close proximity to Burial 1, Feature 1 was left unexcavated but can be tentatively classified as a borrow pit based on its proximity to the palisade line, large orifice diameter consistent with other Pisgah borrow pits, and shallow depth. Feature 2 is located south of Feature 1, intersecting with its southeastern edge, and intersects with Feature 3.

Feature 2 was fully exposed by Area B. It is an oval pit measuring 80 x 137.5 cm. It was 68cm deep and four levels or infilling episodes exposed in profile (Figure 6.3). Feature 2 had sloping walls and was a shallow, basin-shaped profile typical of borrow pits. Feature 3 was partially exposed by Area B, but it is an oval pit measuring 172 cm wide along the east-west axis and at least 113cm north-south. The north half was excavated in Area B to show a shallow, basin-shaped pit profile 61cm deep. Feature 3 was filled in one level or one filling episode (Figure 6.4). Both Feature 2 and 3 are designated borrow pits and were infilled with refuse containing pottery sherds, animal bone, plant material, chipped stone remains, several ceramic pipe fragments, and fire-cracked rock. AMS radiocarbon dating of Feature 3 indicates this pit was in-filled at a later stage in Cane River's occupation, cal AD 1435 to 1487, when the palisade line was being built or repaired.



*Figure 6.3 Photograph of Feature 2 borrow pit profile, Area B, Cane River site (31Yc91)*





*Figure 6.4 Photograph of Feature 3 borrow pit profile, Area B, Cane River site (31Yc91)*

### **6.7.2 Area C Features**

Area C (see Figure 4.23) is a 3x3m excavation unit located on the western edge of the Cane River site and contained three features, along with several postholes that represent a segment of the palisade, possibly the second band that would run alongside those identified in Area B. The plow zone over Area C was shallower, approximately 28 – 29 cm deep. Feature 4 and Feature 6 are in the southern portion of Area C. Feature 4 was an earlier borrow pit that was disturbed/ dug into by Feature 6. Only the northern portion of Feature 4 was excavated but the top was 98 cm wide and the north-south axis was over 137 cm long. Feature 4 is a shallow borrow pit, 42 cm deep. The southern profile revealed Feature 4 was infilled in one episode (Figure 6.5). Feature 4 was noteworthy in that it contained a large quantity of animal bone. Feature 6 was also in the southern portion of Area C but was completely exposed in excavation. It is a circular borrow pit measuring 110 x 130 cm and 54 cm deep (Figure 6.6). Feature 6 was also filled in one episode and an AMS radiocarbon date for Feature 6 dates to cal AD 1292 to 1396. Given separation of approximately 150 years between the borrow pit dates for Feature 6 and Feature 3, it is likely that Feature 3 represents a repair or rebuilding of the palisade which was kept and maintained in the same orientation. Feature 5 is another borrow pit in Area C that was oriented to the north of Features 4 & 6. Feature 5 is 140 x 180 cm oval pit, 58 cm deep. Refuse accumulated in this borrow pit in one in-filling episode, and several postholes intruded into eastern edge of Feature 5 (Figure 6.7).



*Figure 6.5 Photograph of Feature 4 borrow pit profile, Area C, Cane River site (31Yc91)*



*Figure 6.6 Photograph of base of Feature 6 borrow pit, Area C, Cane River site (31Yc91)*



*Figure 6.7 Photograph of Feature 5 borrow pit profile, Area C, Cane River site (31Yc91)*

## 6.8 Storage Pits

The second feature type found frequently at Pisgah sites are storage pits. Dickens (1985:38) referred to this feature as “a pit with relatively small (60 – 140cm) circular orifice; is deep (60 – 130cm); has straight-sided or bell-shaped profile” and I would add frequently has close spatial associations with other domestic structure features and posthole patterns. Storage pits are found on sites from the Archaic through Historic periods in the Southeast (e.g. Dickens 1970, 1976; Cobb and Faulkner 1978; Wilson 1977) and are described in historic accounts as primarily for food storage (e.g. Bartram 1995; Swanton 1946). Dickens (1985:41) does note that these pits in the Southeast were probably used mostly for hard seed and nut storage, given the climate and moist environments would have necessitated above-ground storage for maize and other soft foodstuffs. Storage pits usually have dense and undifferentiated fill, representing short-term accumulation of refuse. Abandoned storage pits would have made desirable repositories for domestic refuse, given their small opening, large sub-ground volume and locations near dwellings, they would have been less likely to attract unwanted vermin or animals or be dispersed via human foot traffic. Dickens hypothesized that the probable time for storage pits to have been abandoned as receptacles for seed and nut storage would be fall or early winter, when storage pits would have been inspected for contamination before next year’s crop was ready for collection (Dickens 1985:42-3). Thus he does not believe these pits would have been filled occasionally at other seasons or year-round. His analysis of several storage pits from the Warren Wilson site supported this hypothesis, as the archaeobotanical profiles in the Pisgah storage pits were for late summer to early fall seasonality (Dickens 1985).

### **6.8.1 Area E**

Area E (see Figure 4.23) is a 2x2m excavation unit located in the central plaza of the Cane River site and contained two pit features. The plow zone over Area E was 30 cm deep. The northern feature in Area E was immediately classified as a likely burial pit (Burial 2) based on the mottled fill. The burial pit was only partially exposed by Area E but measured 90 cm by 60 cm and was an oval pit with a longer east-west axis. Feature 8 abutted Burial 2 to the north so only the south half was excavated. The east-west profile of Feature 8 (Figure 6.8) shows this pit is very deep, 83 cm, and 130 x150 wide at the top. The shape of this pit was clearly different from the borrow pits, having straight sides all the way to the base and then a very flat bottom. The interior of this storage pit had three levels of distinct fill, indicating a slow in-fill of material over time. The AMS radiocarbon date from Level 1 of Feature 8 was cal AD 250 to 381, placing the accumulation of refuse in this pit to the Middle Woodland period. This feature was different from the other feature fill in several notable ways: it contained a much higher proportion of mica sheet fragments and several projectile point styles that pre-date Pisgah occupation, including a Palmer point (Archaic Period).

Warren Wilson and Garden Creek both contain substantial evidence for prehistoric occupations and use during the Middle Woodland period. Based on the central location of this storage pit and its associated materials, it seems Cane River was also occupied, at least seasonally, during the Middle Woodland period. Further work in this plaza area of the site, a relatively “quiet” area on the geophysical survey results, may reveal further evidence for Middle Woodland activity and refuse materials.



*Figure 6.8 Photograph of Feature 8 storage pit profile, Area E, Cane River site (31Yc91)*



### **6.8.2 Area G**

Area G (see Figure 4.23) is a 5x2m excavation unit located on the eastern side of the Cane River site and contained four features, along with multiple postholes. The plow zone over Area G was significantly deeper than other areas of the site at 38 – 55 cm deep. This is likely due to the angle and slope of the site, which was much more pronounced on the eastern side. There was also the possible addition of fill brought into this area to make a recreational pad for a zipline course at the Cane River Middle School, which had since been removed but was found to obscure and compact the soil just to the north of Area G. Attempts were made to excavate another area, Area H, but the soil was too disturbed for any features to be identified. The western feature in Area G was immediately classified as a hearth, given the large amount of ash and burned remains visible at the base of the plow zone. On the eastern portion of Area G, three overlapping storage pit features were identified. Feature 12 was partially exposed by Area G, with the northern portion excavated down to 94 cm. Feature 12 was 130 cm east-west and 70cm was excavated along its north-south axis. Only one level of fill could be determined for Feature 12, but this very deep, straight sided pit feature contained an enormous amount of refuse. Feature 12 overlapped and intersected with Feature 14 to the north, another storage pit (Figure 6.9). Feature 14 measured 60 cm by 70 cm, although it was only partially exposed in Area G. It had steep sides and was the deepest pit excavated in this area, at 108 cm. Feature 13 abutted Feature 14 and was only mostly exposed in Area G, with only a small portion of the eastern edge of the feature unexcavated (Figure 6.10). Feature 13 measured 110 x 105 cm and was 80 cm at its deepest point. One AMS date was obtained from the fill of Feature 13, at cal AD 1412 to 1444, making the abandonment or disuse of these storage pits and infilling with debris relatively



*Figure 6.9 Photograph of North profile of Feature 12 and Feature 14 storage pits, Area G, Cane River site (31Yc91)*



*Figure 6.10 Photograph of East Profile of Feature 13 and Feature 14 storage pits, Area G, Cane River site (31Yc91)*

contemporaneous with the date for the associated hearth feature, indicating the infilling of these pits was after the domestic structure was abandoned.

