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Archaeological Survey and Limited Testing at the Lincoln Trail Site (9bn17), Bryan County, Georgia

Ryan O. Sipe

ARCHAEOLOGICAL SURVEY AND LIMITED TESTING AT THE LINCOLN TRAIL SITE (9BN17), BRYAN COUNTY, GEORGIA

by

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(Under the Direction of M. Jared Wood)

ABSTRACT

The Lincoln Trail site (9BN17) is an Irene phase (AD 1300-1580) village located in southeastern Bryan County, Georgia within the Richmond Hill Wildlife Management Area (WMA). Prior surface survey (ca. 1973, 2010) indicated an extensive artifact scatter and complex of shell middens in a marsh-edge environment, yet little was known of the site's nature and no subsurface survey was conducted. 9BN17 was selected as a case study for a broad research query to identify the structure of mainland Irene phase polities and the role that this site played within one. The site was systematically shovel tested, revealing numerous middens, and intact cultural features. Perusal of Georgia Archaeological Site File (GASF) data and review of the prevailing literature revealed a highly patterned distribution of Irene phase sites across Bryan Neck that was consistent with the dispersed town model proposed for barrier island Irene settlement. As a result, Lincoln Trail was determined to be a largely intact Irene phase village that displays the characteristics of a village center that likely served a larger dispersed town.

INDEX WORDS: Lincoln Trail Site, Irene Phase, Late Mississippian, Bryan Neck, Richmond Hill, Coastal Settlement

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RYAN O. SIPE

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RYAN O. SIPE

Major Professor: M. Jared Wood
Committee: Sue M. Moore
Lance K. Greene

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DEDICATION

To our friend Fred, may this document contribute in some small way to the coastal legacy you established.

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CHAPTER 1

INTRODUCTION

In 2012, archaeologists affiliated with Georgia Southern University began conducting research at the Lincoln Trail Site (9BN17) within the Richmond Hill Wildlife Management Area in Bryan County, Georgia. This site is located at the extreme southeastern corner of the Bryan Neck landform just west of the confluence of Kilkenny and Lincoln Creeks with the Bear River as depicted on the Oak Level (1983) topographic quadrangle map (Figure 1.1).

The investigation was initiated as a project for the 2012 Summer B term field school at Georgia Southern University. Almost no previous fieldwork had been conducted at the site and very little was known about the occupations represented. Prior to the field school, the only investigations at the site include a pedestrian survey of the road named Lincoln Trail which documented a Late Mississippian surface scatter in 1973, and a casual site visit conducted by the author and a local resident in 2010 which revealed a series of large shell middens along the marsh edge. Based on these findings, it was hypothesized that Lincoln Trail represented a Late Mississippian Irene phase habitation of considerable size and the field school aimed to establish the boundaries of the site and identify areas of artifact concentration that could yield clues to the site's function.

There have been many Irene sites recorded across Bryan Neck including the well-known Sevenmile Bend and Redbird Creek sites, and a scattering of smaller sites throughout its maritime hammocks and marsh edge environs. Investigations at many of

these sites have been sparse and/or narrow in scope leaving questions about Irene settlement patterns on the mainland largely unanswered. Island-wide investigation on Ossabaw and St. Catherines Islands, however, have provided detailed information regarding late Mississippian settlement patterns on barrier islands resulting in a "dispersed town" model for Irene settlements at these locations (Pearson 1977;1979; Thomas 2008). Much of this model is based on the unique environmental setting provided by the barrier islands and the landscape-style nature of the investigations conducted. Mainland Irene research has typically been focused on individual sites (usually large villages) or conducted in Cultural Resource Management (CRM) scenarios that leave the interrelationship between sites poorly defined. Moreover, many of the important mainland Irene sites have been lost through development (Irene Mound) and others are threatened by erosion (Sevenmile Bend) and future development (Redbird Creek).

The Lincoln Trail site provides a unique opportunity to start fresh with a mainland Irene village. This investigation was designed to create a baseline for a large scale study aimed at determining the nature of the Irene polities of Bryan Neck and help inform a model for Late Mississippian settlement patterns in mainland coastal settings. The goals of this project were to determine the extent and type of deposits represented at the Lincoln Trail site and develop a hypothesis regarding its role within a Late Mississippian regional system.

The following section of this document presents the primary research question of this investigation: What is an appropriate model for a Late Mississippian Irene Polity and what component of such a model is represented at the Lincoln Trail Site? This discussion

will include a literature review of Mississippian settlement patterns and polities as they can be identified archaeologically, and an examination of conflicting coastal Mississippian settlement models and specific models proposed for Late Mississippian settlements on the barrier islands (Larson 1969; Crook 1978; Jones 1978; Pearson 1977, 1979, 2001; Thomas 2008). The section closes with a brief outline of mainland coastal settlement patterns and the possible role for Lincoln Trail within this system.

Next is a discussion of the environmental setting at 9BN17. This includes a physiographic description coupled with a discussion of the hydrology and soil types which characterize the site. A description of the natural environment and modern conditions will follow along with speculation on the conditions of the site during the Irene Phase occupation. These environmental conditions played a significant factor in the selection of this location for all occupations of the site and a discussion of these factors will provide valuable insight in the role Lincoln Trail served in the lives of its Irene phase inhabitants.

In Chapter Four, a regional culture history for 9BN17 and Bryan Neck is presented. This section includes a discussion of each of the four prehistoric periods of occupation on the Georgia coast and detailed descriptions of the specific prehistoric occupations identified at the site. These include a Late Archaic St. Simons occupation, a Late Woodland Wilmington occupation, possible Early Mississippian St. Catherines phase activity, and the intensive Late Mississippian Irene phase settlement of the site. Because it is the most intensive occupation of the site, the chapter presents an extensive discussion of the Irene phase at Bryan Neck, which sets the stage for describing Lincoln Trail's role within a larger Late Mississippian system. Chapter four concludes with an

examination of the Historic Period at Lincoln trail including a specific discussion of the Cubbedge occupation: a Colonial/Early American component associated with one of Bryan Neck's earliest plantations.

Chapter Five presents a review of the research which has been conducted at the Lincoln Trail Site and Bryan Neck in general prior to this investigation. This discussion begins with a description of the circumstances that led to the discovery of the site, the investigations in the vicinity that led to Bryan Neck becoming a focal point of Irene phase archaeology, and a discussion of other pertinent research conducted in the vicinity of Lincoln Trail.

The research design and methodology for this investigation are presented in Chapter Six. This section begins by outlining a series of research objectives designed to address the broader research question defined in Chapter Two. Due to the early stages of this research and the specific focus on 9BN17, these objectives are best seen as the beginning strategy towards a larger project aimed at defining a model for mainland Irene polities and the role that the Lincoln Trail site may have played within one. With this said, Chapter Six proposes four research objectives that were considered attainable within the present study. These include determining the boundaries of the Lincoln Trail Site, investigating site function, determining its temporal placement within the Irene phase, and comparing the results at Lincoln Trail with similar studies and models proposed for Late Mississippian settlement patterns in coastal Georgia. The methodology outlined within this chapter was designed to address these research objectives through systematic subsurface survey and limited controlled excavation.

The results and interpretation of the fieldwork are presented within Chapter 7. This begins with the results of the systematic shovel testing which are discussed by phase in the order in which they were encountered within the archaeological record. These include the Historic, Late Mississippian, Late Woodland, and Late Archaic components, with an obvious emphasis on the Late Mississippian Irene phase occupation. The results of limited excavation focused on the Irene phase component follows the survey discussion. These excavations were laid out to investigate two dense midden deposits and an empty space between several large middens. As a result, the partial signatures of two possible Irene phase structures were documented. Chapter 7 concludes with the interpretation of the results and a description of the Irene phase landscape of Lincoln Trail, including village layout, community architecture, population estimates, and the temporal relationship with other Bryan Neck sites.

Chapter 8 presents the conclusions reached as a result of the present investigation and suggestions for future research toward the broad research questions outlined in Chapter 2. Based on the results of this investigation, it is proposed that the dispersed town model previously suggested for barrier island Irene settings (Jones 1978; Thomas 2008) also applies to the Irene phase sites of Bryan Neck, which are characterized by regularly spaced clusters of Irene sites around larger village cores (Chapter 5). Based on the fieldwork conducted thus far, it seems clear that the Lincoln Trail site represents one of these village cores and that future research in the area will reveal additional Irene signatures surrounding 9BN17 that are representative of the other scattered hamlets and farmsteads within an Irene dispersed town.

Figure 1.1: Site Location Map

Material Redacted

This Material has been redacted from general publication to protect sensitive information pertaining to this important archaeological site. This information is available from the Georgia Department of Natural Resources, Historic Preservation Division.

CHAPTER 2

LINCOLN TRAIL AND THE MISSISSIPPIAN POLITY

The structure and layout of Mississippian polities are widely discussed across the Southeast. The term Mississippian itself invokes certain sociocultural paradigms of stratification and settlement hierarchy. As a broad term, Mississippian describes a society in southeastern (or midwestern) North America active between AD 900 and 1600, centered on maize horticulture, organized into chiefdom-level political arrangements, and lived in multi-tiered settlements including administrative centers with monumental architecture in the form of the characteristic earthen platform mound (Hally 1999; Milner and Schroeder 1999; Steponaitis 1986). Over the years, research has refined the study of Mississippian chiefdoms yielding specific models of sociopolitical organization and a settlement hierarchy that can be tested archaeologically. These models have largely been influenced by research conducted at South Appalachian Mississippian sites in Georgia, the Carolinas, and Tennessee. Can these models be applied directly to the Late Mississippian sites of the Georgia Coast? This chapter provides a review of Mississippian sociopolitical models and attempts to refine them in a way that can be more appropriately applied in the interpretation of Irene phase polities on the northern Georgia Coast.

2.1 Mississippian Settlement Strategies

Members of Mississippian societies were hierarchically stratified into at least two basic social levels: elites and non-elites (Hally 2008; Steponaitis 1986; Wood 2009). Stratification existed at the settlement level with at least two basic styles of chiefdoms

differentiated based on the number of tiers present in their administrative organization (Steponaitis 1986; Wood 2009). "Simple chiefdoms" represent the most basic Mississippian arrangement and consist of one level of control above the local community. Chiefdoms with two or more levels of control above the village are known as "complex chiefdoms." Sometimes, a third variation developed known as a "paramount chiefdom," in which a series of chiefdoms became organized into a loose confederacy under the authority of one dominant chief (Anderson 1994; Hudson et al. 1985). These organizational hierarchies are archaeologically tested through the identification of local settlement hierarchies. A simple chiefdom can be documented through the identification of a single administrative center, which is determined to be associated with a series of nearby local level communities. Complex chiefdoms, on the other hand, display two or more administrative centers in association with local level communities; however, one center is often noticeably larger or more architecturally complex (Anderson 1994; Hally 1993). In other words, the identification and classification of Mississippian chiefdoms is typically achieved through inter-site comparison.

Two different settlement strategies are clear among Mississippian groups. These include nucleated and dispersed settlements (Hally 1999; Muller 1986; Smith 1978; Williams 1995). Nucleated settlement systems were made up of moderate-to-large villages which were home to hundreds (sometimes thousands) of people. Dispersed systems are characterized by a distribution of farmsteads or hamlets in which single families or family groups would reside. These distinctly different settlement strategies likely arose from a variance on the reliance of maize and other horticulture (Anderson 1994; Hudson et al. 1985), although other explanatory factors, such as prevalence of

Warfare, have been evoked. While maize seemed to play a role in most true Mississippian societies of the Southeast, some groups practiced more intensified forms of maize horticulture than others (Steponaitis 1986). In these communities, maize made up as much as 50% of the diet and was supplemented with an increased use of native cultigens such as chenopodium, sumpweed, and sunflower (Steponaitis 1986). These communities were often established on the floodplains of rivers, which provided the alluvial deposits necessary for intensive horticulture. These locations also allowed for concentrated access to a variety of natural resources necessary to supplement a sedentary, horticultural lifestyle (Milner and Schroeder 1999; Muller 1986; Smith 1978). This concentrated access to resources allowed groups to thrive using the nucleated settlement strategy. Other groups, however, lived in environments that provided differential access to resources in specific patches across a broad area. For these Mississippians, maize horticulture played a more supplemental role, and a dispersed settlement strategy allowed widespread access to the diverse set of resources.

These different settlement strategies are recognized archaeologically through inter-site comparison. Nucleated villages appear as large sites, rife with domestic architecture and debris. They also form clusters with similar villages and are associated with at least one contemporaneous administrative center (Hally et al. 2008; Milner and Schroeder 1999; Steponaitis 1986). Dispersed settlements, however, are clusters of smaller sites (representing farmsteads or hamlets) in locations specifically selected to provide access to a locally available set of resources. These smaller sites feature limited domestic architecture and display limited refuse as the signature of only a few families. They are also clustered around at least one contemporary administrative center.

Presently, evidence seems to suggest the latter scenario for the Late Mississippian communities of the northern Georgia coast. As such, the Lincoln Trail site likely played a role within a dispersed settlement system.

2.2 General Mississippian Archaeological Models

The dataset resulting from decades of Mississippian archaeology has allowed for the formulation of a model of basic spatial organization and architectural elements to be expected for a Mississippian chiefdom including the specific types of sites that should be present. Steponaitis (1986) proposes a model of the Mississippian polity comprised of four basic types of settlements: large mound centers with associated villages, villages without mounds, ceremonial centers with small habitations, and farmsteads made up of only a few households. These polities do not necessarily exhibit each of these site types, but a combination of a mound center and at least one additional tier. In this model, large mound-and-village complexes are characterized as dense population centers. Archaeological examples of these sites display clear zones of residential activity as distinguished by structural signatures of Mississippian households, middens of domestic refuse, areas of resource storage and processing, etc. Architecture, characteristic of the Mississippian administrative center, is also present at these sites. This includes at least one earthen platform mound, an open plaza, and often fortification walls and ditches (Steponaitis 1986; Holley 1999; Kidder 2004; Lewis and Stout 1998). The layout of these architectural elements are also somewhat standardized and the signature architecture are almost always found adjacent to one another. Typically, this includes an open plaza flanked by at least one platform mound that was somewhat segregated from the resident community forming a “sacred precinct” (Holley 1999). These precincts are

often further distinguished by divisive fences, screens, or ditches; and in fact segregated zones and divisive features are often seen as another architectural indicator of the Mississippian administrative complex (Holley 1999; Lewis and Stout 1998).

The sites associated with Steponaitis' other levels of settlement hierarchy do not seem to be as standardized and likely require a level of comparison to recognize them. The non-mound villages represent the previously described nucleated villages and likely appear similar to the residential areas within administrative centers, just lacking mounds and some other public architecture. Mississippian civic/ceremonial centers provided the necessary extension of chiefly/socio-religious power outside of the central administrative complex to control the broad geographic expanse of a larger chiefdom. These sites feature a level of public architecture associated with a resident population (Steponaitis 1986). Archeologically these may appear as a habitation area with identifiable community architecture such as a council house, mortuary center, or even a single platform mound. Farmsteads, as described above, were likely represented by one to three residential structures and associated household debris (Steponaitis 1986).

Hally (1993, 1999; Hally et al. 1990) compiled a sample of 47 Mississippian mound sites in Northern Georgia and adjacent portions of Alabama and Tennessee. This sample includes everything from single mound centers to the eight mound complex at the Macon Plateau site. He sorted these sites by contemporaneity using local ceramic chronologies and radiocarbon dates and measured the linear distance between each site of the same time period. As a result, Hally determined that the distances between these sites could be divided into two statistical groupings: those that were separated by more than 32 km or by less than 18 km. Hally posits that those mound centers separated by more than

32 km were the administrative centers of independent, or simple, chiefdoms; while those separated by less than 18 km are reflective of the multiple administrative centers found within complex chiefdoms.

Based on this research by Hally, Steponaitis, and others, a clear picture of the archaeological signature of the Mississippian chiefdom emerges: administrative centers represented by platform mounds and sacred architecture connected to a broad expanse of civic hubs, nucleated villages, or even dispersed farmsteads over a radius of around 20 km (Hally 1993, 1999). This model has been thoroughly tested for the interior; however, it is unclear if it can be applied to the Late Mississippian occupations of the northern Georgia coast. These groups were among the first and most well-documented Mississippian people that the Spanish encountered during the early Historic Period. These accounts have led some researchers to suggest that that Late Mississippian coastal lifeways may have differed significantly from the model suggested for the Mississippian interior. Late Mississippian archaeology within this region has been largely focused on specific large sites (Irene, Sevenmile Bend, Pine Harbor, etc.), leaving the broader picture of coastal settlement patterns and polity structure somewhat unfocused. With the addition of island-wide landscape studies conducted on Ossabaw and St. Catherines Islands (Pearson 1977, 1979; Thomas 2008), and the growing dataset of mainland Irene research in Bryan County, Georgia (Cook 1971; Pearson 1984; Mitchell et al. 1983; Hendryx et al. 2006; Burkhart et al. 2007; Sipe 2013); a clearer picture is beginning to emerge. The following section provides a synthesis of what is known about coastal Georgia's Late Mississippian settlement patterns and the political structure of the polities they represented.

2.3 Late Mississippian Settlement Patterns in Coastal Georgia

The Late Mississippian period on the northern Georgia Coast is known as the Irene phase and is recognized by a distinct set of ceramics first defined at the Irene Mound Site (9CH1) (Caldwell and McCann 1941). It is widely accepted that these Irene ceramics represent the prehistoric and proto-historic signature of the Guale: the aboriginal inhabitants of the tidewaters of the central Georgia Bight that were among the first North American groups encountered by early European explorers. It has not been as easy, however, to reconcile the archaeological signature of Irene phase settlement patterns with the early European accounts of the Guale lifeways. The discussion began with Larson (1969) and later Crook (1978) proposing a semi-sedentary lifestyle for the Guale/Irene inhabitants of the Georgia Coast. These theories were based largely on ethnohistoric accounts gleaned from the documentary records of Fr. Rogel, a resident friar at Orista during the early Jesuit attempts at missionizing the Georgia Bight. Rogel complained that the Guale constantly scattered into the forest and never stayed in one place for long. He blamed the poor quality of the coastal soil which led them to find suitable patches for maize cultivation wherever possible. Another Jesuit, Father Antonio Sedeño added:

> "…that the few Indians that there are are so scattered; for as they have nothing with which to fell the forests for their plantings, they go where they can find a little land without woods to sow their maize; and as the land is so miserable, they move with their ranchos from time to time in search of other lands which can bear fruit (Zubillaga 1946 [Jones 1978])."

Larson (1969) proposed a seasonally mobile settlement pattern for the Guale which downplayed the role of maize in favor of a fishing, hunting, and gathering lifestyle

supplemented by constantly shifting swidden horticulture. In this model, coastal residents lived in small villages near agricultural fields during the Spring and Summer and then moved to family encampments near tidal creeks in the Fall and Winter. Crook (1978) modified Larson's model to incorporate the concept of the large Irene phase village sites which were being found on the coast at that time. In his model he proposed that these "aggregate villages" located on relatively high ground adjacent to estuarine systems were permanently occupied by the chiefly lineage; however, the majority of the population associated with such a village would shift residence through four specific settlement forms throughout the year. This involved full scale residence in the main village during the summer harvest, a fall shift to the oak forest in matrilineal extended family groups to gather mast, splitting into nuclear families in small encampments near tidal creeks in winter to exploit shellfish, and finally a shift back into matrilineal clans to agricultural hamlets to plant maize to prepare for the next summer harvest (Crook 1986).

Jones (1978) inferred a different vision of the proto-historic Guale from the ethnohistoric record. He believed that many of the Jesuit accounts of Guale lifeways must be viewed as unreliable as they were written as an excuse for why their mission efforts in La Florida were a failure. He also points out that much of the scattering and fractional nature of the Guale at Orista may have been a direct response to the newly established settlement of Santa Elena as well as the presence of the Friars themselves. In Jones' reading of the documentary sources, the Guale seemed to display all the essential features of the classic chiefdom. He proposed that through the highly stratified arrangement, the principal Guale Chief (or mico) is the focus of tribute and primary means of redistribution of goods among the populace. Seasonal movement would be

unnecessary if a dispersed settlement strategy were employed to exploit the widespread varied resources of the coastal zone. He states "the location of Guale settlement along rivers and tidal creeks seems to have actually been a strategic measure to be near shellfish, hunting grounds, and horticultural lands without having to change residence seasonally" (Jones 1978). As a result, he proposed the concept of the "Dispersed Town" in which communities organized themselves at the forest-marsh transition with a village core associated with community buildings and civic leaders that was surrounded by smaller hamlets organized around horticultural fields and oyster beds (Jones 1978). Robert Sandford's 1666 account of Orista is used as an ethnohistoric example of this phenomenon:

> "The Ttowne is scituate on the side or rather in the skirts of a faire forrest, in which at several distances are diverse fields of maize with many little houses straglingly amongst them for the habitations of the particular families (in Sanford 1911 and Thomas 1993, 2008)."

This arrangement suggests a level of economic diversity among the specific parts of the dispersed whole. Jones (1978) suggests that this diversity was overcome by a system of tribute and redistribution such as that which was proposed for the classic chiefdom sociopolitical model. Realistically though, the rich environment of the marsh edge provides a diverse set of resources available throughout the year in close proximity to one another, allowing for a sedentary lifestyle within a central place surrounded by a relatively small foraging radius. Jones (1978) does concede, of course, that trips by smaller groups for the purpose of hunting, fishing, or shellfish gathering undoubtedly took members of the community away from the larger group on a temporary basis.

Pearson's (1977, 1979, 2001) and DePratter's (1974) work on Ossabaw Island has revealed a distribution of Irene phase sites across the island which seems to be consistent with the dispersed town model proposed by Jones (1978). Approximately 30 years of fieldwork on Ossabaw Island has resulted in the recordation of 70 archaeological sites dating to the Irene phase (Pearson 2001). These sites span the upland hammocks of the island's Pleistocene core and represent Ossabaw's most expansive aboriginal occupation. Pearson (1977, 1979, 1980) used site size, architecture, and environmental settings to rank the Irene sites which had been recorded on the island at that time. He used cluster analysis to create distinct classes of Irene sites and identified four distinct clusters of related site types that were designated Class I through IV. Class I sites represent the largest Irene sites on the island, making up more than half of the total area occupied by Irene sites despite the fact there were only two of them (9CH158 and 9CH160). Sites of this class represented important population centers, featured multiple burial mounds, and seemed to have developed out of important Savannah period settlements (Pearson 1977). Pearson interprets these sites to have been permanent habitations and important sociocultural hubs of an Irene phase polity. Sites falling into Class II were significantly smaller than Class I sites but represented the next largest in the spectrum. These sites occupied desirable environmental locations similar to Class I sites; however, based on their size, likely housed smaller populations. Class II sites on Ossabaw rarely had Irene burial mounds but the few that did contained only one (Pearson 2001). Pearson points out the difficulty in assigning a functional definition to these sites; however, they likely represent population centers but should be considered "less important" than the Class I sites (Pearson 1977). Approximately half of these sites showed evidence of previous

occupation, which indicates the other half likely were founded as new population centers during the Irene phase. Class III sites are smaller still and are hypothesized to have been small communities of only a few families. Approximately half of the Class III sites on Ossabaw were associated with burial mounds. These mounds were much smaller, however, which may they served a smaller population or had a different function than those represented at Class I sites (Pearson 1977). Only one of these sites was determined to contain a notable pre-Irene occupation which is likely indicative that they are almost exclusively associated with the expansion of Irene phase occupation on the island. The fourth class (Class IV) had the most numerous count on Ossabaw but made up only 3% of the total area occupied by Irene phase sites (Pearson 1977). Pearson attributes these sites to single function occupations such as resource extraction areas.

Thomas (1987) refers to the conflicting views on coastal settlement patterning as "The Guale Problem." Much of the research he has conducted on St. Catherines Island over the last 30 years has been specifically oriented towards providing an archaeological answer to conflicting ethnohistoric interpretations (Thomas 2008). Thomas (2008) sets out to solve the Guale Problem through a massive infusion of site-based archaeology on St. Catherines Island. If the late Mississippian residents of St. Catherines followed the seasonal mobility model proposed by Larson and, more specifically, Crook, then Thomas expects that this would produce an archaeological signature of both four-season and seasonally-specific settlements. The seasonally specific occupations should be large habitations for the summer, sparse residential groups during the early fall, and moderately dense settlements in the late fall through winter (Thomas 2008). On the other hand, Thomas points out that Jones' dispersed town is really just a form of central place theory

in which central places (villages at marsh edge locations) are occupied year round with strategic forays made by smaller groups away from the main habitation as necessary. If Jones' Dispersed Town can be effectively applied, it would seem a signature based on sustained, four-season occupation of marsh edge settlements with only minimal evidence of seasonal occupations would be present (Thomas 2008). The resulting three-volume work concluded that a low degree of residential mobility seemed to be the rule on St. Catherines Island throughout the prehistoric period. This intensified, along with the island's population, into the Late Mississippian. As a result of this research, Thomas (2008) determined that single season sites dating to the Irene phase are extremely rare on St. Catherines. The majority of these sites were occupied during at least three seasons and 40% of all Irene sites across the island were occupied year round (Thomas 2008). Based on the archaeological evidence, it seems that sustained marshside settlement was the most common lifeway represented on the island. As such, Jones' (1978) dispersed town model seems to be supported by the archaeological record (at least for the barrier islands) more so than a model based on residential mobility.

Most recently, Crook (2013) revisits his previous model of seasonal residential mobility and concludes that the entire debate is in need of re-thinking. Residential mobility, he concludes, may not be the norm for the Mississippian groups of the Georgia Coast, but cautions against ruling it out completely (Crook 2013). He echoes Thomas' (2008) caveats about assuming that a single mobility strategy was pervasive throughout the Late Mississippian and protohistoric Georgia Coast, and calls for extensive new research before a judgment can be made. Crook (2013) posits that large Irene villages, such as Middle Place on Ossabaw Island (or Lincoln Trail for that matter) have no

explanation within the dispersed town model proposed by Jones (1978). He also warns that the permanent settlements on St. Catherines Island described by Thomas (2008) may actually be tied into a series of seasonal settlements on the mainland that were missed due to the island-bound research strategy (Crook 2013). He also notes, as within his previous model, that these large permanent towns housed large populations for part of the year but he believes the overall population fluctuated and that extenuating circumstances may have occasionally caused the whole town to shift location (Crook 2013).

It does not seem impossible to reconcile the large Irene towns with Jones' (1978) dispersed town model. The main point of contention seems to be Jones' statement that "Unlike the larger, compact, towns of the interior, the town center itself seems to have been small, and the bulk of the population was probably distributed among individual farm plots" (Jones 1978). Based on this statement, it may be that Jones' (1978) initial vision of the town center would not have been as large as some of the expansive Irene villages found on the coast (i.e. Middle Place [Ossabaw Island] and Redbird Creek [Bryan Neck]); however, archaeologically, this site would surely appear larger than the surrounding farmsteads. Even though the "bulk of the population" was distributed among these smaller sites, they were dispersed across a wide area while a more concentrated group was found within the town center (Jones 1978). Town centers were undoubtedly the site of community use areas and civic structures as well as home to a group of permanent residents. There is no doubt that populations within these towns increased and decreased throughout the year due to seasonal events, feasting, and other community functions. Several large ritual events are known for the Mississippian yearly

cycle that required the congregation of large populations for weeks at a time (Hudson 1976).

It is not a distant stretch to associate elements of Jones' (1978) dispersed town model within Pearson's Irene class system. Almost all of the Irene sites on Ossabaw have been recorded within 100 meters of the marsh, indicating the marsh edge environs were specifically selected for settlement more often than not during the Irene phase (Pearson 1977). The Class I sites, specifically 9CH158, seem to represent large population centers wielding political power similar to the central village in the dispersed town. Class II and III sites represent the surrounding hamlets and farmsteads occupied by smaller family groups and Class IV sites represent resource extraction areas representative of logistic exploitation of specific resources. It is also interesting that the dispersed town model and Pearson's class system both seem to fit the Mississippian chiefdom model (outlined above) in microcosm. Class I villages with multiple mounds and resident populations seem similar to administrative centers; Class II habitations seem reflective of the nucleated village; while Class III settlements, including single burial mounds and/or possibly other forms of community architecture, may have been similar to civic/ceremonial centers extending the reach of the central village. These towns should not be simply considered small chiefdoms, however. Ethnographic evidence indicates hierarchical relationships between named Guale "towns" spread across large geographical distances in the form of traditional chiefdoms.

2.4 Guale Chiefdoms

The early historic record makes reference to "the 22 chiefs of Guale," and Menendez de Aviles cites "40 villages of Indians" during his trek up the Guale Coast

(Swanton 1922; Jones 1978). This basic Guale political entity seemed to be organized around two principal towns (dispersed towns) in which the leadership of the chiefdom was alternated (Jones 1978). As with other classic Mississippian chiefdoms, these principal settlements controlled a series secondary population centers and lesser habitations. The leader of each cheifdom was known as the mico, the Muskhogean word for chief. The use of "mico" in Spanish accounts to describe Guale leaders suggests that the Guale spoke a Muskhogean language (Swanton 1922; Jones 1978; Francis and Kole 2011). The Spanish also write of a Guale position known as "Mico Mayor" which seemed to be a ranked above that of the local chieftain (Jones 1978; Thomas 1993). This term is used in at least two situations in which the Guale as a whole were united in a form of chiefly confederacy led by the Mico Mayor. This scenario seems to indicate that Guale were at least sometimes organized into a paramount chiefdom. It is unclear; however, if this confederacy always existed or if the Guale simply united when necessary, such as in response to European settlement.

Jones (1978) used Spanish and French accounts to identify three distinct Guale chiefdoms of the North Georgia Coast. He points out that the ethnohistoric material available for the Guale is divided into three time periods: Period I (1526-1586) emphasizes the South Carolina chiefdoms, as the documents used to construct this period revolve heavily around the founding and occupation of the Santa Elena colony; Period II (1587-1606) refers to the post-Santa Elena period during which the Spanish political influence was concentrated far to the south of the Guale in St. Augustine and the early efforts of Franciscan missionization culminating in the rebellion of 1597; and Period III (1607-1684) which encompasses the post rebellion "Golden Age" of Franciscan missions

along the Georgia coast ending with the retreat of the mission system in response to British and Westo raiding parties. Jones' Period II is the most heavily documented due to the Spanish investigation of the Guale Rebellion of 1597, and represents a good model of political structure for the pre-mission Guale because his Period I is focused on South Carolina groups and Period III details the group under heavy Spanish influence.

Jones recognizes three distinct political entities during Period II: the chiefdoms of Guale-Tolomato, Asao-Talaxe, and Espogache-Topiqui. Jones postulates a shared dual chiefdom arrangement in which succession of command seems to alternate between two principal towns. As an example, he provides a 1575 account in which the mico at Guale was dead and it is said that the current mico of the chiefdom was a "very old and feeble" man who resided at Tolomato. His son-in-law; however, lived in the village of Guale and "was the chief of Guale and the next in importance in all that Province" (Martinez 1610 in Jones 1978). Jones points out that by the time of his Period II, the town of Guale was definitely located on St. Catherines Island. He points out that a Period I letter regarding a rebellion in the vicinity of Santa Elena states that the town of Guale was located 20 leagues south of Santa Elena, on St. Catherines Island (Jones 1978). Tolomato, according to Jones, was almost certainly on the Sapelo River based on a description given by Mendez de Canzo in 1598.

Jones believes that both principal villages of the second chiefdom, Asao and Talaxe, are located on the lower branches of the Altamaha River. Prior to the Rebellion of 1597, the Guale-Tolomato chiefdom appears to be in control of the Guale confederation as a whole and it is the mico of Tolomato who is named as the principal leadership of the rebellion. Afterwards; however, Don Domingo (chief of Asao-Talaxe)

seems to be the principal leader of the Guale as a whole. The accounts of Fray San Miguel suggest that Don Domingo frequently resided at both Asao and Talaxe; however, after a mission was established at Talaxe between 1603 and 1606, this town appeared to become his principal residence. San Miguel provides the account, which places both towns on the Altamaha River stating that both were located above the tidal waters; however, Talaxe was further downstream (Jones 1978). It is also clear that by the time of Period III, Asao and Talaxe become merged into one mission town located on St. Simons Island that is alternately referred to as Santo Domingo de Talaxe and Santo Domingo de Asao (Jones 1978).

The smallest of Jones' Period II chiefdoms is Espogache-Tupiqui and is centered on the two principal towns of those names (Jones 1978). Simlar to Asao-Talaxe, Jones posits that both towns are located near each other on the lower reaches of a coastal river; in this case he suspects they are along the North or South Newport River based on a report which places Tupiqui two leagues inland from St. Catherines Island. Prior to the Guale rebellion of 1597, the chief of Tupiqi seemed to be the principal leader of this chiefdom; however, it is the chief of Espogache who travels to St. Augustine to surrender in 1600, suggesting that village was principal soon after the war (Jones 1978).

Jones' (1978) Period II chiefdoms are presented here only as an example and a model. There is no indication that these political alignments were permanent or even stable. The chiefdoms Jones proposes represent political affiliations he was able to tease out of the ethnohistoric record available for the time periods he identified within the documents. During Period I, for example, it seems the Guale/Tolomato chiefdom existed as a different entity which shared power between the villages of Chief Oade (Guale)

(which may have been on Ossabaw or Skidaway island at the time) and his brother Covexcis (Cansin in Spanish accounts) who lived 3 leagues south of Guale at that time (Jones 1978). This suggests that, not only does power alternate between two primary towns within a Guale chiefdom, but the seats of power themselves may periodically change, not unlike other forms of chiefdom cycling (Anderson 1994; Hally 1993). If the town of Guale truly did shift from a location on Skidaway or Ossabaw to St. Catherines Island, but retained the designation "Guale," it suggests that the Guale towns themselves reference more to the people represented than physical places. Bushnell (1994) traces the location of the mission period town of Santa Catalina de Guale to at least seven known locations. The northern strip of the coastal zone between the Savannah and Ogeechee Rivers is also suspiciously underrepresented within Jones' (1978) Period II model. Early documentary accounts suggest that this area may have been largely abandoned during the early phase of European contact. It is interesting if this is truly the case, as this area was home to some of the larger pre-contact Irene settlements, such as the Groves Creek Site (9CH71) and the Irene site itself. Records maintained by the Georgia Archaeological Site File (GASF) show a proliferation of Irene phase sites across this area; however, sites with protohistoric components are almost nonexistent.