## **6.9 Hearth Features**

Hearth features are described as “a pit or depression with a relatively small (40-100cm) circular orifice; is shallow (5-15cm); has a basin-shaped profile; may be lined with rocks or burnt clay” and could be associated with a structural floor while a cooking pit is “a pit with a medium to wide (100-200cm) orifice; relatively shallow (10-60cm); has a straight-sided or basin-shaped profile; and may have burnt areas and/or concentrations of fire-cracked rock (Dickens 1985:39). For my purposes, I don’t differentiate between hearths versus cooking pits for the Cane River site features.

Hearths and cooking pits fell into disuse at the time of abandonment of their associated domestic structures and therefore were left open and unprotected, making any fill susceptible to post-depositional mixing via erosion or foot traffic. Additionally, these were not of large size and were quite shallow, meaning any refuse accumulated will likely be incidental, variable in season, and small in volume. Dickens looked at two hearths at Warren Wilson to see what the seasonality indicated in the archaeobotanical profile (1985). He found one had a very homogenous, rapid fill with a late spring – early summer archaeobotanical profile. The other cooking pit had lensed fill and slower, sequential filling of refuse, with a cross-season mixing of plant remains indicating a slow filling.

### **6.9.1 Area G**

Also in Area G's 5x2 m unit was Feature 11 (see Figure 4.21). At the base of the plow zone, a pit feature with large quantities of ash and charcoal was exposed, along with some areas of burned clay, indicating a large central hearth basin. Feature 11 excavations quickly revealed that this was a rebuilt hearth, with the first hearth basin (11A) measuring 150 cm along the east-west axis and 60 cm north south. The earlier hearth basin was 68 cm deep. Feature 11B, shifted slightly south, was an oval hearth basin 150 x 100 cm and 57 cm deep. Four levels of fill were identified in profile (Figure 6.11), indicating a slow in-filling of material over time. A large quantity of fire-cracked rock, animal bone, plant material and charcoal were recovered from within these two hearth basins. Along the interior of Area G, running north-south between Feature 11's hearth and Feature 12-14 storage pits runs a line of eight postholes. Twenty-two other postholes were mapped on the western portion of the Area G, including a large 30-cm diameter posthole that was likely one of the structure's interior posts. A smaller line of postholes along the unit's western edge show the orientation of an inner partition. Level 1 of Feature 11 was dated to cal AD 1311 to 1425, dating the final or later stages of in-filling.



*Figure 6.11 Photograph of West profile of Feature 11A and 11B rebuilt hearths, Area G, Cane River site (31Yc91)*

### **6.9.2 Area D**

Area D (see Figure 4.23) is a 1x2m excavation unit located in the western portion of the Cane River site and contained one hearth feature. The plow zone over Area D was 33 cm deep. Feature 7 measures 190 cm wide along the east to west axis and was partially exposed by Area D. The north to south axis of the hearth feature exposed 175 cm of the hearth, which was a very shallow basin feature only 43 cm deep. The northern portion of Feature 7 was not exposed (outside the Area D unit) and a large portion of the western side of the feature was disturbed and destroyed by a deep plow scar. There was very little material in this shallow hearth feature, which had four very thin lenses of fill made up predominantly of ash and charcoal. A radiocarbon date ran from Level 1 dated the fill to cal AD 1404 to 1435. This is a similar and possibly contemporaneous episode of abandonment or disuse of a domestic structure in the western portion of the site as the structure in Area G, located on the eastern portion of the site.

### **6.10 Entrance Trenches**

Finally, entrance trenches are a feature class that are functionally postholes and wall trenches, formed from the use of upright posts in the construction of buildings and palisades. Dickens describes the postmold/wall trench as “a pit with a small (5-30cm) circular orifice; shallow to medium depth (10-120 cm); round to pointed bottom; straight sides; and may occur in an aligned pattern or within a narrow trench” (Dickens 1985:40). Postholes and wall trenches become repositories for refuse when the associated structure is abandoned or when repairs are being made to the structure, therefore it is possible for material to become trapped in posts or trenches while the structure is still in use. For most postholes and trenches, however, garbage should be from warmer months. This was the case for the portion of Palisade D’s wall trench,

which had seeds from mostly summer species, and supported the hypothesis that warmer months would be the time for rebuilding and repair of structures and the removal and infilling of older post holes.

Area F was a 1x2 m unit that was expanded to a 7m unit when a concentration of postholes and a rebuilt pair of entryway trenches were found (see Figure 4.14 and 4.15). The plowzone over Area F was 27-32 cm deep. These overlapping pairs of entrance trenches were rebuilt in almost the same place, in the same orientation, and were rebuilt in the size and form, with only a slight increase in width between the northern pair and the southern pair. Both sets of entrance trenches were filled with soil that contained large quantities of burned material. The northern-most pair of entrance trenches measure 110 x 17 cm and 138 x 16 cm and are respectively 63 and 65 cm deep. The southern-most pair of entrance trenches measure 110 x 20 cm and 125 x 20 cm and are respectively 57 and 64 cm deep. Each pair had a posthole at either end, as well as smaller postholes throughout the center. The larger end postholes to the west measured 24 cm in diameter and are uniform in diameter until the bottom, which was pointed and extended down to 85 cm. The smaller postholes at the base of the entryway trenches range in diameter from 7 -18 cm. Charcoal from the southernmost trench post was dated to cal AD 1317 to 1414.

### **6.11 Pisgah Pottery in the Appalachian Summit**

Pottery has long been one of the most important kinds of datasets for archaeologists to use when considering past behavior. Within Pisgah sites, it is arguably the most common artifact type and the easiest marker of Pisgah culture. William H. Holmes (1884), who was cataloguing Pisgah pottery found in a mound on the French Broad River, near Newport, Tennessee, first



described it as a “Mississippian” pottery style with rims that exhibit a number of “novel features” and the exterior surface as “embellished with a most elaborate ornamental design”. Patricia Holden (1966) was the first archaeologist to produce a typology for Pisgah ceramics, noting four different surface decorations in her catalog. Roy Dickens (1976), in turn was the first to perform a systematic, quantitative study of Pisgah pottery characteristics and variation, using collections from the Warren Wilson site and samples of pottery from survey collections in western North Carolina, northern Tennessee, northwestern South Carolina, and southwestern Virginia. David Moore (1981) continued this work by comparing Pisgah ceramics from four feature contexts, two from the Warren Wilson site and two from the Brunk site, to determine what stylistic variation existed and what amount of variation could be attributed to temporal changes. Despite all this work, there are many outstanding questions about what the stylistic variation in Pisgah surface and rim decoration indicates.

This dissertation is fundamentally about interaction and identity. Many scholars have attempted to extrapolate identity from ceramic assemblages. By considering the ceramic attributes of rim sherds from Garden Creek Mound 1 and the offsite village, along with those at Cane River, and combining those datasets with the recently acquired radiocarbon dates, I hope to begin exploring what the variation among Pisgah communities indicates about identity – and what similarities might indicate about affinity.

Beginning with Early Pisgah sites, from around ca. A.D. 1000, paddle-stamped, plain, and check-stamped exteriors began appearing along with an elaborate thickened collar. These rims often had associated decorations in the form of herringbone dashes or punctations that were dragged to create a teardrop or ovoid shape. The resemblance of these vessels to Iroquoian pottery, along with the linguistic connection, led several researchers to suggest a cultural

connection between the Cherokee and the Iroquois (Dickens 1979; Kelly and Neitzel 1961). Another scenario presented by Dickens was a Mississippian connection, whereby “collared pot rims and accompanying decorations were introduced into the southern Appalachians from the Midwest, perhaps along a broad frontier of expanding Mississippian culture” (1976:200). While this hypothesis seems unlikely given that Early Pisgah vessels, appearing around ca. A.D. 1000, also have the elaborate collared rims and paddle-stamped motifs, the in-situ evolution or development of pottery styles as an explanation for the Pisgah ceramic style has had little support or investigation. Further work on the Late Woodland and Early Pisgah ceramics and chronology would hopefully help clarify this transition.

Published work on Pisgah pottery is limited primarily to two sites: the village site of Warren Wilson and the small upland Brunk site. Work by Dickens (1976) and Moore (1981) discussed the possible diachronic shifts in ceramic attributes within the Pisgah phase, subdivided into Early (ca. A.D. 1000-1250) and Late (ca. A.D. 1250-1450). Dickens notes, for example, that “ceramic changes from Early to Late Pisgah are subtle. Rectilinear motifs are bolder, some curvilinear stamping is now present, and check stamping (usually bolder) continues as a strong minority finish” (1979:16). Later analysis by Dave Moore compared ceramics from two features at the Brunk site, an earlier upland single-house occupation, in contrast to the later lowland village occupation at Warren Wilson. This highlighted possible trends in temporal changes between Early and Late Pisgah, such as increased collar size, more narrow forms of Rectilinear Design A surface decoration, and increased inslanted rim orientation (Moore 1981). These either indicate shifts in passive ceramic construction or an intentional change suggesting broad social mechanisms. While this temporal shift is a valid hypothesis, it is also possible that these changes may be attributed to site or feature context, and the practices these vessels were associated with

at the household or village level. The small upland site at Brunk was radiocarbon dated to AD 1245, and recent dating of Warren Wilson puts the occupation between AD 1282 – 1412, meaning these trends are likely more representative of different site types or ongoing changes within the Late Pisgah period – and not necessarily differences between Early and Late Pisgah communities. Investigating these changes within the Late Pisgah period has the potential to clarify our understanding of Pisgah phase social dynamics within the regional settlement system or within a single site. By considering the ceramics, and in particular the rims, from the Cane River site and the mound at Garden Creek, we can further define the variation within the Late Pisgah period.

### **6.12 Ceramic Analysis Methodology and the Warren Wilson Site**

Previous studies of Pisgah ceramics have used a typological framework for the cultural period, identifying potentially temporally sensitive attribute patterns of Pisgah ceramics within Early and Late Pisgah phase divisions (Dickens 1976; Moore 1981). Horizontal and spatial variability across sites within the same Pisgah occupation has received some attention, though dating such variation has not been a major focus of the published literature. For my analysis, all sherds were coded according to vessel portion, thickness, and diameter; technological attributes related to production such as temper material, size, sorting, and presence/absence of mica, as well as stylistic attributes such as external and internal surface treatment, presence/absence of use-wear and sherd color. All rims were coded for profile, rim form, lip form, decoration, thickness, and vessel diameter. To gain a better understanding of the variation among collared rims, I also measured the depth of each collar and the number of rows of decoration, if present. I

also noted the shape, orientation, and average length and width for the punctations or incised markings.

The data reported by Dickens (1970) from the Warren Wilson site excavations included every recovered sherd, while Moore's reported data (1981) only included sherds larger than 1" for analysis. This can provide quite a difference in identification of exterior surface decoration and the variety of rectilinear complicated stamped designs (Moore 1981:49). It is very possible that the abundance of Rectilinear Design A in Dickens' sample was inflated compared to Rectilinear Design B because of the small size of some sherds. For my sampling strategy at Garden Creek and Cane River, only ceramics larger than 25mm were analyzed, thus aligning my methods with Moore's procedure. Another potential issue when comparing data samples is the variety of identified exterior surface treatment types. Dickens only identified eight categories of exterior surface treatment, in addition to "unidentifiable", while Moore separated out his decorative types into nineteen categories. Therefore, many of the broader comparisons between site assemblages will involve collapsing the stylistic categories from Moore's work and my own to facilitate comparison with the larger Warren Wilson ceramic dataset collected by Dickens.

Dickens was the first to provide detailed and comprehensive descriptions of the Warren Wilson site Pisgah ceramics, sampling 30,144 sherds from excavations across plowzone, feature, and burial contexts (Dickens 1976:172). For comparisons to new data collected from other Pisgah sites, I used Dickens' ceramic analysis of 2,204 sherds from 24 features at Warren Wilson. Moore's subsequent analysis (1981) sampled 2,850 sherds from two features at Warren Wilson. After combining the results of these two samples from Warren Wilson (n= 8,034) across 26 different feature contexts, the exterior surface treatment show 55.9% are rectilinear complicated stamped, 0.9% are curvilinear comp stamped, 6.9% are check stamped, 1.7% are

plain, 1.2% other and 33.4% unidentifiable (Table 6.2). For the complicated stamped that could be assigned a specific variety in the two features analyzed by Moore (1981:46), 21.4% were the broad form of Rectilinear Complicated Design A, 1.2% were the narrow form of Rectilinear Complicated Design A, with 29.8% of the first variety of Rectilinear Complicated Design B making up the largest proportion, 3.2% of the third variety, and 4.2% were Rectilinear Complicated Design C.

Rim form at Warren Wilson was predominantly everted (80%) with some straight (15%) and inslanted (5%). Dickens noted that the everted rims usually had the classic Pisgah collar feature. Collars on the rims were constructed by adding a strip of clay around the top of the vessel rim. The collars are generalized by Dickens as being “approximately the same thickness as the rest of the vessel and 7-40 mm high” with taller collars being found on larger vessels (1976:181). Dickens does not describe or quantify the variety of decoration found on these thickened or collared rims. Pisgah pottery generally comes in two forms: jars or bowls (see Dickens 1976:182). There are oftentimes appendages on the collared rims of Pisgah vessels, including appliqued strips in a “U” or “V” fashion, vertical lugs, nodes, and small castellations. Notched, incised or punctated loop handles are also common on some thickened rims.

### **6.13 Ceramic Patterns at the Cane River Site**

In total, when comparing body surface treatment across recently analyzed Cane River sherds from 35 sampled feature contexts (n = 4,683), 43.7% were rectilinear complicated stamped, 0.1% were curvilinear complicated stamped, 0.6% were check stamped, 20.9% were plain, 7% unidentified, and 27.6% “other (Table 6.2). Of the rectilinear complicated stamped

Table 6.2 Exterior ceramic surface treatment percentages across Warren Wilson, Garden Creek, and Cane River contexts

Exterior Surface Treatment	Warren Wilson (n = 8034)	Cane River Feature Contexts (n=4683)	Garden Creek Feature Contexts (n=778)	Garden Creek Mound Contexts (n=280)
Rectilinear Complicated Stamped **	55.9	43.7	16.3	16.7
A Narrow	1.2	10.3	12.9	14.2
A Broad	21.4	25.3	29.5	18.4
B 1	29.8	0.9	4	16.3
B 2	0.7	1.5	1.4	8.2
B 3	3.2	1.1	4	6.1
C 1	4.2	0.8	5.4	6.1
C 2	0.25	10.3	-	-
Curvilinear Complicated Stamped **	0.9	0.1	2.6	0.7
A	0.7		2.4	-
B	0.5		2.7	-
Check Stamped	6.9	0.6	0.8	1
Plain	1.7	20.9	31.6	37.4
Unidentified	33.4	7	33.5	6.4
Other	1.2	27.6	15.2	37.7
<p>**For Warren Wilson Feature Contexts complicated stamped varieties (rectilinear or curvilinear), based on Moore 1981 (n=812)</p> <p>**For Garden Creek Mound contexts, complicated stamped varieties do not include curvilinear; none could be specified (n=49)</p> <p>** For Garden Creek Feature contexts, complicated stamped varieties (n=147)</p> <p>** For Cane River Feature Contexts, complicated stamped varieties (n=2041)</p>				

that could be identified by variety, the broad form of Rectilinear Complicated Design A was the most common, with the narrow form being the second most common. Rectilinear Complicated stamped C was rare, while the B varieties were equally represented (first, second, and third varieties) around 1% each.