2.5 Late Mississippian Irene Polities: An Archaeological Model

This section summarizes the data presented throughout this chapter and will propose a model for Irene phase polities, which will help to interpret the role of sites like Lincoln Trail. Based on the research of Pearson (1977, 1979, 2001) and Thomas (2008) it is clear that Irene phase settlements follow a dispersed settlement strategy as opposed to nucleated types. On both Ossabaw and St. Catherines Islands, Irene settlements were

preceded by Middle Mississippian occupations, displaying a decidedly more nucleated pattern. This includes a prominent Savannah period occupation on Ossabaw and an apparent St. Catherines phase on St. Catherines Island. In both places, the shift to Irene phase settlement is characterized by an increase in the number and dispersal of sites across the islands. Both Pearson (1977) and Thomas (2008) interpret this as a population increase; however, on Ossabaw it seems the overall site area decreases as a whole as the switch is made from Savannah to Irene settlement patterns. Pearson (2001) noted that Ossabaw's largest and most architecturally complex aboriginal site, Middle Place (9CH158), changed significantly during the Savannah/Irene transition. It shrinks from a mound complex of at least four burial mounds during the Middle Mississippian to a smaller site associated with two burial mounds during the Irene phase. It is also clear that only the southern one-third of the original site area is utilized during the Irene phase occupation (Pearson 2001). The opposite seems to be true on St. Catherines, however, as site size tended to increase during the dispersal of Irene phase sites across the island (Thomas 2008).

Local Settlement Hierarchy

While dispersed, an Irene polity is comprised of largely permanent settlements. Both the class based, cluster analyses of Pearson (1977, 1979, 1980) and the central place models advanced by Thomas (2008) suggest that residential mobility was unnecessary and uncommon for the Irene phase inhabitants of the northern Georgia coast. Instead, settlements based on the selection of marsh edge environments for permanent villages were surrounded by smaller hamlets and farmsteads that provided strategic access to the varied resources necessary for year-round habitation (Jones 1978). Archaeologically,

these dispersed towns should appear as clusters of Irene sites of varying complexity similar to the four classes identified by Pearson (1977). These should include a dense habitation site representing a village core. Sites of this type are characterized by a fairly large total area that is peppered with dense clusters of individual shell middens and identifiable community features. Excavation at these sites should indicate the presence of multiple residential structures and other domestic features, and seasonality studies should provide evidence of year round settlement. Sites of this type should also reveal public architecture indicative of their role within administrative systems. At Irene sites, this appears to include multiple burial mounds; however, other forms of public architecture are poorly understood at Irene phase centers. If the traditional model of a Mississippian center can be applied, council houses, plazas, and intentionally-segregated zones may also be expected at an Irene village core (Steponaitis 1986). The core will be surrounded by a number of smaller habitation sites. These represent the signature of family groups living near horticultural plots, oyster beds, or other productive areas (Jones 1978; Thomas 1994, 2008). They should appear significantly smaller in size compared to the village core and will be characterized by proportionately fewer midden clusters. Excavation at these sites will undoubtedly reveal features characteristic of residential occupation (structural elements, storage pits, domestic refuse) but will lack evidence of the public architecture expected at a village core. These sites may also show evidence of year round occupation. Sites of this type are largely based on Pearson's (1977) Class II designation, developed through his work on Ossabaw Island; however, Pearson also identified Class III sites on the island. The role that these played in the dispersed town is less clear. They can be recognized by smaller site areas and are typically associated with a single burial

mound or other types of public architecture. Sites of this type also featured a resident population, therefore residential debris and domestic architecture should also be expected. Seasonality studies should indicate four seasons of occupation. The remainder, and most numerous type associated with the signature of an Irene phase dispersed town will be small special use areas indicative of resource extraction and associated with limited and temporary occupation. These are procurement middens associated with shellfish collection at specific oyster beds, short term hunting camps away from the village, and the activity areas that accumulate when a small group temporarily leave their homes to collect resources for the larger group. The signature left by these activities will vary widely ranging from small artifact scatters to the massive procurement middens found along back barrier islands attributed to centuries of shellfish collection. A general lack of structural and domestic features will help distinguish sites of this type from the habitations. If middens are present, their contents will reveal a decreased frequency of domestic debris (such as pottery) within. Seasonality studies at these sites should reveal them to be reflective of single or bi-seasonal activity (Thomas 2008).

Settlement Hierarchy on the Chiefdom Level

Each distinct cluster of Irene sites should represent a dispersed town, the basic Guale political unit described in the ethnohistoric record. In addition, documentary sources also describe hierarchical relationships between these towns that formed several coastal chiefdoms and possibly even a paramount chiefdom (Jones 1978). Based on this, there should be archaeologically recognizable elements of certain towns that differentiate their rank above the others. As outlined above, traditional Mississippian administrative

centers are identified by the characteristic architecture of the "sacred precinct." This includes at least one plaza delineated by the presence of one or more earthen platform mounds (Holley 1999). It is presently unclear, however, if a similar layout should be expected within an Irene phase administrative center.

The Irene Site (9CH1) represents the most architecturally complex Irene occupation documented thus far and provides the most compelling data towards identifying the layout of a possible Irene phase administrative center. The site was occupied during both the Savannah and Irene phases and represents a principal Savannah era political center which transitioned into an important Irene phase complex. It provides the only example of true platform style mound architecture found at any Irene site to date; however, these features are associated with the preceding Savannah occupation. Considered the hallmark of the Mississippian administrative complex, platform mounds are not usually found at Irene phase sites. The Large Mound at Irene measured 4.7 meters high and 48.8 meters in diameter, and was constructed in eight distinct stages. The eighth and final stage was the only portion of this mound that dated to the Irene phase. Excavation within this feature showed that intentional shell layers were added to the flanks and top of the mound to obliterate the earthen ramps and alter its distinctive platform morphology (Caldwell and McCann 1941). This indicates that the platform mound at Irene was not used as a platform mound at all. In fact, it appears to have been used as a burial mound. The remaining seven stages of mound construction and use were all associated with the Savannah occupation of the site. These included an initial sequence of four earthen embanked structures followed by three true platform constructions (Caldwell and McCann 1941).

Another instance of a feature similar to a platform mound has been suggested for the Irene occupation at the Redbird Creek site (9BN9) in Bryan County, Georgia (Sipe 2013). This large earthen feature appeared domed in profile and circular in plan view. It probably did not function in exactly the same way as traditional Mississippian platform mounds; however, it was comprised of at least two successional structure construction episodes, which appeared to occupy distinct prepared earthen summits. Further research is needed to properly interpret this feature.

The community architecture affiliated with the Irene phase occupation of 9CH1 included a low earthen burial mound, utilized during the Savannah II period and Irene phase; the Rotunda, a large circular structure interpreted as a council house; the Mortuary, a funerary structure that was intentionally razed and transitioned into a cemetery; and a series of walls/enclosures which connected the rotunda with the large mound and burial mound and segregated the site into distinct zones (Caldwell and McCann 1941). Five structures were identified at the Irene site, of those, only two can be associated with the Irene phase occupation (one of these is likely associated with a Savannah/Irene transitional period and may not be reflective of a typical Irene residential signature). This, along with its relatively small size on a distinct and circumscribed landform, may suggests that there was never a large residential population at the site. Traditional survey was never conducted at the Irene Site and it is possible that additional structures may have been located using these techniques. Erosion also seems to have had an extensive effect on the site and may have washed away additional residential signatures. Its role within a larger polity is somewhat unclear because of its transitional nature; however, the Irene site's Irene phase features do provide an interesting view of

community buildings which may be associated with a coastal, Late Mississippian administrative complex.

The Middle Place (9CH158) site provides another glimpse of a multi-mound complex associated with a dense Irene phase occupation (Pearson 1977, 1979, 1980, 2001). This site is located within the north central portion of Ossabaw Island's Pleistocene core at a strategic landform immediately abutting Buckhead Creek (Pearson 1977). It is characterized by six burial mounds and over 80 discrete shell middens across an area of more than 900,000 square meters. This site represents an important Savannah period center that is occupied into the early Irene phase. It maintained a relatively large resident population throughout both phases; however, it does shrink from a Savannah phase center with four burial mounds and population spread across the entire site, to a two mound Irene habitation which occupied roughly the southern one third of the site (Pearson 2001). It appears to maintain its preeminence as the principal center throughout this transition, but it is unclear if it represents more than just a site of local importance.

The Redbird Creek Site (9BN9), located on the northern tip of Bryan Neck in Bryan County, Georgia provides a unique opportunity to study the community architecture of a primarily Irene phase occupation (Pearson 1984; Sipe 2013). Redbird represents an Irene phase occupation that is later than occupations at the Irene site and Middle Place. This is based on the low frequency of Savannah period artifacts and Irene artifact seriation. Recent investigations at the site have also provided two AMS dates from secure contexts. These included Beta 297416, a sooted sherd, which yielded a two sigma range of cal AD 1420 to 1460 (cal BP 530-490) and Beta 270236, a charred corn cob, which yielded a split two sigma range including cal AD 1440-1540 (cal BP 510-

4220) and cal AD 1540-1630 (cal BP 400-320) (Sipe 2013; Keith Ashley, personal communication 2010). This site extends across a broad coastal ridge for a distance of over 1,710 meters (north-south) and 1,140 meters (east-west) at its widest point. The densely occupied portion of the site is only represented within the northern portion of the site. This site is characterized by 25 individual shell middens clustered in two groups, each oriented around a low burial mounds (Mounds A and B) (Pearson 1984). The two zones are separated by broad flat area that is free of midden and displayed a sparse artifact distribution. This may represent a plaza (Sipe 2013). The town is oriented along an approximate 40° axis that follows the landform. If the central portion of this alignment is interpreted as a plaza, its shape is unknown but its limits are delineated by burial mounds A and B (Sipe 2013).

Pearson (1984) reported on an extremely well preserved wattle and daub structure partially exposed during the initial fieldwork at the site. More recent broad-scale excavation (Sipe 2013, Sipe et al 2011c) has identified extensive post alignments and daub concentrations that likely represent additional residential structures. This structural data, coupled with the presence of fairly extensive domestic midden depsosits, suggest a resident population was present at the Redbird Creek site.

Recent excavations at Redbird have also revealed the signature of divisive walls that may be similar to those identified at the Irene site. The signature of two linear orientations of closely spaced, single set posts were found within the southwestern portion of the densely populated portion of the site. These posts were located within a shallow trench like feature that contained burned daub and raw clay. These were interpreted as the signature of the bases of daubed walls (Sipe 2013). The portions of

these features that were exposed were remarkably similar to the walls identified at Irene, down to the diameter and spacing of the postmolds and the depth of the shallow base of the wall (Sipe 2013; Caldwell and McCann 1941). However, only a small portion of the Redbird Creek walls were exposed and it may be too early to compare them directly.

Mound C was located just south of the wall features, measured approximately 20 meters in diameter, and was raised over one meter higher than the surrounding landscape. The mound appeared to be domed in profile and ovoid in plan. It was determined to have accumulated due to the construction of at least two structures built in succession atop one another on two distinct prepared summits (Sipe 2013). While this is similar to the successional construction of many earthen platform mounds, further investigation is needed to interpret the role of this feature within the layout of the community. It undoubtedly represents the location of important community architecture. The role of the Redbird Creek site within a larger chiefdom arrangement is unclear; however, it does provide an important glimpse at definitive examples of Irene phase community organization and community architecture.

Ethnographic evidence also provides important clues to the community architecture that may be present at an administrative center within an Irene phase chiefdom. It is noted above that descriptions of Guale settlements are inconsistent. Even descriptions of individual structures varied widely (and based on the limited structural data gathered so far, variation may have been common). There is one architectural feature, however, that is consistently mentioned in the discussion of principal Guale Towns: the council house (San Miguel [1597] 2001; Francis and Kole 2011). Fray Andres de San Miguel visited the Guale town of Asao (center of the Asao/Tupiqui

chiefdom identified by Jones [1978]) in 1597 and described the council house in which he and his companions slept. He described the structure as a circular structure made out of "entire pine trees" which came together in a point to form the framework of the roof (San Miguel 2001). He notes that beds lined the walls and estimated that as many as 300 men could sleep within this community building (San Miguel 2001). During the Guale rebellion of 1597, council houses became the targets of aggression by enemy combatants. Starting in 1595, the Franciscan order established missions within five principal Guale towns: Guale Island (St. Catherines), Tolomato, Talapo, Tupiqui, and Asao (Francis and Kole 2011). After the friars were murdered and the Spanish began their investigation, it soon became clear that not only had the rebel Guale war party burned the mission buildings at these principal towns, they had also burned the council houses at several of these locations but not others. Among the burned council houses was the one located at the principal town of Tolomato (administrative seat of the Guale/Tolomato chiefdom identified by Jones [1978]). Francis and Kole (2011) find this odd because the Spanish believed it was Juanillo, the chief of Tolomato, that incited the rebellion.

Juanillo was next in line for the title of Mico Mayor, the paramount chief of all the Guale chiefdoms. The missionaries intervened and prevented his succession in favor of another chief by the name of don Francisco. The Spanish believed that this angered Juanillo to a point to incite the other Guale chiefs into open rebellion against the Spanish in 1597, resulting in the deaths of five friars and a lay brother (Swanton 1922; Francis and Kole 2011). By 1601, all the Guale chiefs had surrendered to the Spanish with the exceptions of Juanillo and don Francisco who went into hiding at a location identified as Yfusinique, located further towards the interior (Swanton 1922; Francis and Kole 2011).

The Spanish put the chief of Asao, don Diego, in charge of a Guale war party aimed at bringing Juanillo and Francisco to justice. Diego's force successfully completed their task, and reportedly brought the scalps of both Guale rebels to Governor Mendez de Canzo, at which point don Diego was appointed the new Mico Mayor of the province of Guale (Swanton 1922; Francis and Kole 2011). Francis and Kole (2011) suggest that the balance of power within Guale chiefdoms was far less stable than suggested by Jones (1978) and more akin to cyclical rising and falling of polities such as that proposed by Hally (1993). Based on their interpretation of the ethnohistoric evidence, the Juanillo Revolt of 1597 was more of an inter-chiefdom conflict in which the Spanish became embroiled than a revolt against their authority. The council house and Juanillo's own home at Tolomato were burned prior to the Spanish investigation. This may have been the result of an attack by don Diego as he tried to establish himself as a paramount chief by force. Diego's council house at Asao, the very same one described by San Miguel, was suspiciously unharmed (Francis and Kole 2011). During the hostilities of 1597, Diego was also reported to have led a failed invasion against the Mocama mission on Cumberland Island while wearing the clothing of a murdered friar and brandishing a gun known to have belonged to the missionary (Francis and Kole 2011).

If this interpretation is true, then don Diego specifically targeted council houses as a symbol of the paramount village's administrative authority. During the Spanish investigation, principal and lesser villages were visited and the damage at each is described (Francis and Kole 2011). They also describe the buildings that were burned at each village during Spanish reprisal. The Spanish describe only council houses during their visits to principal towns, at lesser towns they specifically mention residential

structures, storehouses, and horticultural plots (Francis and Kole 2011). If this analogy can be applied to the pre-contact Guale, then the archaeological signature of a large circular council house will be the tell-tale indicator of a principal town within an Irene phase chiefdom. Unfortunately, the only clear example of this that has been documented at an Irene occupation so far is the rotunda at the Irene site. This lack of council houses is likely do to the level of horizontal exposure necessary to identify such a feature. Investigation at Irene habitation sites suspected of principal towns of a chiefdom will need to include more broad scale excavation or advanced remote sensing in order to identify these community structures. Once several Irene council houses can be uncovered, a pattern may be recognized for their location and excavations can more effectively target them.

A Coastal Late Mississippian Chiefdom Model

As noted earlier in this chapter, the primary research question that has driven this investigation was to identify what type of Mississippian site is represented at Lincoln Trail. Addressing this question actually implies a broad secondary question: What type of chiefdoms were found on the northern Georgia coast during the Late Mississippian? Based on the previous review of Mississippian chiefdom models for the Southeastern U.S., it is clear that these were almost always devised based on site data collected from the South Appalachian region or elsewhere within the interior Southeast (Anderson 1994; Hally 1993, 1999, 2006, 2008; Holley 1999; Steponaitis 1986). In this region, Mississippian polities are focused within river floodplains and followed the nucleated settlement strategy that was previously described (Hally 2006; Hally et al 1986; Holley 1999). These areas are environmentally circumscribed, in the sense that the resources

(such as fertile soil for intensive maize horticulture) necessary for sedentary lifestyle are concentrated within the floodplains themselves. Outside of these zones, the resources necessary to sustain settlement are only seasonally available and population movement is necessary to effectively exploit them (Milner 2004; Hally 1993). Can these general chiefdom models be directly applied to the northern Georgia Coast where access to resources is spread over a broad area? Groups living in this environmental zone followed a dispersed settlement strategy. Specifically, strategies such as Jones' (1978) dispersed town seemed to have been employed here during the Late Mississippian Irene phase. How do these groups fit into a general chiefdom model, and how can these coastal polities be recognized archaeologically? This section proposes to create a testable model for Late Mississippian chiefdoms on the northern Georgia coast. Perhaps a summary of the elements proposed for this model is appropriate here.

Earlier in this section, the archaeological signature of the Irene dispersed town is proposed as a series of Irene phase occupations of varying complexity clustered around a large habitation site identified as the village core. This village core will likely stand out from the other Irene sites in the cluster based on its larger site area and characteristic community architecture. While layout data is somewhat scant for the Irene villages documented thus far, it does seem there are a few common elements among those sites that have undergone large-scale investigation. These include extensive evidence of a resident population (clusters of middens, structural features, etc.), community buildings, plazas or other public space, and burial mounds.

These clusters represent separate dispersed towns that compose a chiefdom. Presently, it is unclear how many of these dispersed towns make up a chiefdom or over

what geographic extent such a polity may hold sway. Jones' (1978) ethnohistoric interpretations suggest that Guale chiefdoms extended across broad areas; however, their size and number of subject towns varied over time. It is also clear, based on the documentary record, that one and maybe two of these towns were ranked above the others within a single chiefdom. Ethnohistoric sources suggest that these "principal" Guale towns were identifiable by the presence of large circular council houses. To date, the Rotunda at the Irene Site is the only archaeological example identified for an Irene phase site; however, additional broad scale excavation or shallow geophysics at other large Irene villages may help identify other examples and refine the use of this architecture as an indicator of a principal town.

So, explicitly stated, a coastal Irene chiefdom will be composed of one or more contemporaneous dispersed towns, in relative spatial proximity to one another. Each of these dispersed towns will contain a single village core, characterized by community architecture and a relatively large residential population. In addition to the village core, each dispersed town will have associated sites of lesser architectural complexity, such as hamlets, farmsteads, and resource-procurement sites. Each dispersed town will appear as a geographic cluster, covering perhaps approximately seven kilometers.

Given this model, it is posited that the Lincoln Trail site represents a village core of a dispersed town located within the southeastern portion of the Richmond Hill Wildlife Management Area. The following chapter explores the environmental variables that make the setting of 9BN17 an ideal location for a dispersed town center. Chapter 5 provides a review of the other possible dispersed towns identified along Bryan Neck and anchors the Lincoln Trail Site within the framework of a regional polity. Finally,

Chapters 7 and 8 present the results of the field investigation and interpretations that inform a hypothesis for an Irene phase chiefdom based on Bryan Neck.

CHAPTER 3
ENVIRONMENTAL SETTING

Any study of past sociocultural systems must consider the role of the natural environment in influencing human settlement and behavior. Pearson (1977) and Thomas (2008) posit that environmental factors are among the driving forces behind Late Mississippian settlement patterns in coastal Georgia. The following section provides a detailed description of the environmental variables present at the Lincoln Trail site and within its immediate vicinity that affected the Irene phase settlement and site patterning. The description will attempt, as much as possible, to portray the environmental conditions of the pre-contact period and identify the types of environmental variables and resources considered influential to aboriginal selection and use of the site (Pearson 1977).

Physiography

The Lincoln Trail site is located in coastal Georgia within the Barrier Island Sequence of the Coastal Plain province. The barrier islands are characterized by a chain of geologically- young accumulations primarily formed through late Pleistocene and early Holocene sea level fluctuation, sedimentation, and estuarine erosion (Pearson 1977). This zone also includes a five to ten kilometer-wide strip of the adjacent mainland that was formed through similar processes and appears environmentally and culturally similar to the barrier islands (Pearson 1977). This region is best described as a series of marine terraces which formed as a result of the advance and retreat of Pleistocene sea levels (Hodler and Schretter 1986). These step-like terraces of decreasing elevation form parallel to the present coastline and culminate in a series of relict dunal ridges that

separate low-lying inland systems from the salt marshes associated with the current barrier island setting. 9BN17 is located at the southern extent of a dunal ridge along a Pleistocene terrace which forms the southeastern corner of Bryan Neck. This setting provided access to a variety of ecological patches within a relatively small area. By settling landforms such as these, prehistoric populations were able to take advantage of varied and diverse resources at an efficient rate of energy expenditure and without the need for residential movement. This physiographic zone is bordered to the west by a broad, relatively flat zone characterized by pine forest known as the Pine Barrens (Pearson 1977).

Biotic Communities

Pearson (1977) identifies three distinct ecozones which made up the aboriginal landscape of Ossabaw Island: the beach or strand, the island uplands, and the marsh estuary. The upland and marsh estuary zones apply directly to an environmental discussion at Lincoln Trail along with a third distinct ecozone, referred to here as the interior wetland.

The upland zone at Lincoln Trail refers to the vast majority of the total area within the site boundaries themselves. These uplands represent a portion of ridge that extends from the southeastern tip of Bryan Neck to an inlet south of the Bryan fisherman's Co-op for a distance of around five kilometers. This zone is characterized by maritime live oak forest and based on Johnson et al. (1975), it seems it has changed relatively little since its aboriginal habitation. Live oaks tend to dominate upland forests of this type due to their tolerance for xeric conditions and resistance to the salt spray (Pearson 1977). Johnson et al. (1975) also point out that these forests are typically quite

stable due to the long life-span of the tree and its ability to out-compete other climax species. Live oaks and other hardwoods within the maritime hammocks of coastal Georgia provide mast: an important direct source of food for aboriginal groups and game animals, such as white tailed deer, which were also exploited. Forests of this type establish themselves within areas of moderately well-drained to well-drained soil types, considered suitable for limited horticulture (USDA 1974).

The marsh estuary forms the ecozone immediately east of Lincoln Trail and is comprised of the salt marsh associated with the confluence of Lincoln Creek and the Kilkenny River (Figure 3.1). These marshes were formed as a result of sedimentation deposited by the fresh water rivers, a process which continues slowly today (Pearson 1977). The marsh is dissected by an extensive system of tidal creeks which provided aboriginal inhabitants a system of transportation as well as access to important resources. Tidal fluctuation also played a big role in the way aboriginal groups used the marsh estuary. The range of fluctuation along the northern Georgia coast is among the highest on the eastern coast of the United States and would have dramatically affected access to resources and aboriginal boat travel. The size and location of these salt water creeks seemed to have played a prominent role in the location of aboriginal habitation sites within the coastal zone. The recorded boundaries at Lincoln Trail indicate that immediate access to small tidal creeks was available during high tide at several locations along the eastern site boundary. If the site can be correctly presumed to extend to the north and south, then adjacent access to the main channels of the Kilkenny River and Lincoln creek would have been possible (Figure 3.1). The marsh estuary zone also likely provided access to some of the most important food resources available to the residents of

Lincoln Trail in the form of abundantly available species of fish, crustaceans, and shellfish such as the eastern oyster.

The final ecozone of importance at the Lincoln Trail site can be referred to as the interior wetland. This distinct biotic community forms the western boundary of the site where the uplands slope into a shallow slough that culminates in a salt marsh to the southeast of the site associated with a tidal tributary of Lincoln Creek (Figure 3.1). This zone is characterized by poorly drained soil types which support a canopy of pine, water oak, red maple, sweet bay, and magnolia, with an understory of palmetto. At least two locations within this ecological zone seem to have held freshwater ponds. These hydrological features were likely once fed by non-artesian, surficial water and may have even been small, artesian fed seep heads. A broader inspection of the view provided by the 2009 Aerial LiDAR data indicates that several other similar features can be found along either side of the interior wetland slough. This may indicate that the slough was once a freshwater swamp or even a flowing stream. In any case, this zone likely provided an important source of fresh water during the aboriginal (and even historic) occupations of Lincoln Trail.

Hydrology

The most obvious hydrological features in the immediate vicinity of the Lincoln Trail site are Lincoln and Cubbage Creeks, and the Kilkenny River (Figure 3.1). Lincoln and Cubbage Creeks merge approximately 0.5 miles southeast of the site and continue toward their confluence with the Kilkenny River 0.78 miles east of the site eventually converging onto the Bear River one mile to the east (Figure 3.1). These hydrological

features and their associated salt marsh provide the productive estuarine environment that was clearly important for the sustenance of the site's residents.

Just beneath the surface, however, lies an even more important hydrological resource: the Floridan Aquifer. This deeply buried stratum of Eocene-age limestone, dolostone, and calcareous sands extends from South Carolina to Florida, and as far inland as Alabama (Thomas 2008). The aquifer represents one of the most productive groundwater reservoirs in the United States and is separated from the ground surface by as much as 600 meters of sedimentary strata and 150 meters of sand and clay in some areas; however, in areas near the Savannah River it is quite shallow and under a layer of only 15 to 50 meters of sand (Thomas 2008). Under ideal conditions, the aquifer is confined and the water within it is under positive pressure or under "artesian conditions." Above the pressurized aquifer was a surficial reservoir of groundwater trapped within the sand and clay soils. This water table lacked the hydrostatic pressure to achieve artesian flow; however, in areas where the water table is higher than the ground surface, it accumulated in ponds or swamps. Prior to the late 19th century, this "nonartesian" water provided the primary source of fresh water for Georgia's coastal inhabitants (Thomas 2008; Stephenson and Veatch 1915; Krause and Clark 2001). Around this time, however, increased development and population densities along the coast called for more productive and reliable water sources and artesian wells were created throughout the coastal zone. The magnitude of the impact of this drilling into the Floridan aquifer is only beginning to be understood. The hydrostatic pressure was lowered across the entirety of the karstic formation and low pressure "cones" were created in areas of high population density. These were so bad in some areas that the lack of positive pressure

allowed for salt water contamination in portions of the aquifer (Warren 1944; Thomas 2008). As a result of this impact, many freshwater springs no longer flow, and freshwater ponds and wetlands that were fed by the Upper Floridan aquifer have long since gone dry (Thomas 2008). Even ponds fed by the nonartesian reservoirs were affected as surface waters percolated downward into the aquifer which would have once remained surficial due to the hydrostatic pressure.

The signature of several former freshwater ponds seems to be present at Lincoln Trail. Most notably, two elliptical-to-round depressions are clearly visible on the 2009 LiDAR map (Figure 3.1 [1 and 2]) along the western slope of the site's landform. These likely represent instances where surficial water from the surrounding high ground was able to accumulate and provide a fresh water source. Alternatively, in times of higher hydrostatic pressure, these may have been artesian-fed seep heads and the linear wetland along the western portion of the site may have been a freshwater swamp. There is also a tidally-influenced inlet or lagoon within the east-central portion of the site. Currently, this appears as an elliptical low area that is connected to the marsh by a narrow stream which meanders toward a larger tributary of Lincoln Creek (Figure 3.1 [3]). Prior to the drop in artesian pressure, this low spot also collected accumulated surface water and provided convenient access to fresh water. The eastern edge of this resource is associated with a dense sheet midden which artificially forms an extensive part of the current shoreline at this location. The stream connecting the interior water source likely formed later through erosion, as evidenced by the fact that it seems to have eroded through the midden. This midden may have been purposely accumulated at this location to help protect the fresh water source from the encroaching marsh. A similar phenomenon has

been suggested for the Hammerhead Point Site (9BN887) located near Genesis Point (Sipe 2013).

Thomas (2008) reports similar hydrological conditions on St. Catherines Island; specifically, a large pond located within the north-central portion of the island was believed to have been an important fresh water source. The signature of this pond can still be seen by the distribution of poorly-drained Rutledge fine sands (Thomas 2008). Soils of this type are described as commonly flooded and occurring in shallow depressions and bays with high organic matter. At Lincoln Trail, these features seem to be associated with poorly drained Leon fine sand (Figure 3.2). The Soil Survey of Bryan and Chatham Counties, Georgia (USDA 1974) describes this soil type as being high in organic matter and found in areas where the water table is high but fluctuating. These descriptions are quite similar and likely represent similar soil types.

Ethnohistoric sources indicate that the importance of these freshwater ponds are far from theoretical. Fray Andres de San Miguel writes of his experience of running out of water two days before being shipwrecked (near present day Wolf Island) (San Miguel 2001). He reports that upon coming ashore, his group was "diligent in search for it [and] no great effort was necessary because the merciful goodness of God provided it soon from some pools we found close to where we landed" (San Miguel 2001). He also goes on to describe the availability of non-artesian surface water after digging "a little hole that we made on the beach up to three yards away from the sea, where we found sweet and very good water" (San Miguel 2001). Jonathan Bryan's visit to St. Catherines Island in 1753 provides another description of these fresh water sources (Thomas 2008). Bryan describes the middle of the island as "a perfect Meadow being a large Savanna of about a

Mile or Mile and half wide and for or five Miles long, and finely water'd with Springs" (in Thomas 2008). These descriptions confirm the presence of abundant and easily accessed fresh water along Georgia's coastal zone and it is no surprise that prehistoric deposits associated with every aboriginal occupation at Lincoln Trail are most heavily concentrated around these hydrological features.

Soils

Based on the Soil Survey of Bryan and Chatham Counties, Georgia, the boundaries of the Lincoln Trail Site intersect with four distinct soil types. The majority of the site, which corresponds with the upland portions of the Pleistocene ridge, is comprised of moderately well-drained Chipley fine sand and excessively drained Lakeland sand. This division occurs almost directly across the crest of the ridge. Excessively drained soil is associated with the eastern slope near with the marsh. The moderately-well drained sand forms the western portion of the ridge that slopes into a linear band of wetland that forms the western boundary of the site (Figure 3.2). The soil survey indicates that this wetland is associated with the same formation of Chipley fine sand as the upland ridge. Perusal of the 2009 Aerial LiDAR survey, as well as the shovel testing, however, indicates that this soil would likely be more accurately associated with the pocket of poorly drained Leon fine sand mapped just west of the wetland. The map also depicts a pocket of poorly drained Leon fine sand within the northeastern corner of the site; however, the present investigation has determined this to be erroneous as this portion of the site appears to be comprised of moderately well-drained to excessively drained sand. The southwestern portion of the site is depicted within a pocket of poorly drained Olustee fine sand.

Modern Conditions

As noted above, the Lincoln Trail site occupies a vacant, wooded tract within the southeastern portion of the Ricmond Hill WMA property. Currently, the tract is heavily wooded with a moderate-to-dense understory of palmetto. Historic and modern impacts to the site have been relatively few, with the most notable exception being the construction of the paved road known as Lincoln Trail across the top of the ridge formation. During the initial recordation of the site, Pearson and DePratter noted that the construction of the road (a dirt road at that point) impacted several shell middens, and they recorded a surface scatter of artifacts within the road that extended almost a mile. At present, shell and artifacts can still be found within the right-of-way on either side of the modern road. Other impacts to the site include a shallow ditch oriented east-west across the central portion of the site and a north-south oriented ditch along the western boundary of the site within the interior wetland. These ditches can likely be attributed to drainage projects initiated by Henry Ford (Sullivan 2000). The north-south ditch also likely played a major role in changing the hydrological conditions of the interior wetland swamp. The signature of a former road can also be detected within the northern portion of the site. This may represent a former route of Lincoln Trail or perhaps a logging road that preceded the construction of the public road. The construction of only one structure has ever been documented within the boundaries of the Lincoln Trail site. This was the home of the Cubbedge family who acquired the land in the late 1740s and established Lincoln (or Linkhorn) Plantation (Sullivan 2000). A concentration of tabby debris was encountered within the east central portion of the site and is believed to be the remains of the 18th century Cubbedge home. Cursory investigation of this portion of the site

indicates that impacts associated with the construction of this house were apparently minor. Overall, the site does not appear to have undergone significant silvicultural or agricultural activity and remains largely intact.