When looking at the 459 rim sherds analyzed from Cane River, along with large rim fragments from 18 partially reconstructed vessels, the Cane River rim assemblage had a majority of everted rim profiles (66.9%) with a strong minority that were straight (26%) and a very small portion that were inverted (6.7%). The majority of the rim forms were Pisgah collared rims (56%) and also unmodified/plain (37%), with a minority having a thickened lip (4%) and only a dozen rims containing an applied strip (3%). About half of the Cane River rims had a flattened lip form (55.1%) and the other half rounded (41.7%) with beveled (2.3%) or notched (0.2%) being very rare. The few rims that did have appendages tended to have either luges (6.3%) or nodes (6%) with a very small number of castellations (1%) present in the assemblage. The rim decoration was mostly punctated (51.4%), which is found to be positively correlated to the collared rim form. There were quite a few unmodified/smooth rims (20.5%), some of which had incising (12.2%), and a very small number of those were brushed (0.6%), cord-marked (0.2%), and notched (0.4%).

#### **6.14 Ceramic Patterns at the Garden Creek Site**

Mound 1 at Garden Creek served as a ceremonial substructure and began at ground level with two paired earth lodges, then subsequent mound-building episodes produced two more floor surfaces that were the base for later ceremonial buildings and a summit-top log palisade. Rim sherds were analyzed from both Earth Lodge 1 & Earth Lodge 2 (n=64) and from Floor 1

(n=199) and Floor 2 (n=17) of the mound. One previous radiocarbon date from an adjacent feature, assumed to be a borrow pit for clay fill utilized in building either Floor 1 or Floor 2, yielded a date of A.D. 1435 +/- 70 years (Dickens 1970:78). However the new radiocarbon dates obtained from mound and sub-mound contexts indicate that Mound 1 was constructed earlier, between 1290 and 1414 CE, placing the earlier fortified village occupation in the 12<sup>th</sup> or 13<sup>th</sup> centuries and the subsequent Late Pisgah occupation and mound in the 14<sup>th</sup> and 15<sup>th</sup> centuries. Across a hundred different feature contexts both within and off the mound, 1,026 rim sherds were analyzed, along with large rim fragments from 42 reconstructed vessels.

In total, when comparing body surface treatment across all recently analyzed Garden Creek rim sherds from just the Mound 1 contexts (n=280), 16.7% are rectilinear complicated stamped, 0.7% are curvilinear complicated stamped, 1% are check stamped, 37.4% are plain, 37.7% are other and 6.4% are unidentifiable (Table 6.2). Condensing both Floor 1 and 2 ceramic assemblages and comparing them to the earlier Earth Lodge 1 and 2 ceramic assemblages demonstrates that the earlier levels of ceremonial architecture (i.e., the earth lodges) have different ratios of Rectilinear Complicated stamped designs compared to the later Floor levels, with Rectilinear Complicated Design A being more prevalent. The Floor assemblages from the mound had a few Curvilinear Complicated Designs and a higher ratio of Rectilinear Design B to Design A.

When considering the mound contexts again as a whole, within the Rectilinear Complicated Stamped designs that could be identified by variety, the broad form of Rectilinear Complicated Design A was the most common (at~18%) with the first variety of Rectilinear Complicated B (~16%) and narrow form of Rectilinear Complicated Design A (~14%) also very well represented. Given that the ratios of Design B to Design A switch between earlier and later



mound contexts, with the narrow and broad forms of Design A being approximately equal in representation – this three-way split in Rectilinear Complicated Designs across all mound levels is to be expected. In total, comparing exterior body surface treatment across all sampled Garden Creek rims from 91 feature contexts (n=778), 16.3% are Rectilinear Complicated stamped designs, 2.6% are Curvilinear Complicated stamped, 0.8% are check stamped, 31.6% are plain, with 15.2% as “other” and 33.5% as unidentifiable (Table 6.2). Within both feature and mound contexts, “other” surface decorations included incised surface motifs such as those on cazuela bowls, cord-marked surfaces (which made up 20% of the surface treatments sampled from the mound contexts), net-impressed, burnished and indeterminate stamped exteriors. This accounts for some of the observed patterns in exterior surface treatment and the large proportion of “other” types at Garden Creek. Within the complicated stamped category that could be identified by variety within the non-mound feature assemblages, the broad form of Rectilinear Complicated Design A was by far the most prevalent type (~29%). The narrow form of Rectilinear Complicated Design A was the second most common (~13%) followed by the Rectilinear Complicated Design B and C varieties.

When looking at just the rim attributes of the Garden Creek assemblage (n=1,026), the majority had a rim profile that was everted (74.7%) with a minority that were straight (12.1%) and inverted (13.2%). The majority of the rim forms were unmodified/plain (58.3%) with a substantial portion that were also collared (29.2%). A small number had thickened lips (6.4%) or applique strips below the lip (4.8%) and a very small number had both a collar and an applied strip (0.4%). About half of the Garden Creek rims had a flattened lip form (45%) and the other half were rounded (49.3%) with beveled (1.8%) or notched (3.1%) forms being very rare. Most rims did not have appendages but there were some luges (3.4%) and nodes (1.1%), and a few had

both luges and castellations (1.1%). The greatest variability in the rim attributes was in the decoration type. The most common type of rim decoration was punctated (36.6%), which often included the classic herringbone style of collar decoration found on Pisgah rims. There were quite a few unmodified/smooth rims (27%), some that had paddle-stamping that extended up to the rim edge (14%), and a minority that were incised (8.7%), cord-marked (4%), or notched (3.9%).

### **6.15 Intra-site Results: Variation Between Pisgah Sites**

When considering all three studied assemblages together (from Warren Wilson, Garden Creek, and Cane River), aspects of technological production do not show many differences. However, when observing characteristics of the temper, I did note whether mica was present in the paste for each sherd at Garden Creek and Cane River. Unfortunately, this attribute was not noted for the Warren Wilson ceramic assemblage, and it is unclear if there is sufficient inclusion or patterning in construction to warrant further study. There is a slightly higher amount of mica temper in Garden Creek's ceramic feature samples (48.7%) and Cane River's ceramic feature contexts (30.9%) than in the ceramic sample from mound contexts at Garden Creek, which has mica recorded in the temper for only 24% of the assemblage. It is interesting to note that the Garden Creek and Cane River feature contexts also tend to have thicker vessel walls on average (by 1mm, comparing averages to mound contexts). Therefore, the difference in proportions of mica temper utilized might be a functional aspect of production for larger, thicker vessels disposed of more often in off-mound areas, rather than differences in clay sourcing. This correlation is weak, however, given the smaller sample sizes at Garden Creek and Cane River, as

well as the fact that mica presence in temper was not considered within any Warren Wilson ceramic datasets.

Variation in internal surface treatment is noticeable within the Cane River feature assemblage, which has the majority of vessel interiors burnished (78%), although this was also the common practice at Warren Wilson. Moore noted that in his sample from features at Warren Wilson, 45% had smoothed interiors and 55% were burnished (1981: 52). Cane River also had 37% of the interiors smoothed and 15% that were rough. How this may correlate to exterior surface treatment has yet to be considered, but it is worth noting that burnishing at Warren Wilson was noted to be especially common on shallow bowls (Moore 1981: 52). At Garden Creek the mound contexts had more smoothed interior surfaces (38.9%) and rough interior surfaces (42.5%) than burnished, while the feature assemblage was pre-dominantly smoothed (44.7%) and burnished (367.4%) interiors.

Overall differences between exterior surface treatment in these assemblages, broken down into the mound and off-mound assemblages at Garden Creek, the feature contexts at Warren Wilson, and the feature contexts at Cane River, show the dominant form of body surface decoration at Warren Wilson and Cane River is rectilinear complicated stamping. While this is also present at Garden Creek, the plain and “other” designs make up larger percentages than the complicated stamped designs. This may be due to the fact that no body sherds were included in the sample from Garden Creek – I limited my analysis to rim sherds, which allowed me to get a large data set on rim attributes as well as exterior surface treatments. However, sherds were often broken at the shoulder below the rim, making “indeterminant stamping” one of the commonly assigned decorative treatments. I collapsed/condensed “indeterminate stamping” into the “other” category for this inter-community comparisons, and it is highly probable that

“indeterminate stamping” encompasses both complicated stamped varieties, as well as simple stamped surface treatment.