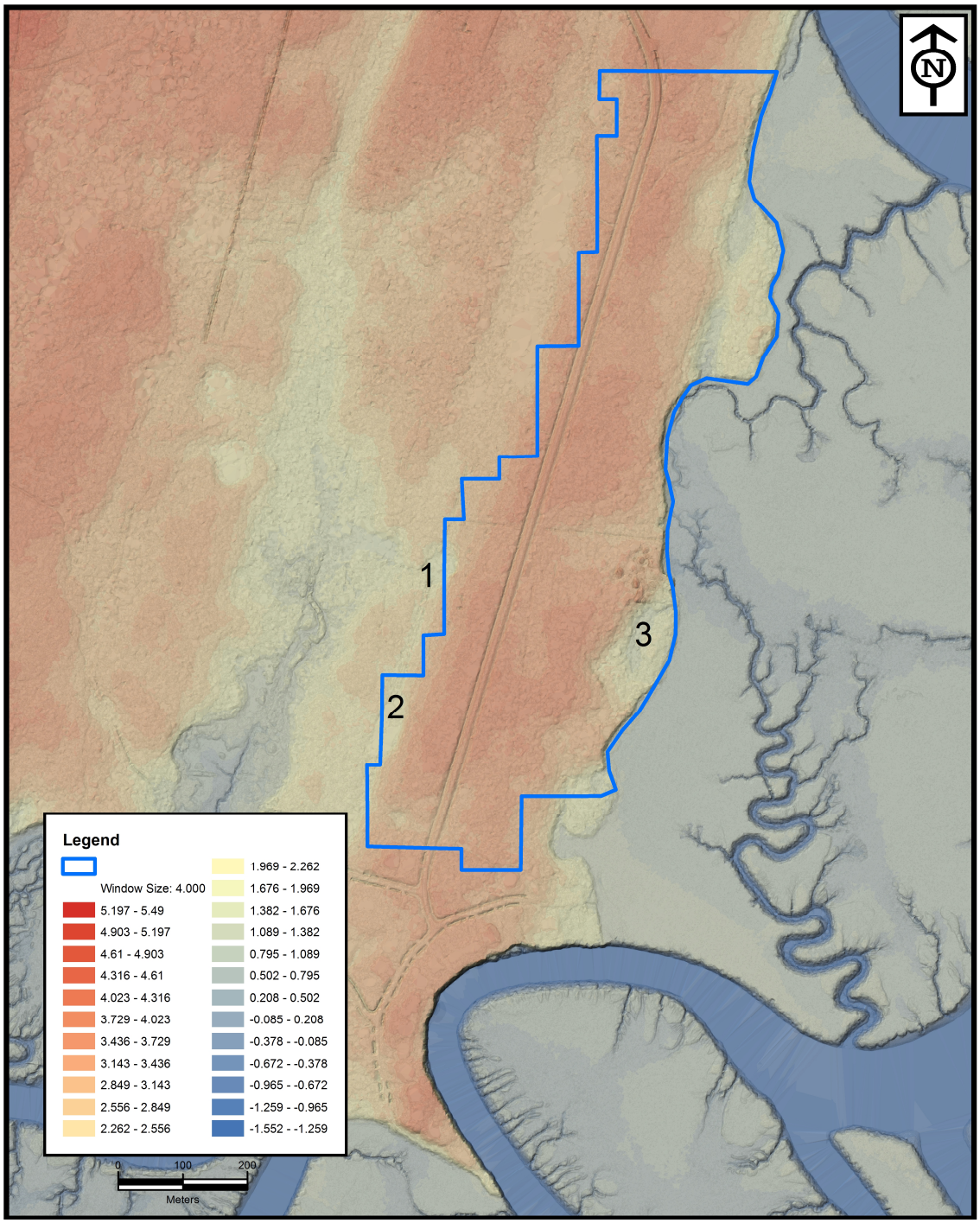

Figure 3.1: 2009 Aerial LiDAR Map of Lincoln Trail

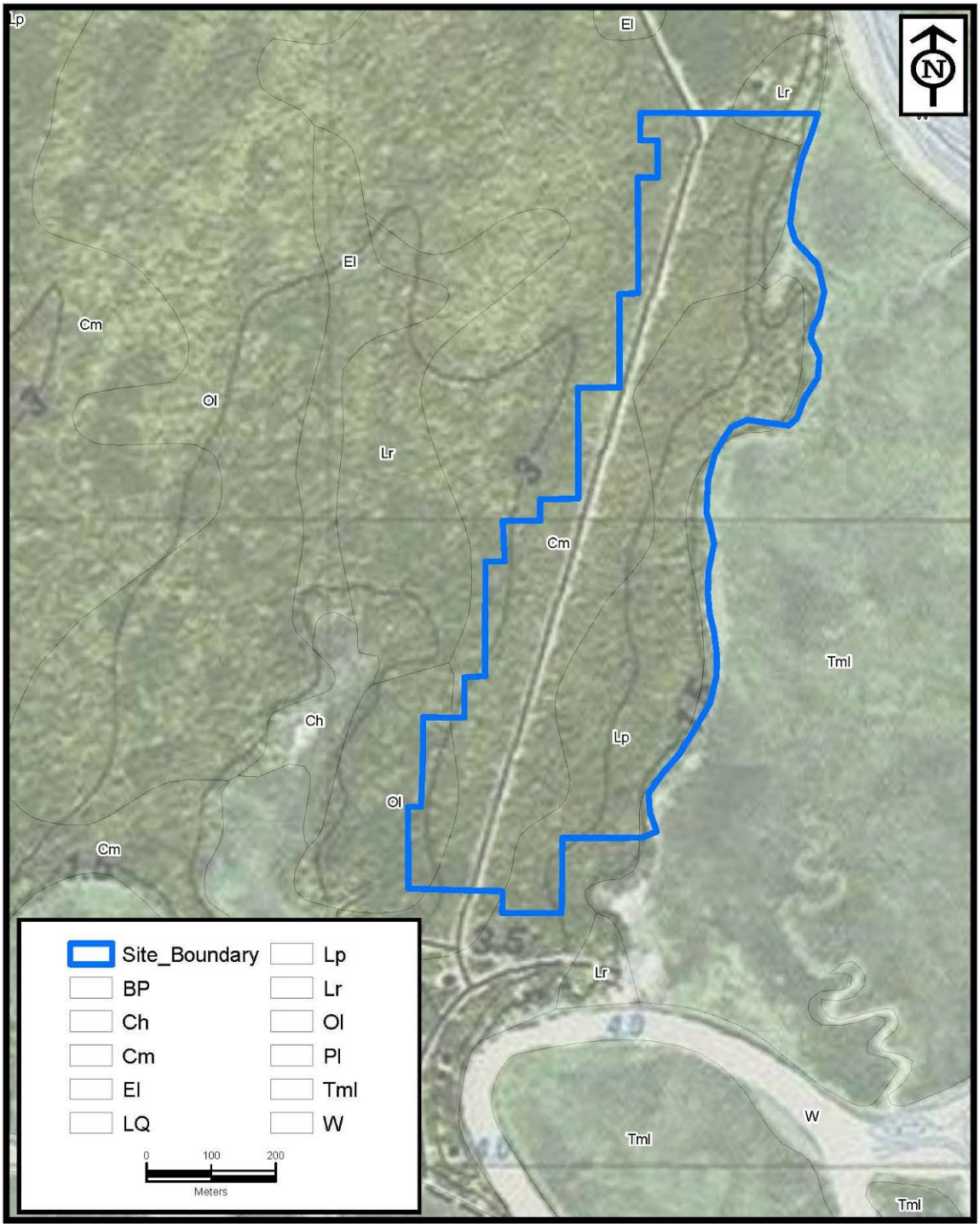

Figure 3.2: Soils Map

CHAPTER 4

REGIONAL CULTURE HISTORY

The following review of coastal Georgia's regional culture history is to serve as a framework for the understanding of patterns of human settlement within the vicinity of the study area. Five broad chronological periods are used to characterize the Native American history of coastal Georgia, which spanned over 12,000 years. Each of these periods is based on distinct cultural and technological developments that can be recognized in the archaeological record. These periods include Paleoindian, Archaic, Woodland, Mississippian, and Contact/Mission and span from at least 10,000 BC to the late 17th century AD; however, sites dating to the Paleoindian and Early Archaic are somewhat underrepresented within the coastal region. Table 4.1 summarizes the Native American prehistory of coastal Georgia.

Investigations at the Lincoln Trail Site have revealed occupations dating to three of the five periods including a Late Archaic component of moderate size, a sparse Woodland component, and a heavily occupied Late Mississippian habitation site, which is the primary focus of this study. The site also revealed a non-aboriginal component associated with Georgia's Early British Colonial Period as well as its Early American Period. This overview will provide a brief outline of each of the Native American periods for coastal Georgia as well as a more detailed account of the periods with occupations represented at the site. It closes with a summary of the documentary research conducted to identify the historic occupation of the site and place the study area within the broad historical development of the Bryan Neck area.

Table 4.1: Prehistory of Coastal Georgia (adapted fromAnderson et al. 1990; Elliot and Sassaman 1995; Saunders 2000; Worth 2007; and Thomas 2008)

Cultural Period	Temporal Placement
Paleoindian	~10,000 - 8,000 BC
Archaic	8000 - 1000 BC
Early	8000 - 5000 BC
Middle	5000 - 2500 BC
Late	2500 - 1000 BC
Woodland	1000 BC - AD 1000
Refuge	1000 - 500 BC
Deptford	500 BC - AD 500
Swift Creek	AD 500 - 700+
Wilmington	AD 700 - 1000
Late Woodland/Mississippian	AD 900 – 1100
St. Catherines	AD 900 – 1300*
Mississippian	AD 1000 - 1550
Savannah	AD 1000 – 1300*
Irene	AD 1300 - 1580
Contact & Mission	AD 1580 - 1685
Altamaha	AD 1580 - 1685

***St. Catherines ceramics seem to replace Savannah on St. Catherines Island and seemingly on portions of Bryan Neck during the Early Mississippian**

Paleoindian Period

The Paleoindian period encompasses the earliest human occupation in the Americas and spans from a commonly accepted date of around 10,000 BC to approximately 8,000 BC. This time frame corresponds with the end of the Pleistocene as it transitioned into the Holocene; a time known for changing climate, lower sea levels, and the dwindling presence of mega fauna. The paleoindians themselves were nomadic hunters that likely supplemented their carnivorous diet by gathering various edible plants. In Georgia, the period is typically divided into three sub-periods: Early (ca 10,000-9,000 BC), Middle (ca. 9,000-8,500 BC), and Late (8,500-8,000 BC) based on diagnostic stone point types (Anderson et al. 1990).

Anderson et al. (1990) have plotted the distribution of Paleoindian artifacts in Georgia and revealed that these artifacts seem to be concentrated in the southwestern and north-central part of the state. Lithic tools associated with past hunting and butchering activities are the most commonly detected Paleoindian implements due to preservation and site visibility biases in the archaeological record. Diagnostic spear point types found in Georgia include Clovis, Simpson, Suwannee, Cumberland, Beaver Lake and Dalton (Anderson et al. 1990). Paleo material is extremely rare on the Georgia Coast due to the apparent sea level differential; however, Cook (1971) reports the location of a single Clovis point eroding from the bluff at the Sevenmile Bend Site (9BN7), just seven miles northwest of 9BN17.

Archaic Period

The environment of the Archaic Period is characterized by a warmer climate and rising sea levels. Human Populations tended to increase during this period, and regional, environmentally specific adaptations resulted in distinct material assemblages (Smith 1986). Subsistence strategies were varied during this period but generally focused on the procurement of smaller game, fish, and wild plants as the mega-fauna were no longer available. Anderson and Hanson (1988) proposed that Archaic Period residents of the Savannah River basin traversed the river basin in a highly organized seasonal settlement strategy that culminated in the formation of annual aggregate groups along the Fall Line during the fall. Regional specialization increased along with interregional variation. Sedentism became more common over time and a variety of site types began to appear including base camps or villages, short-term encampments, procurement camps, and cemeteries (Milner 2004). This temporal span is subdivided into Early, Middle, and Late

periods based on distinct projectile point typologies and other material culture. Occupations dating to the Early (8,000 – 5000 BC) and Middle (5000 – 3,000 BC) periods are under-reported within the Bryan Neck region. Late Archaic (3,000 – 1,000 BC) activity is common across Bryan Neck and at the Lincoln Trail site itself.

Early (8000 – 5000 BC)

The Early Archaic is characterized as a time of great transition from the Pleistocene epoch to Holocene environmental conditions. Diagnostic projectile points associated with this period are typically corner-and side-notched types such as the Palmer, Taylor, and Kirk hafted bifaces. These are found throughout southeastern North America. An increased nutritional reliance on plant sources is suggested by the occurrence of vegetal processing tools such as nutting stones, manos, metates, and utilized cobbles. Man of these have been recovered in South Carolina and Georgia (Anderson and Schuldenrein 1983; Goodyear et al. 1979).

The settlement patterns of the Early Archaic are marked by a trend away from the mobile lifestyle of the hunter-gatherer bands of the Paleoindian period toward more specialized lifeways (Anderson and Hanson 1988). The evidence of this phenomena can be found in the repeated use of new and specific environments such as rock shelters and inter-riverine terraces and ridge tops.

Middle (5000 – 3000 BC)

The middle part of the Archaic in southeastern North America can be further subdivided into three phases based upon diagnostic projectile point types from the Piedmont: the Stanly, Morrow Mountain, and Guilford phases (Coe 1964). Sassaman (1985) added a fourth, transitional phase to this period known as the Late Middle Archaic

phase based on the occurrence of distinctive MALA (Middle Archaic to Late Archaic) hafted bifaces. Middle archaic lithic assemblages are also characterized by a shift away from the use of cryptocrystalline rock to coarser, locally available lithic materials in the coastal plain (Milner 2004). This indicates an increased reliance on localized settlement and a decrease in interregional mobility.

Late (3000 – 1000 BC)

Just as the previous period, the Late Archaic can be divided into distinct phases based upon diagnostic artifacts. Coe (1964) proposes distinct phases based on the following stemmed point types from oldest to most recent: Savannah River, Otarre, Kiokee, Broad River, and Gary points. Other Late Archaic lithic artifacts include grooved axes, cruciform drills, and steatite vessels. A continued emphasis on sedentism develops throughout the Late Archaic and evidence of increased social complexity and long distance trade becomes more common. The earliest evidence of plant cultivation also occurs in the Southeast during the Late Archaic (Yarnell 1993; Milner 2004).

The most significant new development which takes place during the Late Archaic occurs at around 2500 BC and represents the apogee of Smith's (1986) "Container Revolution": fired clay pottery (Sassaman et al. 1993). These earliest ceramics were first produced in the Savannah River valley and along the northern Georgia and South Carolina coasts and are easily recognized by a characteristic paste tempered with vegetal fiber and occasionally sand. Ceramics of this type were molded by hand into bowls of various sizes and shapes (Waring 1968; Bullen 1972; Milanich and Fairbanks 1980). Pottery types affiliated with this development are known as Stallings Island within the Savannah River Valley and St. Simons along the coast.

Waring (1968) and Russo (2006) have identified three site types associated with the Late Archaic occupations of the Georgia-Carolina coast: scattered occupations or camps along marsh edges, large and small marsh middens, and deliberately shaped middens known as shell rings. The Late Archaic component at the Lincoln Trail site may be at least partially classified as the third type, and will be discussed in further detail in Chapter 7.

Late Archaic shell rings are interpreted as monumental structures composed of dense shell midden, including domestic debris (Russo 2006). The shapes of these features include circles, ovals, and open ended "U" or "C" shaped designs that range between 30 and 250 meters in diameter. Some shell ring features include multiple ring formations and accumulated shell between 1 and 6 meters in height (Russo 2006). The midden deposits themselves delineate a shell-free plaza within the interior of the architectural feature that helps distinguish these sites from other midden accumulations.

Three general functional models have been proposed for Late Archaic shell rings. Trinkley (1985) and later Thompson (2007) proposed that households arranged in circular communities accumulated shell gradually within their trash middens and as the middens grew, they blended together to form a ring-like shape. Saunders (2002) notes that the assemblages at shell ring sites differed from those at non-ring habitation sites, showing a tendency towards more specialized or possibly ceremonial activities. She proposes that these rings represent evidence of episodic feasting and/or intentional accumulation of midden in formation as part of ceremonial activities (Saunders 2002). Russo (2006) posits a third model, which concludes that both residential and ceremonial functions occurred at these sites, but perhaps not simultaneously. He notes that the ring

portion of the midden itself is made up of whole, clean oyster shell, which he interprets as evidence of mass, rapid consumption indicative of feasting. Beneath the shell ring, however, Russo (2006) notes that one often finds evidence of habitation in the form of cooking and storage pits filled with whole and broken oysters. Layers of organically-stained soil which contain crushed oyster shell and other faunal material are also frequently encountered beneath the rings; and are interpreted as living floors. Based on this, Russo (2006) and later Thompson (2007) conclude that shell ring sites underwent stages of development, possibly going through successive periods of habitation and ritual feasting.