When considering the identified varieties of rectilinear complicated stamped and curvilinear complicated stamped designs, the Garden Creek Mound contexts had by far more diverse representation in comparison with the Garden Creek and Cane River Feature contexts that had Rectilinear Complicated Design A varieties being the clearly preferred surface treatment. Earlier assemblages in the mound (those associated with Earth Lodge 1 and 2) had Rectilinear Design A as the predominant variety, while later contexts (Floors 1 and 2) indicated a preference for Rectilinear Design B. Recent radiocarbon dates for Earth Lodge 1 and Earth Lodge 2 place the construction between ca. AD 1285 to 1390, while a radiocarbon date from the posthole fill located *over* Floor 2 dates to cal AD 1317 to 1414. This is still a very tight and fast mound-building sequence in comparison to previous hypotheses, indicating that this shift in surface treatment preference likely reflects social factors and choices, not temporal trends in ceramic production over time.

A large portion of the Garden Creek rims have the distinctive collar form (n=300, 29.2%) and linear punctations that form a herringbone design. Combined with the collar data from Cane River, I observed that there is a positive correlation (correlation coefficient 0.5) between collared rim forms and punctated rim decoration across both sites. There is also a very strong negative correlation between collared rims and unmodified rim decoration, which is to be expected. If a potter goes to the effort of making a collar on a vessel, it's very unlikely that they would then decide to leave it blank; the collar is essentially produced as a space that requires decoration. The size of the collars ranged across both sites from 9mm to 40mm deep, but the average size at Garden Creek was larger (m = 23.42mm) than at Cane River (m = 19.98). This also means that

there was more surface area to decorate, and individual potters were taking advantage of that added space because there were on average more decorative rows on the collars at Garden Creek ( $m = 2.51$ ), than at Cane River ( $m=2.38$ ).

Considering these patterns in collar form it seems unlikely that the fluctuations in collar size that Moore initially identified with the Brunk site and Warren Wilson site rims is simply due to diachronic shifts in style (1981). By looking at the Pisgah communities at Cane River and Garden Creek, which are contemporaneous occupations, it seems that these groups were likely using rim stylistic decoration to signal different intentions regarding Pisgah identity and Mississippian affinity. At Garden Creek, there is evidence of mound construction, foodways, and ceremonial architecture for increased interaction with Mississippian groups to the south and west, as well as adoption of Mississippian lifeways. However there is also the possibility that the distinctive Pisgah vessels were being modified to demonstrate and meld traditional Appalachian ceramic production practices with a slightly more flourished and embellished rim form or decoration. At Cane River, they were using embellished rims for extra means of decoration beyond the paddle-stamped exterior surface, but the depth and variety of decoration on these rims is less variable than at Garden Creek.

By taking a very detailed attribute analysis approach to looking at surface treatment and rims – even more specifically the collar attributes – my goal was to narrow down which elements of Pisgah style were signaling different social affiliations during this period of Mississippian interaction within the Appalachian Summit and streamline future analysis of Pisgah rims within other assemblages. Combined with other lines of evidence such as the built environment, foodways, and domestic architecture, it is clear that Late Pisgah communities were independently reacting to Mississippian interaction and adopting different strategies of

integration. However, the variation among rim treatments is subtle. Overall, the dominant rim form (excepting unmodified/plain) is collared. And on that, the majority of the decoration is overwhelmingly punctated. This has the potential to influence how we interpret ceramic traditions outside the central Appalachian Summit, where Pisgah styles are found among neighboring Late Mississippian communities. It has been suggested that the similarity in the exterior surface treatment across Pisgah pottery found within the central Appalachian Summit and neighboring Mississippian regions possibly represents a deliberate imitation of the Pisgah brand in order to facilitate group cohesion and act as a common identity marker for the Appalachian region (Schubert and Meyers 2018). By considering and including the variation in rim attributes alongside the broader patterns in exterior decoration, we may be able to see not only which regions or communities were developing a closer relationship to Pisgah groups but also which Pisgah communities within the Appalachian Summit were more receptive to interaction and trade.

## Chapter 7 Conclusions

Fifty years ago, Roy Dickens Jr. completed his graduate studies at UNC - Chapel Hill and his dissertation resulted in the publication of *Cherokee Prehistory* (1976), a classic volume and contribution to our knowledge of late prehistoric culture in the southeast. Dickens interest in Late Pisgah communities must have been contagious, because his work set off a series of research papers and publications on Pisgah sites in the Appalachian Summit. These early forays explored factors affecting the variation in site size and location (Moore 1986), settlement patterns (Dickens 1978), and pottery (Moore 1981), while continuing to increase our understanding of these prehistoric Cherokee people. While many historians and archaeologists have made substantial gains in understanding the impact of Mississippian interaction within various regions across the Eastern Woodlands during this political, economic and social transformation, the variation among Late Mississippian period villages within the Appalachian Summit of western North Carolina was still largely conjecture.

Pisgah is considered one of several south Appalachian Mississippian traditions, due to its distinctive complicated stamped pottery, the presence of a substructure platform mound at Garden Creek, the use of Mississippian motifs on several ceremonial items such as the Lick Creek gorgets, and similarities in community layout shared with several of its South Appalachian Mississippian neighbors. Still, much of the mountainous landscape in western North Carolina is difficult terrain for large-scale agriculture, leading many Southeastern archaeologists to suppose it was too isolated and environmentally limited to support the surplus production of crops

necessary to support hierarchical social organization, typical of Mississippian polities (Dickens 1978; Moore 1986; Purrington 1983). Many statements regarding the level of Mississippian interaction and integration exhibited by Pisgah communities were hard to support, due to the fact that the majority of data collection and publication to date for Late Pisgah (AD 1200- 1600) came from the Warren Wilson site.

Therefore many questions remained about Late Pisgah peoples. How did these communities at the periphery of the Mississippian world incorporate, or even actively reject, those Mississippian transformations their neighbors were putting into practice? What did these village communities look like? What changes did these villages experience during the period when native people in the Southern Appalachians first encountered Mississippian groups and ideas? How did they change over time, as public architecture and household dwellings were built, rebuilt, and then abandoned? What were the plants and animals they consumed, and how important were domesticates, like maize, to their diet and subsistence economy? These questions are important to investigate, to further our understanding of how new economic and social patterns were selectively integrated during the Late Mississippian period within communities along this southeastern frontier.

In the preceding chapters of this dissertation, the built environment and public spaces, the foodways, the updated chronology, and the household patterns and activities from two Late Pisgah communities, the Garden Creek site and the Cane River site, were detailed and analyzed to demonstrate how Mississippian practices outside of the larger river floodplains settings were integrated into montane, peripheral interaction spheres. The data show it was not only possible to have people affiliate with Mississippian belief systems and foodways without a large maize surplus being produced, but it was also done in historically particular ways that were different for



each community. These Pisgah communities were loosely tied to each other with a shared Pisgah identity, as indicated in the ceramic styles and similar household architecture, as well as very similar environments and available plant and animal resources. However the different size of each community and different choices made by the people living there meant the trajectory for social change was different in how each approached incorporating and installing public Mississippian works and ritual into their lives.

In Chapter 4, I detailed and compared the elements of built environment and community layout known from excavations at the Warren Wilson site and the Garden Creek site, as well as geophysical survey and excavations conducted at the Cane River site. Previous work at Mississippian sites within the Southeast have identified spatial patterning of the community's built environment that reflects Mississippian cosmology and worldview (Lewis et al. 1998a). These key elements of a Mississippian town include the plaza, mound, and boundary (i.e. palisades), which were most likely ritually prescribed (Lewis and Stout 1998). The spatial patterning of a "typical" Pisgah community includes the large, nucleated village, often with a palisaded, circular layout and rectangular houses surrounding a central plaza (Ashcraft 1996; Moore 2002; Dickens 1970, 1976). Another notable change associated with the Late Pisgah period, likewise observed in Mississippian developments elsewhere, is the platform mound construction at Garden Creek (Cobb 2015; Dickens 1970, 1976). Using geophysical survey and targeted excavations, I was able to conclude that the Cane River village extended over approximately 1.5 hectares and had a semi-circular layout similar to Warren Wilson and other South Appalachian Mississippian communities. Two sections of a palisaded enclosure were identified – one from the 1989-90 excavations in the southern portion of the village and one from the 2013-2014 excavations I directed on the northern sides of the village. Five buildings were

identified from posthole patterns and hearth locations, and these surrounded a central area of the village that was relatively magnetically quiet, indicating a central plaza approximately 30-40m in diameter. Nine new radiocarbon dates from Cane River place its Late Pisgah occupation from cal AD 1287 to AD 1613, excepting the one sample from a centrally located pit within the plaza that dates to the Middle Woodland period (cal AD 250 – 381).

In comparison, Warren Wilson's central plaza was defined by the exposed houses on either side and is approximately 25 – 27m in diameter (Moore 2002). The plaza size and location are inferred from the lack of features and structures. Warren Wilson's seventeen domestic structures were arranged in a semi-circle around the central plaza, and there is little to no overlap of the houses, inviting the possibility that the sites' multiple palisades represent an evolution in site size. Several houses show evidence of being repaired or rebuilt in the same location, indicating a planned and consistent community layout. The palisades at Warren Wilson appear in three groups: five inner palisade lines, two outer lines, and two to three shorter segments extending into the central plaza or "square" (Moore 2002). Interestingly palisade lines K, A, L and a portion of B and F delineate a "square" shaped interior space or possess almost square corners, and the outer pair of defensive palisade lines also contain a square or rectangular plan view. Yet the majority of middle palisade lines form a semi-circular village layout. Five new radiocarbon dates for Warren Wilson place the Late Pisgah occupation from cal AD 1282 to AD 1412. These dates reinforce the prevalent hypothesis that the village at Warren Wilson maintained a relatively stable village layout throughout its occupation and was constructed according to a carefully planned and organized pattern of "Mississippian grammar". The recent AMS dates to also show the outer palisades were constructed last and the larger village area was added on to after the inner configuration, but the overlapping ranges show they could have been

used simultaneously as well – continuing the possibility that the inner palisades were used to segregate interior space, within the Warren Wilson community.

While the overall village layout at the Garden Creek site is the least understood of the three communities discussed here, the excavations conducted by the University of North Carolina at Chapel Hill in 1965-1967 focused extensively on Mound 1 and its immediate areas. Mounds in southeastern Mississippian cultures were typically constructed over the course of several stages (Cobb 2003; Beck 2003; Blitz 1993; Hally 1996; Pauketat 1994). While mound-building may have multiple social and political meanings, aspects of the mound construction and building process can indicate how leaders or elite individuals were utilizing, and possibly co-opting, these ritual spaces. Done so repeatedly, these groups could actively legitimize their position in society by memorializing important historical and social events through each stage of mound construction (Wilson 2010). Individuals have memory and remind others by holding anniversaries and ritual events annually. Thus the mound and plaza construction was building a social or “incorporated” memory within a community (Connerton 1998). Ethnohistoric research also demonstrates that mounds reflected origin stories and embodied religious narratives of the Mississippian worldview (Brown 2006; Knight 1986). At the time of its excavation, Mound 1 at Garden Creek stood about seven feet high (2m) and measured 150 feet from east to west and 130 feet north to south (45 x 40m) (Dickens 1976; Steere 2015).

Dismantling the mound revealed two eroded floor surfaces, the remains of a ramp, and a palimpsest of features, postmolds, and burials within the mound (Dickens 1970, 1976). The top of the mound, Floor 2, constitutes the final stage of mound construction and use. Three structures were identified on this upper mound level: two superimposed square structures and an enclosing palisade. The structures measure 28 feet square and 15 feet square, and were enclosed

by the palisade, indicating a privatization of the upper mound levels when it was in use. A gap in the posthole pattern of the palisade, along with the ramps on the east side of the mound, indicate that the plaza was likely to the east of Mound 1. Below Floor 2 excavations uncovered a second surface, Floor 1, however slumping and structural collapse likely made this surface unstable and it only contained a wall trench and evidence of multiple fill episodes. Below these mound levels there was a series of pre-mound ceremonial structures.

Below the west side of the mound “footprint”, a platform of carefully placed river boulders covered a posthole pattern for a 50 x 70 ft rectangular “labyrinth” or multi-corridor structure. This structure was immediately adjacent to two paired earth lodges that were found on the eastern side of the pre-mound surface. Oriented north-south, these semi-subterranean square earth lodges were relatively similar in size and were connected via a pair of entrance trenches. Finally, below these earth lodges and the associated “labyrinth” structure lies an earlier portion of the Pisgah village. On this village surface, a line of postmolds within a wall trench marks the outline of a 100ft palisade segment, complete with two bastions. In total, eight new radiocarbon dates for the Garden Creek site, from structures beneath the mound, within the mound, and from various off-mound features, illuminate a chronologically short history of mound-building at Garden Creek and also indicate the mound was built earlier than previously thought, between cal. AD 1290 – 1414.

The new AMS radiocarbon dates from Garden Creek show the rapid process of mound building, from the late 13<sup>th</sup> century to 14<sup>th</sup> century, over earlier ceremonial earth lodges and structures. Beneath these ceremonial architectural elements was an earlier village surface that contained a portion of a wall-trenched palisade. This defensive structure contained a bastion jutting out of the outer wall and if it can be assumed that the bastion juts out and away from the

interior of the village, then main habitation area of the village and the associated central plaza would have been to the north/northwest, not to the east. Based on the location of the mound ramps and the openings of the structure and palisade on Floor 2, the location of the central plaza associated with the mound and later Pisgah villages would have been to the east. So while the extent of the plaza(s) at Garden Creek is unknown, the location of the central village social space would appear to have shifted dramatically south and east over the village's lifetime. This suggests not just an expansion of the community space – but a complete shift in the entire planned community layout. The Garden Creek inhabitants underwent a radical reconfiguration in community structure and identity during the 13<sup>th</sup> century – just prior to the construction of the initial earth lodges and subsequent mound building on the periphery of the earlier village. How this pre-mound community shift fits into the process of incorporating and adapting Mississippian practices is as follows – it seems likely that this was an abrupt and perhaps violent response to new ideas and beliefs being introduced. The community did not simply incorporate the new mound-and-plaza complex into their pre-existing built environment, but instead constructed an entirely new village layout within a prescribed South Appalachian Mississippian ritual community structure.

The built environment at the Garden Creek site marks a divergent Pisgah site evolution in comparison to the Cane River and Warren Wilson sites. In addition to being the only Pisgah community with a definitive mound built in the South Appalachian Mississippian tradition, it also has an unusual palisade construction, with a single trenched line of posts and bastions as opposed to the double line of single-set posts at Warren Wilson and Cane River. The highly robust defensive structure of the earlier village at Garden Creek presents a more autonomous and “huddled down” community. While we do not have any further information on this earlier

occupation, at the beginning of the 14<sup>th</sup> century, the cultural entanglement with new Mississippian beliefs and ideas resulted in a shift in community orientation and location. Within a span of a hundred years, or just a few generations, new public spaces for ceremonial activities were constructed and ritually demolished, then rebuilt several times over as the base for new religious mound space. The presence of the second palisade around the mound summit also indicates that boundaries were utilized to segregate and co-opt ritual space within the village as well.

Also at the beginning of the 14<sup>th</sup> century, the Warren Wilson and Cane River sites were established with a similar enclosed community layout. The continuity in palisade and house location over time demonstrates a shared, prescribed community organization, similar to other South Appalachian Mississippian villages (with and without mounds.) This inscription of new meanings at various scales of public spaces marks a long period of incorporating and adapting their local traditions within a Mississippian structure. However the variation in the Pisgah built environment across different socio-political contexts within the Appalachian Summit highlights the variation in Mississippianization of community identity. Not all Pisgah villages responded to extra-local interaction in the same manner, or at the same tempo. Why some communities responded similarly – and others did not- could be linked to variation in site function (regional centers versus smaller upland sites), variation in trade networks, and the differing degrees of isolation and resource access experienced in different upland site locations.

In Chapter 5, the foodways and subsistence at Garden Creek and Cane River was described and analyzed in comparison with previous analysis of faunal and archaeobotanical remains from Warren Wilson. A greater reliance on maize agriculture and surplus is the most common change in subsistence that southeastern archaeologists consider when discussing the

adoption of Mississippian culture. To date, the only other published study of Pisgah plant remains, beyond this dissertation, was the analysis of plant remains from six pits at the Warren Wilson site (Yarnell 1976). In order to collect data to assess household consumption and the possible role of feasting in each community, subsistence remains from features at both Cane River and Garden Creek were sampled. At Cane River, corn, beans, and squash were well represented; the archaeobotanical evidence indicates that other foods, such as nuts and edible seeds, were also important in the diets of people living at Cane River. Starchy acorns and chestnuts may have been gathered to add variety to the diet, or to provide a secondary starchy food source to supplement a poor corn crop. Foods such as hickory nut oil and breads made with acorn and chestnut flour may have remained important to Native cuisine after the adoption of corn agriculture. Food remains appear with similar frequency across feature contexts, particularly corn and nuts. Given the ubiquity of many plant foods across different feature contexts, it does not appear as though there was much variability in the types of foods consumed within the community. Any concentrations of certain plants are likely the result of daily cooking and discard activities rather than specialized consumption. At the Warren Wilson site, there is also the same suite of corn, beans, and squash, as well as a large number of nuts and some native cultigens.