There are more than 50 known shell ring sites along the Atlantic Coast of the Southeastern United States, including examples that extend across the entire Georgia coastline (Sanger 2010; Ogden 2011). The closest of these features to Lincoln Trail are located on St. Catherines Island, approximately eight miles southeast of the study area (Sanger and Thomas 2010; Ogden 2011). These include contemporaneous constructions known as the St. Catherines Shell Ring (9LI231) and the McQueen Shell Ring (9LI648), located on tidal marshes on opposite sides of the island (Sanger and Thomas 2010). The St. Catherines Shell Ring (SCSR) was identified on the western side of the island adjacent to the salt marsh associated with an unnamed tributary of Cattle Pen Creek. It represents an almost perfect circle of oyster shell that stands approximately one meter high and measures 70 meters diameter from the two exterior edges (Sanger and Thomas 2010). Excavation revealed that the feature accumulated in three stages based on radiocarbon assays (Sanger and Thomas 2010). These stages included a series of shell pits that were deposited prior to the ring formation around 2540 to 2290 cal B.C.; the

accumulation of the ring itself around 2230 to 2030 cal B.C.; and finally a set of large, flat-bottomed circular pits were dug within the interior of the ring sometime around 2410 to 2210 cal B.C. (Sanger and Thomas 2010). The McQueen Shell Ring (MQSR) was recorded on the eastern side of the island on a formation known as McQueen Hammock. This feature was determined to be oblong in appearance but almost the same general size as the SCSR (Sanger and Thomas 2010). Excavation within the MQSR revealed very similar features and a high degree of overlap in the radiocarbon sequence suggestive of contemporaneous use with the SCSR (Sanger and Thomas 2010). The artifact assemblages recovered at each site turned out to be very different, however. The SCSR revealed primarily utilitarian debris such as plain fiber tempered pottery, lithics from nearby sources, and a high incidence of baked clay objects (Sanger and Thomas 2010). The MQSR has St. Simons pottery that was elaborately decorated with punctate and incised designs, a diverse lithic assemblage, and almost no baked clay objects (Sanger and Thomas 2010).

The proximity (separated by only 2 km) and contemporaneity of these two features on St. Catherines Island implies that shell rings likely served multiple roles in the Late Archaic world of the Southeastern U.S. (Sanger and Thomas 2010). More investigation is sorely needed at these sites and others along the Atlantic Coast in order to develop these models. Almost no work has been conducted at the LTSR thus far; however, initial observations suggest that it is smaller than those on St. Catherines Island. Perhaps additional work at Lincoln Trail will help tease out the role of morphological variation and function at these unique coastal features.

Woodland Period

As a general theme, many of the advances seen in the Late Archaic began to intensify during the Woodland Period. Pottery, a geographically isolated phenomenon during the Late Archaic, becomes common throughout the Eastern U.S., and variations become regionally specific (Milner 2004). Population continued to increase in the southeast during the Early and Middle Woodland and the emphasis on sedentism became even more pronounced, which continued to promote regional variation in material culture. Elaborate earthworks are built in many locations throughout the southeast during this period and in many cases, significant members of the communities can be identified by their elaborate burial treatments (Milner 2004). As before, discussions of the Woodland Period are typically broken up into Early (1000 BC to AD 0), Middle (AD 0 to 500), and Late (AD 500 to 1000) based on diagnostic artifacts. In coastal Georgia, however, the line between Early and Middle Woodland is somewhat blurred. The following discussion presents a brief description of Woodland occupations of the Georgia coast in the form of Early (1000 BC to AD 700) and Late (AD 700 to 1000) Woodland occupations. No material dating to the Early Woodland has been recovered at the Lincoln Trail site thus far.

Early (1000 BC – AD 700)

In coastal Georgia, the earliest years of the Woodland are most often associated with the ceramic traditions known as Refuge and Deptford. Refuge pottery began replacing its fiber tempered predecessors around 1000 BC. Pottery of this type is tempered with sand, presumably to produce a more durable final product (Waring 1968; DePratter 1979). It often displays decorative treatments similar to those which were

identified on St. Simons vessels, including incising and often elaborate punctated patterns. This similarity has led many to suggest an evolutionary link between Refuge and St. Simons pottery traditions; however, Refuge is often referred to as a transitional type and remains poorly understood.

The more widely-studied Deptford pottery seems to supplant Refuge traditions by about 500 BC and continues to around AD 600 on the Atlantic coast, straddling the accepted boundary between Early and Middle Woodland elsewhere in the Southeast (Milanich 1971, 1973). Deptford groups are thought to represent a continuation of the coastal way of life that was well established in Georgia, even by the Late Archaic. Deptford communities likely focused on the exploitation of estuarine and maritime resources and were typically established on maritime hammocks near tidal marshes. Life within these communities may have revolved around a seasonal movement between inland river valleys and the coast (Milanich 1973); however, investigations in barrier island settings suggest a largely sedentary lifestyle (Thomas 2008).

The characteristic Deptford ceramic type is defined by a sand and/or grit-tempered paste and sherds can be plain or simple stamped, but are most frequently check stamped (Caldwell and Waring 1968; DePratter 1991). Check stamping on these vessels is often recognizable as a bold or linear stamped variety. Deptford sites are commonly reported in Chatham County, in fact the Deptford type site (9CH2) was identified in Chatham County and was excavated by the WPA.

Swift Creek is another Woodland era ceramic tradition frequently found on the southern Georgia coast, though not commonly within the immediate vicinity of 9BN17. As a broad term, Swift Creek refers a diverse set of Woodland era peoples who made

characteristic complicated stamped pottery from the Gulf Coast of Florida to the Atlantic coast of southeastern Georgia and northeast Florida (Williams and Elliot 1998). This pottery was in production across this vast geographic zone from as early as AD 100 in northwestern Florida and as late as AD 850 in northeastern Florida and parts of southeastern Georgia, but its production span varied widely by region and/or group (Williams and Elliot 1998; Stephenson 2002; Stephenson et al. 2002). This pottery style is recognized by signature curvilinear and geometric complicated stamped designs on sand/grit and sometimes charcoal tempered pottery. Ceramics of this type do not appear in the middens of extreme southeastern Georgia until around AD 300; however, Swift Creek sites late in the temporal span are more common (Wayne 1987; Cook 1995; Ashley et al. 2007).

More recently, many of the coastal Woodland sites associated with complicated stamped pottery in southeastern Georgia have been attributed to a new culture known as Kelvin (Cook 1977). These Kelvin sites feature complicated stamped wares with motifs similar to that of Swift Creek but the stamping is carelessly executed and poorly smoothed, with interiors often scraped with mussel shells (Cook 1977; 1979). While the pottery may be similar to Swift Creek, most other aspects of material culture at Kelvin sites differ considerably (Cook 2010). Cook (1977, 1979, 2010, and 2013) has presented compelling evidence for the Kelvin culture to be considered as a separate archaeological phase from Swift Creek based on differences in mortuary custom, house construction, and village layout.

Late (AD 700 to 1000)

The Late Woodland on the Georgia coast is represented by the Wilmington phase. This is typically recognized by a shift from the sand/grit tempered ceramic traditions to grog (or sherd) tempered pottery. Cord marking also seems to become the preferred decorative style for this era, replacing the check and complicated stamping of the Early-to-Middle Woodland. Sites of this type are frequently encountered at both inland riverine and coastal sites in Georgia, with the latter including shell middens and burial mounds. The Wilmington phase, as with other Late Woodland components in the Southeast, is often glossed over and broad scale comparative studies for this culture are lacking in the prevailing literature. Much of the information that is available was obtained during the WPA era from excavations at the Walthour Site (9CH11/9CH16) on Wilmington Island (DePratter 1991).

More recently, Thomas (2008) provides a synthesis of 30 years of fieldwork on St. Catherines Island including the documentation of 47 Wilmington phase occupations and the collection of 13 radiocarbon dates from the Late Woodland. Based on the results of this intensive research, he refines the temporal span of the Wilmington phase on St. Catherines Island to a slightly earlier interval spanning from AD 350 to 800, placing it within the Middle and Late Woodland periods. At present, it is unclear if this new Wilmington temporal span can appropriately be applied to the mainland. Thomas (2008) also presents important new seasonality data for the Wilmington components he identified on the island noting that many of these Late Woodland sites were occupied during multiple seasons. He also notes that the season(s) each site was occupied had little influence on its location in proximity to the marsh, suggesting a more sedentary settlement system than a seasonal round (Thomas 2008).

Mississippian Period

Increased population density, sedentary habitation, and increasingly stratified social structure eventually led to the rise of the politically centralized southeastern Mississippian chiefdoms. This period is typically thought to begin around AD 1000 on the Georgia coast with the Savannah phase; however, a transitional Late Woodland/Early Mississippian phase known as St. Catherines seems to represent the initiation of the Mississippian Period in some places along the Georgia coast (Thomas 2008). Recent research on St. Catherines Island as well as in Bryan County have suggested that the early stages of the Mississippian might be more complicated than originally anticipated on the northern Georgia coast (Thomas 2008; Sipe 2013, Sipe et al. 2011c).

Late Woodland Transitional/Early Mississippian (AD 800 to 1300)

Traditionally it has been suggested that the Mississippian Period in coastal Georgia began with the Savannah phase, which developed directly out of Wilmington around AD 1000. Others (Caldwell and Waring 1971; DePratter 1979) have proposed a transitional phase known as St. Catherines, that separates the terminal Woodland period from the Savannah phase. Originally, this phase was thought to span from around AD 900 to 1100 and was recognized by thin walled, grog tempered pottery made from a paste tempered with smaller grog particles than those seen in Wilmington pottery (DePratter 1991). St. Catherines pottery was also typically smoothed and less chunky than Wilmington and fine cord marking was the most commonly noted decorative technique employed on these vessels (DePratter 1991). Crook (1986) suggested that the role of this phase in the coastal chronology may be more complicated. He proposed that the St.

Catherines and Savannah wares were contemporaneous and reflect variability in the coastal Savannah pottery assemblage (Crook 1986).

More recently, Thomas (2008) has elaborated on this idea and presents the results of his investigations at 20 St. Catherines components on St. Catherines Island. He reports that these components tend to be smaller than previous or subsequent deposits. A series of 16 radiocarbon dates from St. Catherines components across the island resulted in a temporal span that began as early as AD 800 and extended to the beginning of the Irene phase around AD 1300 (Thomas 2008). These new radiocarbon data extend the St. Catherines phase around 100 years earlier and 200 years later than the original models, making it contemporary with the Savannah phase as opposed to its predecessor (Thomas 2008). Interestingly, no pure Savannah phase contexts were identified on St. Catherines Island. It is clear that other large Savannah sites existed on the coastal mainland and even on nearby Ossabaw Island (Caldwell and McCann 1941; Cook 1971; Pearson 1979, 1980). Broad-scale investigations at Genesis Point (Hendryx et al. 2006; Burkhart et al. 2007; Sipe 2013) also revealed no significant Savannah phase component, this time within a mainland setting. These data suggest that on portions of the Georgia Coast, St. Catherines is the Early to Middle Mississippian phase, while Savannah groups seemed to thrive elsewhere.

Three St. Catherines period burial mounds were also documented on the island. Each of these mortuary features seemed to be initiated by a central pit feature containing multiple human interments (Thomas 2008). Two of these pits were lined with logs and appeared similar to many of the Early and Middle Woodland mound burials; however, it was clear that mortuary demographics had changed significantly during the St. Catherines

Phase on the island. These mounds contained the remains of infants and sub-adults, indicating that status was inherited as opposed to earned in St. Catherines Phase society.

Savannah (AD 1000 to 1300)

Elsewhere in coastal Georgia, the Mississippian period begins with the Savannah phase around AD 1000. These sites are recognized by sand-to-medium-grit tempered pottery that includes a variety of vessel forms and decorative techniques. These include plain, burnished plain, check stamped, complicated stamped, and, most frequently, fine cord marked wares (Caldwell and Waring 1939). The Savannah phase is also associated with the construction of platform mounds, burial mounds, plazas, and other civic architecture largely associated with the Mississippian period in the Southeast. Savannah civic centers were presumably seats of power for Mississippian chiefdoms spread throughout the resource-rich landscapes of the coastal zone. Several large Savannah phase centers are located in the vicinity of Lincoln Trail. These include the Irene Mound Site in Chatham County, Sevenmile Bend on Bryan Neck, and the Middle Place Site on Ossabaw Island (Caldwell and McCann 1941; Cook 1971; Pearson 1977, 2001).

Irene (AD 1300 to ~1580)

Sites associated with the Late Mississippian Irene Phase are well-represented in coastal Bryan County. In fact, several of the premier examples of this archaeological type are situated around the mouth of the Ogeechee River including the Sevenmile Bend (9BN7) and Redbird Creek (9BN9) Sites. The Irene phase is named for a distinct set of ceramics identified during the WPA-era excavations at the Irene Mound Site (9CH1) located northwest of downtown Savannah (Caldwell and Waring 1939; DePratter 1984). The ceramics were identified within the last phase of mound construction at the site as

well as other deposits determined to date to the Late Mississippian Period. Diagnostic examples of this type include incised and filfot stamped motifs executed on the exteriors of thin, grit tempered pottery. Traditionally, the phase was divided into Early (AD 1350 to 1450 [Irene I]) and Late (AD 1450 to 1550 [Irene II]) subphases, with the latter based on the addition of ceramic incising (Saunders 2000); however, Braley (1990) further subdivided the phase into three subphases: Irene I (AD 1300-1350); Irene II (Pipemaker's Creek, AD 1350-1450); and Pine Harbor (AD 1450-1580). More recently, Thomas (2008:878) has estimated the Irene temporal period span from AD 1300 to 1580 on St. Catherines Island. Thomas' chronology is based on a series of 24 radiocarbon dates directly associated with Irene ceramics (Thomas 2008:420).

While the Irene Mound site may be the namesake for this late prehistoric culture, more recent archaeological investigations within purely Irene contexts have suggested that large platform mound complexes are more likely the exception than the rule for these population centers. In fact, the majority of the deposits and monumental architecture at 9CH1 were constructed during the Middle Mississippian Savannah period. The recovery of Irene pottery at the site was found to correspond with changes in mound construction and mortuary practices which occurred around AD 1300-1350 (Caldwell and McCann 1941). This transitional period corresponds with a change in site distribution and village layout recognized for the northern Georgia coast. On both Ossabaw and St. Catherines Islands, there is a noticeable change in the number and size of sites during the transition from the Middle to the Late Mississippian periods. Both islands show a clear increase in the number of sites during the Irene phase (Pearson 1977, 2001; Thomas 2008). Pearson (2001) notes that overall site area decreases from the Savannah to the Irene phase, while

Thomas (2008) suggests that Irene phase site area increases during the Late Mississippian site dispersal. This is likely due to the differing phases represented on each island during the preceding Middle Mississippian periods (Savannah on Ossabaw and St. Catherines on St. Catherines) (Pearson 1977, 1979, 2001; Thomas 2008). Both authors interpret this dispersal as corresponding with a general population increase.

A change in layout is evident at the Irene Mound site and helped define the shift from Savannah to Irene phases (Caldwell and McCann 1941). These changes included an intentional modification in the use and appearance of the platform mound, addition of a low burial mound and mortuary, construction of a council house (Rotunda), and an apparent decrease in the number of structures present (Caldwell and McCann 1941). More recently, changes such as these have been observed elsewhere at Savannah centers that transitioned into Irene sites. Pearson (2001) notes that Ossabaw's largest and most architecturally complex aboriginal site, Middle Place (9CH158), shrinks from a mound complex of at least four burial mounds during the Savannah phase to a smaller site with two burial mounds. Other predominantly Irene phase sites have also provided vital clues for Late Mississippian village layout. The Redbird Creek Site (9BN9), located just five miles north of Lincoln Trail, presents the Late Mississippian village layout. Two low burial mounds have been identified at Redbird Creek including one that may be similar to the Mortuary documented at 9CH1. A third mound, dubbed Mound C, represents the highest point on the Redbird landform and was determined to be at least two successive architectural building episodes of wattle and daub construction. Additional excavations at the site also point towards a system of walls or screens that divide the site into zones which seemingly tie into the location of Mound C. This same phenomenon was also

identified at the Irene site including similar post morphology and spacing within the divisive walls that led to the platform mound itself (Caldwell and McCann 1941). AMS dates collected at the Redbird Creek site reveal that it was likely inhabited around 100 years after the occupation at 9CH1; however, similarities in settlement layout seem to persist from the Irene Mound site to its coastal predecessors.

Protohistoric/Mission Period

Most evidence suggests that the people who produced Irene pottery are the archaeological manifestation of the historic group known as the Guale. The Guale were among the first aboriginal people of the Southeast to experience European contact. It is clear from both French and Spanish accounts that the aboriginal people of the Georgia coast were organized into a series of politically stratified chiefdoms. An early Spanish document refers to "the 22 chiefs of Guale," and Menendez himself cites "40 villages of Indians" during his trek up the Guale Coast (Swanton 1922; Jones 1978).

Much of the discussion about the arrangement and location of Guale cheifdoms stems from the accounts of visits by la Florida's early governors Menendez and Ibarra. These accounts detail stops made by the governors as they proceeded up the coastline where they met with native leaders at each location. It can be inferred from these accounts that the leaders mentioned at each stop were from the villages nearby (Jones 1978; Francis and Kole 2011). For example, Ibarra made three stops during his visit, which are believed to be in the vicinity of St. Simons, Sapelo, and St. Catherines Islands. These villages are typically divided into three groups: the northern, central, and southern. The Ibarra account, however, details his 1604 visit to the coast as Florida's new Governor. His visit also catalogs which chiefs he met at each location. When one

compares these accounts, it is clear that many of these villages seemed to have shifted locations. Accounts such as these indicate that the names of Guale villages are much more about the people within the group than the place itself.