The village assemblage from Garden Creek (Hw7) is similar to that from Cane River, although the sample size is the smallest. The sample of archaeofaunal remains includes all vertebrate classes except fish, with the most abundant species including box turtle, black bear, and deer. The sample from Garden Creek Mound No. 1 includes mollusks and all five vertebrate classes with the most abundant species including toads, box turtles, turkeys, passenger pigeons, black bear, squirrels, and deer. Compared to the village assemblages from Hw7 and Yc91, the

mound has proportionately more fish, toad, turtle, passenger pigeon, and squirrel remains. The mound contexts also have many more unbroken bone elements of large mammals. The presence of large mammal unbroken bone elements – and paired elements from the same individuals- are classic indicators of primary deposits resulting from feasting. Additional evidence for special or ritual events includes the large samples of toad remains and passenger pigeons from Mound No. 1, with over half the toad remains being recovered from one of the earth lodges.

When comparing these data with the Warren Wilson site's faunal assemblage, I see a similar spread of taxonomic composition across all known Pisgah sites (Runquist 1979). Most abundant are remains of deer, box turtles, toads, black bear, turkey, and squirrels. However, the Garden Creek Mound No. 1 assemblage overall includes a significantly greater frequency of whole deer elements than those recovered from Cane River. In fact, over a third of vertebrae are complete, which means that large mammal bones at the domestic sites were processed much further for nutrition, while the extravagant feasting at Garden Creek Mound 1 resulted in more waste. At the Garden Creek mound, most marrow-rich long bones were broken for marrow extraction, but not further reduced for boiling. The lack of evidence for post-depositional scavenging and dispersal represents a single event of deposition, followed by immediate burial. The deer remains associated with the mound include more delicate axial parts (vertebrae and ribs), while the village assemblages include proportionally more of the denser foot bones. This pattern is consistent with other South Appalachian Mississippian sites, such as Toqua on the Little Tennessee River (Polhemus 1987). The quick burial of bones and meat has been interpreted as evidence of world renewal ceremonialism at other Mississippian sites (Kassabaum 2013; Kelly 2001)



While previous studies of Late Woodland and Mississippian assemblages note that taxonomic faunal diversity decreases as a response to deforestation and scheduling conflicts associated with maize agriculture (Smith 1974; Muller 1997), during the Late Pisgah period there is no indication from any of the site assemblages that people were specializing in the exploitation of certain faunal species. Faunal taxonomic diversity is similar to the earlier Woodland period, utilizing the Middle Woodland mound assemblage at Garden Creek and the Middle Woodland assemblage from the Biltmore mound located to the east (Kimball et al. 2010). Therefore, there is no evidence from the faunal evidence to suggest a restructuring of subsistence around maize agriculture. Rather, communities during the Late Pisgah period were adding maize to the enormous diversity of plants and animals they continue to consume.

In Chapter 6, evidence for household architecture across Warren Wilson, Garden Creek, and Cane River was detailed and analyzed to better understand the process of household construction, use, repair, and abandonment, as well as the organization of households and daily activities through both structural remains and the cycle of creation, abandonment, and discard within various features classes. Additionally, the variation in ceramic production from Cane River and Garden Creek was detailed, compared to previous studies of ceramic assemblages from Warren Wilson.

The Warren Wilson site's seventeen domestic structures provide the largest sample of household architecture from the Late Pisgah period. These domestic structures can be classified into two contemporaneous house forms: winter houses and summer houses (Ward 1986). Winter houses contain entrance trenches, sharp corners, and straighter (unbowed) walls, while the summer houses at Warren Wilson are constructed without entryway trenches, have rounded corners, and contain walls that bow or curve slightly outward. Recent AMS radiocarbon dates

associated with household structures at Warren Wilson also bolster Ward's early interpretation that these two household structure forms are contemporaneous in use. Excavations at Cane River from 1989-90 uncovered one complete posthole pattern for a domestic structure, and subsequent excavations in 2013-4 revealed the partial remains of four more structures' postholes, central hearth features, and accompanying storage pits. With Dickens' (1976) brief descriptions of two off-mound domestic structures and one house floor excavated to the east of Garden Creek's Mound 1, the five domestic structures at Cane River, and the seventeen structures identified at Warren Wilson, we can consider variability in domestic architecture across all three sites. At Warren Wilson, Garden Creek, and Cane River, there are similar elements of household architecture that signify a similar pattern of greater household autonomy in the Late Mississippian period, as similarly noted by broader regional data for other Late Mississippian communities (Steere 2017).

Household clusters of two or three square, domestic structures, along with a rectangular storage facility, arranged around small, open work areas were identified at the King Site (Hally 2008; Hally and Kelly 1998). Combined with the ethnohistoric record, Hally and Kelly (1998) surmise that these household clusters were used by matrilineal and matrilocal extended families, with each square structure occupied by nuclear families. At the Warren Wilson site, we can also surmise that corporate matrilineal descent groups likely formed the economic core of Late Pisgah societies given the presence of similar Mississippian household clusters, as have been identified at other Late Mississippian sites. Considering how winter houses at Cane River, Garden Creek, and Warren Wilson also provide evidence for increasingly complex and labor-intensive architectural traits (multiple rooms created with interior partitions, entryway tunnels, and rebuilding episodes), it indicates the economically driven changes in household organization

seen at other sites during the Mississippian period were occurring among these communities as well.

Southeastern archaeologists have also linked certain features of native architecture to the religious and cosmological symbolism of Southeastern Indian groups, recorded during the historic period (Hally 2002, 2008; Sullivan 1995). Late Mississippian domestic structures in Southern Appalachians have a relatively similar architectural grammar that has been argued to correspond to shared symbolic associations (Gougeon 2007, 2002; Steere 2017: 129). Thus it can be postulated that Pisgah people at Warren Wilson, Garden Creek and Cane River also had increased value and emphasis attached to individual households and household clusters, as reflected in their increased architectural investment, subfloor burials connecting kin within households to lineages, orientation of individual structures towards household courtyards, and household patterning that reinforced a shared cosmological symbolism. The incredible similarity of Pisgah houses with other Late Mississippian houses in the South Appalachians also indicates that these western North Carolina communities had a high degree of integration and exchange with other communities in eastern Tennessee and northern Georgia such as at the King site, the Toqua site, and the Little Egypt site (Gougeon 2002, 2006; Hally 2008; Hally and Kelly 1998; Polhemus 1987, 1998; Steere 2017).

Another category of material remains that indicates a frequent exchange with other Late Mississippian neighboring communities in the Southern Appalachians is the broad geographical extent of Pisgah pottery, ranging across western North Carolina, northern Tennessee, northwestern South Carolina, and southwestern Virginia. Pisgah pottery, with its “Mississippian” style of rims and exterior surface treatment, is therefore a useful marker of interaction and identity. Looking at the ceramic attributes of rims sherds from Garden Creek

Mound 1 and the associated off-mound village, and comparing them with the assemblage from Cane River, I was able to more accurately quantify the variation in Pisgah ceramics that was only previously considered at Warren Wilson (Dickens 1976; Moore 1981). When considering all three studied assemblages together, aspects of technological production do not show much variation. Overall differences between exterior surface treatment in these assemblages, both the mound and off-mound assemblages at Garden Creek, the feature contexts at Warren Wilson, and the feature contexts at Cane River, show the dominant form of body surface decoration at Warren Wilson and Cane River is rectilinear complicated stamping. While this is also present at Garden Creek, the plain and “other” designs make up larger percentages than the complicated stamped designs. When considering the identified varieties of rectilinear complicated stamped and curvilinear complicated stamped designs, the Garden Creek Mound contexts had by far more diverse representation than the Garden Creek and Cane River feature contexts, which had Rectilinear Complicated Design A varieties as the clearly preferred surface treatment.