Towards the end of the 16th Century and throughout the 17th Century, Guale material culture is characterized by an almost universal shift in the ceramic traditions of the Guale from Irene style ceramics to the simpler Altamaha wares (Saunders 2000; 2009). This transition seems to correlate with the rise of Franciscan Missions, which began with limited success in 1587 and continued throughout the 17th century. Altamaha pottery is recognized by its relatively coarser grit paste and a change from the filfot cross motif to crossed simple stamped or line blocked stamping. The line block motif typically features four sets of four grooves arranged in alternating directions oriented around a central node. This design is often interpreted as a simplified version of the filfot cross (Saunders 2000). Archaeologists typically associate a date of 1580 with the transition of Irene to Altamaha. This is based on investigations at Santa Elena, a colonial Spanish garrison town founded on Paris Island, South Carolina and abandoned by 1587. Irene pottery was frequently found within the deposits at this colonial site; however, almost no Altamaha pottery was found. This indicates that the aboriginal communities surrounding Santa Elena provided pottery to the Spanish settlers and the pottery they provided was Irene not Altamaha (Thomas 2008; DePratter 2009). Based on this, archaeologists conclude that Irene pottery was still produced after Spanish contact and is even the dominant ware until at least the mid-to-late 1580s.

Historic Overview

The earliest documentation of the subject property is the establishment of headrights from General Oglethorpe to George Cubbedge of North Carolina in 1748 which granted him three tracts near the Great Ogeechee River (Sullivan 2000: 18; White 1855). Cubbedge named this property Linkhorn Plantation, a name which eventually became regionally known as Lincoln. It is not clear what George Cubbedge Sr. planted on this property; however, it is known that he improved the land and owned several slaves as he was given official ownership of the property in 1756 (Historic Collections of Georgia). He also established a home on the property which was said to have been overlooking the salt marshes "where Kilkenny River, Cubbedge Creek and Lincoln Creek converge en route to their eventual confluence with the Bear River" (Sullivan 2000:107). The Cubbedge family patriarch died in 1758 and his will was filed in 1759. Within this document, he left the Linkhorn property to his wife Elizabeth and gave her ownership of the family's five slaves: Numday, Sambo, Debborer, Jemey, and Grace (Cubbedge Will, Georgia State Archives). George's son, John Cubbedge Sr., continued the family legacy as a planter and expanded family holdings with 250 acres on the Tivoli River known as Laurel Hill (Sullivan 2000: 18). Upon the death of Elizabeth Cubbedge, the family tract at Linkhorn passed to George Cubbedge Jr., the grandson of the original recipient of the family headrights. George lived at the family home built by his grandfather and continued to farm the Linkhorn tract. He also served as commissioner of roads for the Ogeechee District during the American Revolution (Sullivan 2000: 19). George expanded the family holdings by 500 acres, when he acquired part of the land seized from

Thomas Young after the American Revolution for 625 pounds sterling (Sullivan 2000: 19). George's brother John also became sheriff of Bryan County in 1815.

CHAPTER 5

PREVIOUS RESEARCH

This chapter will present a summary of the investigations conducted at Lincoln Trail prior to the initiation of this project and a review of the Irene phase research specific to the Bryan Neck area. This research provides a vital framework to guide the creation of research objectives necessary to identify the signature of an Irene phase dispersed town and assess the probable role that the Lincoln Trail site may have played within such an entity on Bryan Neck.

5.1: The Lincoln Trail Site (9BN17)

The site was first recorded by Charles Pearson and Chester DePratter in 1973 during their reconnaissance survey of eastern Bryan County in order to identify cultural resources located on International Paper Company property (Pearson and DePratter 1973). Many of the locations that were visited during this reconnaissance had been previously scouted by Fred Cook, who no doubt led them to Lincoln Trail (Fred Cook, personal communication 2010). When it was recorded, the site was identified as a scatter of artifacts and shell debris which extended along a dirt road known as "Lincoln Trail" for almost 1,600 meters. They noted a series of 15 shell middens exposed along the road including 10 or 12 which had been impacted by the construction of the road. At the time of their visit, it was clear that the deposits continued "a good ways back into the woods on either side of the road," however, a full pedestrian survey was not feasible at the time (Pearson and DePratter 1973). They did speculate that the shell deposits are likely

representative of household middens and that the site likely represented an Irene village and one of the largest sites in Bryan County (Pearson and DePratter 1973).

Seventy-four artifacts were collected during this initial walkover. This assemblage was dominated by pottery; however, one leg bone believed to be from a deer and a flint flake were also recovered. The pottery collected was overwhelmingly Irene phase material. This included Irene burnished plain (n=15), reed punctated rims (n=2), complicated stamped (n=38), and incised (n=1). There were two unknown categories identified including residual decorated (n=8) and residual plain (n=4). These likely reflect some type of unknown category. There were also four fiber tempered plain sherds indicative of the site's Late Archaic component. It is interesting to note that even this small sample size from likely disturbed context seems to reflect the same stylistic frequencies identified across the site during the present study (discussed in Chapter 7). Fred Cook also reports finding an incised ceramic pipe bowl in the form of a stylized human head in the road during one of his early visits to the site (Fred Cook, personal communication 2010; Pearson and DePratter 1973). No further investigation at the site was recorded for 37 years after the initial reconnaissance survey.

In 2010, large scale excavations at the Redbird Creek Site (9BN9) were initiated as part of the Genesis Point Development Tract (Hendryx et al. 2006; Burkhart et al. 2007). During this project, the author worked closely with Fred Cook and a local avocational archaeologist named Frank Chance. Intrigued by findings at Redbird Creek, Cook led a series of tours of the sites he helped Pearson and DePratter record across Bryan Neck in 1973. During one of these, Chance and Cook visited the Lincoln Trail site. It was during this visit that Frank explored the marsh edge portion of the site and

discovered an extensive complex of large middens (Loci A and B, Chapter 7). Chance and the author then toured the site and began informally mapping the features with a Garmin GPSMAP 60CSx handheld GPS unit. The informal visits to Irene sites like Lincoln Trail, along with the large scale survey and excavation conducted at Genesis Point, led to the recognition of common traits and patterns in Irene phase sites across Bryan Neck. Because of its location within the Richmond Hill WMA, the Lincoln Trail site was determined to be relatively safe from development that provided an immediate threat to other large Irene phase sites in Bryan County and a survey of the site was initiated as part of the Georgia Southern Archaeological Field school in the summer of 2012.

5.2: The Irene Sites of Bryan Neck

There are 51 recorded archaeological sites recorded on Bryan Neck that have been determined to contain Irene phase components (Figure 5.1). These sites are arranged in five distinct clusters evenly distributed across the marsh edge of the landform and it is proposed that each of these clusters represents a dispersed town. The recorded sites include three identified as Prehistoric Indian Villages, ten Prehistoric Indian Shell Middens, and 24 that were recorded as Prehistoric shell or artifact scatters (GASF 2013). There were also 13 sites recorded as simply "Mississsippian" on their site forms; however, the report prepared for the survey during which they were recorded clearly identifies them as Irene (Hendryx et al. 2006; Burkhart et al. 2007). Perusal of the site forms submitted for the Bryan Neck Irene components reveal that two of these sites (9BN6 and 9BN8 [or maybe 9BN70]) may be more appropriately classified as villages. With this considered, it seems that each of Bryan Neck's Irene phase clusters is

associated with a site that can be appropriately classified as a village center. These include (clockwise from A to E on Figure 5.1) 9BN6, the Sevenmile Bend Site (9BN7), the Redbird Creek Site (9BN9), the Lincoln Trail site (9BN17), and the Tivoli Creek Site (9BN8 or 9BN70). Furthermore, each Irene village is surrounded by a series of smaller support sites and is spaced evenly across Bryan Neck with gaps of 6.5 to 8 km between them. Interestingly, the Bryan Neck population centers on the marsh edge facing Ossabaw Island are separated from Ossabaw's main Irene phase center (9CH158) by the same distance (Figure 5.1). Figure 5.1 depicts the Irene centers with their associated site clusters. The mean distance between the villages was calculated to be 6.89 km and each site is depicted with a radius of half this distance (3.45 km), which represents the presumed extent for each cluster. Each of these Bryan Neck clusters are described separately below.

The Cherry Hill Group (A)

This dispersed town cluster is referred to as the Cherry Hill group after the Ogeechee Rice Plantation established at this location during the antebellum period (Figure 5.1 and 5.2). These sites were recorded during the primarily plantation archaeology associated with the development of the Richmond Hill Plantation housing development. As such, many of the Irene occupations recorded here had been disturbed by antebellum activity. Furthermore, most of these sites have been almost completely eliminated by the modern housing development. Much of the research conducted at these Irene components has been sparse and the reporting is somewhat unclear. The following discussion is based on the conclusions of the researchers who conducted the fieldwork even if the evidence to support them is somewhat lacking.

9BN6

This site was identified under approximately 50 cm of fill dirt associated with the mansion Henry Ford constructed at Cherry Hill in the 1930s. Shovel testing was conducted across a portion of the site; however, the results of these tests are unclear. It is reported that a high frequency of artifacts was encountered that was affiliated with Savannah and Irene phase occupations, along with St. Simons activity in the southern portion and Deptford and Wilmington in the northern tip (Mitchell et al. 1983). The authors also describe a visible midden or occupational zone identified within several of the shovel tests. This seems to be associated with the Savannah/Irene occupation. Limited excavation in the form of a 1 by 1 meter unit was conducted in order to identify the midden. It was also noted that the midden was visible, along with a shell lense and a postmold, in the profile of the eroding eastern shoreline. The authors also report collecting a large sample of prehistoric pottery at low tide (Mitchell et al. 1983).

The authors conclude that the site represents an important habitation during the Savannah and Irene periods. They assert that the site is eligible for the National Register based on the likelihood that it may yield important new data regarding Mississippian settlement strategies and their relationship with their barrier island counterparts (Mitchell et al. 1983). No mention of household middens or surface features was made; however, much of this may have been eliminated due to Ford's construction activities. Based on the report and the significant curve in the Ogeechee River upon which this site was identified, it is clear that 9BN6 has undergone heavy erosion. Significant surface features and deposits have likely been washed away. A true statement regarding the function of this site within a larger Irene polity may be difficult based on the fieldwork reported;

however, this site does seem to be the principal settlement among the cluster of Irene sites documented during this limited fieldwork.

There are nine other Irene components within this cluster. These each represent limited signatures recorded during investigation of specific elements of the Cherry Hill Plantation deposits. Very little fieldwork was focused on the investigation of these components and they are reported as limited artifact scatters that contain Irene phase artifacts and in some cases material associated with Savannah, Wilmington, and Deptford components (Mitchell et al. 1983).

The Sevenmile Bend Group (B)

This group is named after the Sevenmile Bend Site (9BN7) which is located on a distinctive oxbow bend in the Ogeechee River of the same name (Figure 5.1). This cluster is comprised of four sites: the village center at the Sevenmile Bend site itself, a cluster of shell middens recorded as 9BN23, and the Causeway Site (9BN20) shell midden recorded at the initiation of the marsh causeway constructed as an entrance to Fort McAllister (Figure 5.3).

The Sevenmile Bend Site (9BN7)

The village core of this group (9BN7) is located on a narrow spit of land formed by a large oxbow bend in the Ogeechee River known as the Sevenmile Bend (Figure 5.1). This site has been subjected to extensive erosion as the river continues the process of turning the oxbow bend into an oxbow lake. Concerned about the loss of this resource, Cook secured permission from the landowners to conduct limited excavation at the site in 1971 (Cook 1971). He noted that so much of the site had been lost to erosion, it was difficult to determine the true layout of the village center (Fred Cook, personal

communication 2010). Extensive shell midden had been exposed on both sides of the site, and eroding artifacts and even human burials could be found exposed along the banks of the Ogeechee (Cook 1971). The scatter of artifacts along the eroded banks was determined to be primarily associated with a Middle and Late Mississippian deposition; however, one Clovis point was also identified (Cook 1971).

Cook documented a burial mound, heavily impacted by erosion, within the northwestern portion of the site. He estimated that the portion of the mound that was still visible was around one-third of its original shape and it likely measured thirty-feet (9.15 meters) in diameter and stood 2 feet (60.98 cm) tall. The mound was capped with a layer what Cook described as clay that contained exclusively Irene deposits; however, the majority of the mound fill seemed to date to a previous Savannah period occupation. Cook documented a single, flexed burial eroding from the southern portion of the mound and several disarticulated human bones which seemed to be associated with the Savannah Period construction of the burial mound. An interesting discoidal stone was identified within the Irene clay cap, however. It also seems that Irene phase mortuary activities did likely occur at the site. One filfot stamped burial urn with applied rosettes as a rim elaboration, a filfot stamped carinated bowl which was used as a lid, and the human remains within were churned up by a tree fall at the site in the 1990s (Sue Moore, personal communication, 2011). These mortuary items were donated to Georgia Southern University and are discussed further in Chapter 7.

Cook established an excavation block within the southeastern portion of the site. This portion of the site was determined to be exclusively associated with the Irene occupation and here he documented an extensive assemblage of Irene phase pottery

(Cook 1971). He noted a relatively high frequency of Irene incised pottery and an increase in this pottery type from the deeper levels to the more shallow deposits. This was interpreted as an indicator that the use of incising increased at the site over time (Cook 1971). Cook also documented the rounded corner of an Irene phase structure within this excavation block. Its exterior walls were daubed and approximately five to ten inches wide. The daub was supported by widely-spaced wattle comprised of marsh grass and the exterior surface of the walls seemed to have been plastered with smooth clay that lacked the rough fibrous inclusions of the interior wall (Cook 1971). Much of this exterior daub was preserved due to burning and Cook observed that much of it was incised with a series of curvilinear and perpendicular lines. He judges from the size and shapes of these incised patterns that the motifs were extremely large and were presumed to cover a large portion of the structure's exterior (Cook 1971). These curvilinear motifs seem similar to those represented on Irene incised pottery of the Pipemakers Creek style (Braley 1990).

Cook also documented a number of unique ceramic types during his excavations at the site. Many of these were encountered in disturbed contexts created by erosion; however, several examples are definitively associated with the Irene phase. One extremely interesting sherd from an apparent burnished bowl featured a protrusion resembling what Cook interprets as an ear of corn applied just under its lip. This interesting "corn effigy" sherd was recovered from a pit feature comprised of Irene phase ceramics (Cook 1971). Two unique incised sherds also were encountered among other Irene ceramics. These were broad, wedge-shaped rims with a flat top that had been incised with concentric circles that were interpreted as representative of small bowls

(Cook 1971). Interestingly, a sherd identical to this description was encountered in an excavation unit at Lincoln Trail during the present study, as discussed in Chapter 7.

9BN23

This small site was recorded by Pearson and DePratter during their Bryan County reconnaissance on the southeastern portion of the high ground in the vicinity of Sevenmile Bend on the edge of the marsh which separates the mainland from Fort McCallister (Pearson and DePratter 1973) (Figure 5.1). The site is characterized by a thin oyster scatter covering an area of around 30 meters that was associated with three Irene complicated sherds. Extensive disturbance was noted at the site and the function of this resource was unclear.

Causeway Site (9BN20)

This site was recorded at the western end of the causeway leading to Fort McAllister during the eastern Bryan County reconnaissance survey (Pearson and DePratter 1973) (Figure 5.1). The site is described as a thin shell scatter associated with 37 sherds and one fragment of flint. The ceramics seemed to be largely from the Savannah phase (n=15); however, four Irene complicated stamped and two Irene incised sherds were also reported. One grog tempered fine cordmarked sherd was also found and likely representative of St. Catherines pottery, along with ten sand tempered plain sherds and one unidentified stamped ceramic (Pearson and DePratter 1973). This site is located directly across the street (SR 144 spur) from 9BN23 and these resources are likely reflective of a single site prior to the disturbance caused by road construction and extensive erosion. Joined together, these two sites may have represented a small

habitation or perhaps temporary use area associated with the larger Sevenmile Bend dispersed town.

9BN1132

This site appears to have been officially recorded in 2009 after the donation of Fred Cook's field notes to the GASF. It is recorded as a St. Catherines phase mound atop a sand ridge one mile south of the Sevenmile Bend Site near the headwaters of Redbird Creek (Figure 5.1). Cook investigated the site in 1967 and recovered a St. Catherines phase cordmarked pot and burnished bowl in the backfill of a looters hole. He also documented an intact dog burial within the remains of the looter's hole. A report from 1988 seems to describe the investigation of human remains from this site during a visit by Armstrong State College archaeologists (Babits and Leech 1988). The authors report active looting at the site attributed to an unidentified archaeologist from Florida who visited the site 2 or 3 years before the report (ca. 1985-1986). The looter's hole was a formal 3 by 3 meter test unit which was still marked by wooden stakes and string. Cremated human remains were found throughout the area and under a wooden screen left by the excavator (Babits and Leech 1988). There also were human remains examined from a flexed burial disturbed by two children in the area that apparently came from the same mound. The areas where the boys had encountered the remains were investigated by the Armstrong archaeologists and three sherds described as "Irene or Savannah" were encountered (Babits and Leech 1988).