Earlier assemblages in the mound had Rectilinear Design A as the predominant variety, while later contexts preferred Rectilinear Design B. Recent radiocarbon dates for Earth Lodge 1 and Earth Lodge 2 place the construction between ca. AD 1285 to 1390 while a radiocarbon date from the posthole fill located *over* Floor 2 dates to cal AD 1317 to 1414. This is still a very tight and fast mound-building sequence in comparison to previous hypotheses, indicating that this preference in shift in surface treatment likely reflects social factors and choices, rather than temporal trends in ceramic production over time. By looking at the Pisgah communities at Cane River and Garden Creek, which are contemporaneous occupations, it seems these groups were likely utilizing rim stylistic decoration to signal different intentions regarding Pisgah identity and Mississippian affinity. At Garden Creek, there is evidence of mound construction, foodways,

and ceremonial architecture for increased interaction with Mississippian groups to the south and west, as well as adoption of Mississippian lifeways. However, there is also the possibility that the distinctive Pisgah vessels are being modified in order to demonstrate and meld traditional Appalachian ceramic production practices with slightly more embellished rim treatments. At Cane River, they embellished rims for an extra means of decoration beyond the paddle-stamped exterior surface, but the depth and variety of decoration on these rims is less variable than at Garden Creek. However, the variation among rim treatments is subtle. Overall, the dominant rim form (excepting unmodified/plain) is collared. And on that, much of the decoration is overwhelmingly punctated. This has the potential to influence how we interpret ceramic traditions outside the central Appalachian Summit, where Pisgah styles are found among neighboring Late Mississippian communities.

To circle back to the hypotheses and expectations detailed in Chapter 2 (Table 2.1), how do these observed trends in Pisgah behavior across these three communities fit, or not fit, with the Mississippian Adaptation and Upland Continuity scenarios? In terms of domestic architecture and economy, at all three Pisgah villages there is evidence in the domestic architecture of a shared Mississippian architectural “grammar” or shared Mississippian blueprint. At the Warren Wilson site, the large number of winter and summer houses associated with shared public spaces and above ground storage structures suggests that corporate matrilineal descent groups likely formed the economic core of the Late Pisgah village. Given the presence of similar Mississippian household clusters at other Late Mississippian sites and the similar winter house features (presence of entrance trenches, rebuilding, interior partitioning) at Garden Creek and Cane River, there is also evidence for increasingly complex and labor-intensive architectural traits. This indicates that the economically driven changes in household

organization observed at other sites during the Mississippian period were occurring among these communities as well, aligning with the “Mississippian Adaptation” scenario.

In terms of ceramic wares, there is the possibility that the distinctive Pisgah vessels at Garden Creek are being modified in order to demonstrate and meld traditional Appalachian ceramic production practices with slightly more embellished decorative rim treatments. When considering the identified varieties of rectilinear complicated stamped and curvilinear complicated stamped designs, the Garden Creek Mound contexts had a far more diverse representation than the Garden Creek, Cane River, and Warren Wilson feature contexts with Rectilinear Complicated Design A varieties as the preferred surface treatment. Earlier assemblages in the mound (those associated with Earth Lodge 1 and 2) had Rectilinear Design A as the predominant variety, while later contexts (Floors 1 and 2) preferred Rectilinear Design B. Given the fast mound-building sequence, this conscious shift in surface treatment likely reflects social factors and choices related to producing or specializing ceramic wares tied to certain ritual or feasting events. Therefore at Garden Creek there are indications that social identity and affinity indicate a “Mississippian Adaptation” model, whereas the shared preference for certain surface treatments across the non-mound assemblage, Cane River, and Warren Wilson assemblage shows a surprising lack of differentiation and diversity, perhaps indicating a more traditional, “upland continuity” approach across Pisgah communities, in which a shared regional and local Appalachian identity was still being emphasized through the pottery.

In terms of subsistence, there is abundant maize, squash and bean remains found in the archaeobotanical samples from both Warren Wilson (Yarnell 1976) and Cane River, although it is difficult to quantify an increased reliance without an earlier record of botanical remains from Early Pisgah or Late Woodland communities. Wild plant foods such as mast seeds and acorns,

however, indicate a balanced subsistence of hunting and gathering along with growing crops. This is also supported within the faunal assemblages across all three sites, where we see a relatively similar assemblage of common animals being consumed such as white-tailed deer and eastern box turtle, with no indication from any of the site assemblages that people were specializing in the exploitation of certain faunal species. Faunal taxonomic diversity is similar to the earlier Woodland period, and there is no evidence from the faunal evidence to suggest a restructuring of subsistence around maize agriculture, thus aligning with the “Upland Continuity” scenario to a degree. However within the Garden Creek Mound No. 1 assemblage, feasting events resulted in a significantly greater frequency of whole deer elements than non-feasting remains recovered from the features at Cane River and off-mound features at Garden Creek and Warren Wilson. The Garden Creek Mound No. 1 also contains evidence for symbolic or ritual offerings, suggested by the pigeon and frog remains recovered from mound contexts, similar to those recorded at other Late Mississippian sites in the South Appalachians. These feasting events and ritual deposits show specialized public and ceremonial practices were taking place within special-use spaces at the Garden Creek site, aligning with the “Mississippian Adaptation” scenario.

Finally, there are material correlates of Mississippian community organization and planning at all three Late Pisgah sites – including complex defensive structures, a large centrally located plaza, and public spaces. In the case of Garden Creek, we see an entire community layout reorganizing itself to align with a new Mississippian mound and plaza complex, but first specialized public/ceremonial spaces were constructed and utilized beneath the mound before being ritually sealed and mound construction begun. These elements of “Mississippian Adaptation” in community-wide organization and public events, while seen at all three sites, are

disproportionately observed at the Garden Creek site. What processes or factors, either ecological or cultural, could account for this observed variation?

By combining analysis of the abundant assemblages from Garden Creek Mound 1 with those from Cane River and drawing comparisons to previous work at the Warren Wilson site, my research has generated a more comprehensive picture of Mississippian emergence and interaction across the frontier region of the Appalachian Summit. This dissertation is tackling the definition of what it means to be Mississippian, and how useful the term is when interpreting individual communities' level of integration within a broader regional interaction sphere. Despite some variation among these Pisgah communities, the general trend is of similarity. Sites like Warren Wilson and Cane River are palisaded settlements that have uniform Late Pisgah ceramic assemblages that represent a more regionalized, less-integrated period of time in Late Mississippian cultures within western North Carolina. They shared a similar architectural "grammar" in terms of the household architecture, household clustering, and storage practices, which indicates a higher focus on individual household autonomy. While the presence of Mississippian motifs on artifacts recovered from Warren Wilson and Garden Creek shows that some Pisgah communities were receptive to Mississippian influence, the incorporation of Mississippian ideas and practices was certainly not homogenous. Considering the location of the Garden Creek site farther southwest than either Warren Wilson and Cane River (as well as its lower elevation), Garden Creek likely traded and interacted more frequently with Mississippian groups to the south, west and east. Some sub-groups or lineages within Garden Creek were possibly more receptive than others to Mississippian interaction and trade, given that community's location, accessibility along the river, and available resources. Facilitating greater integration of Mississippian rituals, religion, and practices may have given certain sub-groups



within Garden Creek elevated status or power in that community as well, although variation in household size, location, activity areas, or foodways within the village areas is currently unknown. What is known is that the Mississippian influence seems more pronounced at Garden Creek than at Warren Wilson or Cane River.

Future work on the Garden Creek off-mound areas would help to elucidate the previous settlement layout, size, and household structure prior to the mound's construction and afterwards. Knowing the approximate orientation of the original palisaded fortification, along with the new orientation of the mound and plaza, would allow for targeted work to be done on the pre-mound and post-mound settlements. The ceramic assemblages are also a rich repository of information on identity and form and function of vessels, yet this analysis only scratched the surface of what is possible in terms of rim analysis, surface decoration, and temper variation. I think more comparisons of Pisgah assemblages both within western North Carolina's Appalachian Summit and outside of it would help to better define the level of interaction between Pisgah people and their neighbors, as well as consider traditional elements of ceramic production that may remain consistent

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