Strangely, the authors thought this site was the same as the Redbird Creek site reported by Pearson (1984) in Early. Also, several other authors (Hendryx et al. 2006; Burkhart et al. 2007) have reported that human remains at the Redbird Creek site were

investigated by Babits and Leech (1988). These are clearly two different and potentially unrelated sites. It is unclear if this site does represent an Irene phase; however, if it does it may represent an additional burial mound affiliated with the Sevenmile Bend group. It is unlikely that there is anything left of 9BN1132 as it was being developed during the Armstrong site visit and is currently part of the Redbird Creek subdivision.

The Sevenmile Bend group was undoubtedly comprised of additional sites prior to the extensive development and erosion of the landform south at 9BN7. It is clear that the Sevenmile Bend site represents an important Middle Mississippian civic center and was used well into the Irene phase (based on the preponderance of incising). Many of the unique aspects of the site can be attributed to the Irene occupation and even seem to set it apart from the other village centers of Bryan Neck. The location of this dispersed town puts it within a prime setting for the exploitation of the varied marsh edge ecosystem and a strategic spot to utilize, or even dominate, the mouth of the Ogeechee River, a network of tidal streams that was undoubtedly an important system of aboriginal travel and trade. The incised façade documented on the structure at Sevenmile Bend is unique among the handful of Irene phase structures documented on the Georgia coast. Such decoration may have been used to denote the residence of an important individual or community building; however, the limited sample of Irene phase structural data makes this hard to say. Some of the unusual pottery styles Cook identified seem to also be associated with the Irene occupation of the site. This pottery may be reflective of the exotic wares or trade items one might expect to find at a principal administrative center.

The Genesis Group (C)

This is the largest group identified among the Bryan Neck cluster; however, this may only be the result of more systematic survey (Hendryx et al. 2006). These 25 Irene components were recorded during the CRM investigations at the Genesis Point Development tract that were conducted between 2004 and 2012 (Hendryx et al. 2006; Burkhart et al. 2007; Sipe 2013). The village site within this cluster is represented by the Redbird Creek Site (9BN9) located on the northern extent of a Pleistocene ridge abutting the salt marsh adjacent to Redbird Creek, a prominent tributary of the Ogeechee River (Figure 5.4).

The Redbird Creek Site (9BN9)

The Redbird Creek site consists of two burial mounds (Mounds A and B) that are surrounded by clusters of discrete domestic midden, and seem to delimit a central plaza along a northeast-southwest axis (Sipe 2013). A third earthen mound (Mound C) was documented adjacent to the southwestern midden cluster. This significant earthen rise accumulated through at least two successional construction episodes atop earthen summits that likely represent important civic structures. Divisive walls were also encountered that may have separated or enclosed portions of the village, such as those that were documented at the Irene Site (Caldwell and McCann 1941). This complex of represents important community architecture that indicates Redbird was an important focus for the inhabitants of the dispersed town it served. It was also established on a desirable marsh edge landform consistent with the model of strategic resource exploitation proposed by Jones (1978).

It is also clear that there was a resident population at Redbird as evidenced by 25 oyster middens interpreted as domestic debris and the well-preserved portion of a burned, wattle and daub residential structure (Pearson 1984). Pearson and DePratter documented dense concentrations of burned daub wall fragments, and charred timbers interpreted as roof debris from Structure 1. They also encountered a portion of an apparent exterior wall complete with 10 in situ wall posts made of yellow pine. A clay lined hearth with a raised lip was also documented within the center of their excavation unit. The structure could not be excavated in its entirety at the time; however, if the hearth can be considered the approximate center of the structure, Pearson (1984) predicts it would have measured 5.2 meters in width. Several other daub concentrations and post alignments were identified during the more recent excavations at the site (Sipe 2013). These features no doubt represent additional structures; however, further investigation is needed in order to assess their form and distribution.

Two AMS dates, including one from a sooted sherd (Beta 297416) and a charred corn cob (Beta 270236) were generated Redbird Creek. These yielded two-sigma calibrated date ranges which spanned from cal AD 1400 (cal BP 550) to as late as late as cal AD 1630 (cal BP 320) due to a split range obtained from the corn (Keith Ashley, personal communication 2010). The two-sigma range from the sherd yielded a much tighter interval of cal AD 1420 to 1460 (Sipe 2013). Pearson (1984) also reports a radiocarbon date collected from a charred post encountered within the daub wall of Structure 1. This sample yielded an extremely early return of AD 1145 ± 60 (UGA 5350) and is considered to be a flawed radiocarbon reading (Pearson 1984).

Twenty-four other Irene components were recorded in the vicinity of the Redbird Creek site during the survey of the Genesis Point Development Property (Hendryx et al. 2006). These include four habitation sites similar to Class II or III sites on Ossabaw (Pearson 1977) and at least two examples of Irene components disturbed by historic occupations, and eighteen small, likely temporary occupations based on resource extraction.

Hammerhead Point (9BN887)

Site 9BN887, or the Hammerhead Point site is located on a jutting peninsula overlooking Redbird Creek, aptly named for its appearance similar to the head of a hammer (Figure 5.1). This site represents the most intensive Irene component in this cluster outside of Redbird Creek and is characterized by a series of oyster middens arranged in a semicircular pattern to the south of a tidally influenced lagoon located at the eastern tip of the "hammer's head." The lagoon seems to represent a hydrological feature similar to the freshwater ponds described in Chapter 3. This small, circular low spot is presently affected by tidal fluctuation and is connected to the main channel of Redbird Creek by a small stream. Interestingly, the eastern portion of the lagoon had been reinforced by an enormous sheet midden, which effectively separated it from encroaching salt marsh. This midden effectively constricts the mouth of the small stream leading into the lagoon to only a few meters wide; however, it seems that the stream was formed as fluctuating water eroded through the midden and connected the pond with the salt marsh. The lagoon likely formed as an accumulation of non-artisian surficial water in a shallow depression. This important source of fresh water may have been protected by an intentional accumulation of oyster midden to shield it from the marsh (Sipe 2013).

Eight discrete, raised oyster middens were identified at the site within a distinctive half- circle pattern also recognized at 9BN9. Excavations in and around these oyster shell middens revealed dense deposits of Irene style pottery and the signatures, albeit faint, of at least two rectangular wall trench features. These were only recognized by the presence of staining; no daub was identified at the site. Several other structures are suspected to have been located at Hammerhead based on the preponderance of post alignments that do not easily form coherent patterns. A sample of soot from a fragment of an Irene Filfot Stamped vessel with a segmented rim was submitted for AMS dating (Beta 297415) that yielded a two-sigma calibrated date range of cal AD 1400 to 1440 which indicates that this habitation is contemporaneous with the Redbird Creek Site (Sipe 2013). The Hammerhead Point site seems to have functioned similarly to one of Pearson's (1977) Class II Irene sites, and represented a relatively large residential center at which a few families or perhaps a kin group resided.

Yellow Fly Landing (9BN11)

This site was recorded by Pearson and DePratter (1973) during their reconnaissance of Bryan Neck on a broad landform that overlooks an unnamed tributary of Redbird Creek (Figure 5.1). The site was originally recorded as a scatter of oyster shell exposed along the dirt road leading to the bluff. During the initial site visit, the site had been recently planted in pine and was overgrown to the point that it was considered impossible to map. Five Irene complicated stamped sherds were collected during Pearson and DePratter's vist.

In 2005, the site was revisited during the intensive archaeological survey of the Genesis Point Development Tract. During this survey 49 shovel tests, including 26 that

were positive were dug across the site, whose boundaries measured 160 meters (east-west) by 240 meters (north-south) (Hendryx et al. 2006). Fifty-two artifacts were collected as a result of this survey including Irene sherds (n=12), grit tempered sherds which are also likely associated with the Irene phase (n=25), Savannah check stamped (n=1), St. Simons eroded (n=1), and diminutive sherds (n=6). Other artifacts included six chert flakes, one piece of dark green glass, and an unidentified iron fragment (Hendryx et al. 2006). There was no mention of the midden noted during Pearson and DePratter's survey (1973) in the survey report. This midden was encountered within the road, which would put it within the south-central portion of the site; however, Pearson and DePratter (1973) note that it appeared the midden deposits continued into the woods on either side of the road. The survey map shows no midden at the road or distribution of shell throughout the site. The site was recommended for additional investigation as part of a Phase II evaluation; however, the developer chose to preserve the site in place. Based on the relatively small artifact assemblage and what is presumed as a farily isolated midden deposit, this site likely represents the signature of a small farmstead occupied by one or two families.

The Genesis Midden (9BN104)

Site 9BN104, or the Genesis midden, was recorded in 1993 during an earlier attempt to develop the Genesis Point property (Ashley et al. 1995). The site was also revisited during the 2006 survey (Hendryx et al. 2006), and subjected to phase II evaluation in 2007 (Burkhart et al., 2007). Full-scale excavation was conducted at the site in 2009 (Sipe et al. 2011a). This small habitation site featured a sprawling oyster midden within the southern portion of the site and several middens along the edge of the

marsh. The southern midden was dominated by Irene pottery and overlaid a large Irene oyster pit. Samples of oyster shell from both the midden and the pit feature were submitted for radiometric dating (Beta 258627 and Beta 258626) which yielded a two sigma calibrated date range spanning from cal AD 1420 to cal AD 1650 (Sipe 2013). While it is difficult to work with such a broad range, these dates do show a degree of overlap with the Redbird Creek and Hammerhead samples, but could also be considered statistically later.

Sorting and measuring of impressed odostome shells (*Boonea impressa*) was employed during 9BN104 analyses in order to address seasonality. Impressed odostomes (or *boonea*) are small parasites that feed on oysters. These organisms are inadvertently collected along with shellfish and are eventually incorporated into cultural deposits. *Boonea* spawn in the spring or early summer (May and June) and have a life cycle of approximately one year. Over their lifetime, the parasites undergo measureable and predictable accretionary growth, making them an ideal subject for seasonality studies (see Reitz et al. 2012 for a refined discussion of this method). Length measurement of impressed odostomes at their time of death has been used to suggest the time of year when the oysters within a given cultural deposit were harvested (Russo 1991; Russo et al. 1993), although Keene (2012) suggests that the life cycle of *boonea impressa* along the Georgia Bight may not be as predictable. The *boonea* at 9BN104 were determined to be present in stages of their life cycle that represent a four season habitation (Sipe 2013). Very few structural features were encountered at this site and it is hypothesized that this site represents a small hamlet of only a few families.

9BN847

9BN847 was recorded on a broad landform approximately 700 meters east of an unnamed drainage of Redbird Creek (Figure 5.1). Four small oyster middens within the southern portion of the site were the only surface features documented; however, 103 positive shovel tests were dug at 15 and 30 meter intervals across the site (Hendryx et al. 2006; Burkhart et al. 2007). Eleven square meters of formal excavation were also conducted at the site as part of a Phase II evaluation (Burkhart et al. 2007). As a result of this work, 9BN847 was determined to have been primarily occupied during the Late Woodland Wilmington phase but also revealed limited use during the Late Archaic and Mississippian periods. During its Wilmington occupation, the site does seem to have been extensively occupied and several cultural features indicative of habitation (such as cooking pits and refuse pits) were determined to have been affiliated with that occupation (Burkhart et al. 2007).

Activities were apparently sparse during the Savannah and Irene phase use of the site. It is unclear if the middens depicted on the site map for 9BN847 were determined to be associated with the Irene phase. One post features was encountered beneath a midden deposit and contained Irene pottery. Based on this limited data, this site likely served as a small farmstead during the Irene phase occupation of Bryan Neck. Further investigation was never conducted at 9BN847 because it is protected by a preservation easement.

9BN872

Site 9BN872 is characterized by a small cluster of three raised oyster shell middens adjacent to a small seasonal drainage that leads to the salt marsh associated with Redbird Creek (Hendryx et al. 2006; Burkhart et al. 2007; Sipe et al. 2011b). This site is

somewhat unique among the Redbird Group as it is located more than 350 meters from the salt marsh; however, it is still associated with middens comprised of estuarine shellfish. This implies that the site was not established as a camp to collect oyster but they were likely consumed here. Structural features were relatively sparse at this site, however, one rectangular structural alignment was recognized in the vicinity of the middens, as well as a the faint signature of a possible trench. It is believed that this site may represent a small cluster of residences associated with a farmstead.

A similar study of *Boonea impressa* like that at 9BN104 was performed using a sample collected from the most prominent midden (Midden 1) at 9BN872. Interestingly, this sample produced almost three times the *Boonea* observed within a similarly sized sample at 9BN104, but revealed comparable results (Sipe 2013). Oyster from this sample was submitted for radiometric dating (Beta 263675) and yielded a two sigma calibrated range of cal AD 1420 to 1640. As with 9BN104, this range does overlap with the AMS dates from Redbird Creek and Hammerhead sites; but may also be considered statistically later due to the broad date range. Presently, the comparative sample is too small to make this judgment.

9BN909

This site was located on an upland peninsula jutting into the marshland associated with Redbird Creek, directly across from Fort McAllister State Park (Figure 5.1). The boundaries for this site were determined to be quite large through shovel testing; however, only the extreme western portion of the site revealed intensive habitation (Burkhart et al. 2007). This portion of the site was characterized by two low midden piles and dense artifact concentration. Based on artifact distribution, it seems that

9BN909 was most intensively occupied during the Late Woodland Wilminton phase; however, significant Irene signatures were also detected.

Excavations within the western portion of the site revealed that the middens accumulated during the Irene phase occupation and were associated with signatures from at least two structures. These included a linear stain containing postmolds interpreted as a possible signature from a rectangular structure and series of post alignments which may have formed at least one other structure (Sipe et al. 2009). All evidence indicates that these structural signatures can be attributed to the Irene phase occupation of the site. Based on these features, 9BN909 also likely represents a small cluster of dwellings affiliated with one or two Late Mississippian families exploiting the marsh edge.

The remainder of the Genesis Group consists of sites which range in size from small artifact scatters to additional midden scatters. Most of these likely represent temporary activity areas or short term habitation. Some of them may even represent additional small farmsteads or hamlets; however, these sites were not investigated past the survey level due to avoidance by the developer or recommendations that additional archaeology was unwarranted (Hendryx et al. 2006; Burkhart et al. 2007).

The Tivoli Group (E)

This cluster of seven sites is located on either side of Tivoli Creek, a south-flowing tributary of the Medway River (Figure 5.1). This cluster is the most poorly understood of the Bryan Neck groups and almost all data acquired for these sites have been achieved through pedestrian survey and informal site visitation. The village core of this grouping is believed to be the Tivoli Site (9BN8); however, a re-visit to this site in 2010 has led to some confusion as to which site is the Tivoli Site, as discussed below.

The site visit may have actually been to 9BN70, a site which may rival Tivoli for the position of village core. The other sites in the grouping (9BN24-26 and 9BN522 and 523) are characterized by midden deposits along the marsh edge (Figure 5.5).

The Tivoli Site (9BN8) and 9BN70

This site was first reported by Fred Cook in 1968 and formally recorded by Pearson and DePratter (1973). It is recorded on a jutting landform on the eastern banks of Tivoli Creek approximately one mile from its junction with the Medway River (Figure 5.1). It consists of a large shell midden extending 200 meters along the marsh edge and measuring up to one meter high. A 2009 site form update for the site describes additional middens up to one meter high that extend some distance from the shoreline. This updated site form also reports that Fred Cook excavated a trench approximately 5 by 15 feet into the thickest part of the midden along the marsh. These excavations yielded a complete Irene phase globular jar which is curated at the University of Georgia (UGA) Laboratory of Archaeology. Based on these descriptions the site seems to display evidence of extensive domestic middens and may represent an important residential center for the cluster of Irene phase sites along Tivoli Creek. When the position of this site was plotted on a modern aerial photograph, it appeared this site has been destroyed by modern residential development.

The author visited a site purported to be the Tivoli Site in 2010 which displayed extensive midden deposits including an extremely large shell ridge that accumulated in the marsh immediately adjacent and parallel to the shore. Based on a review of the GASF, it seems that this site is 9BN70, as it was clearly within a heavily wooded parcel (and not a residential development), and part of the Richmond Hill WMA property. This

site was recorded by Lewis Larson in 1990 and described as a series of oyster middens scattered throughout the heavily wooded area along the edge of the salt marsh. The 2010 revisit revealed a distribution of discrete household middens that appeared quite extensive. Irene complicated stamped and incised pottery was noted on the surface of several midden deposits including the oyster ridge in the marsh. Based on these limited descriptions, it seems that the village core of the Tivoli group may be represented at the Tivoli Site or 9BN70. Further investigation at 9BN70 would undoubtedly help refine this hypothesis.

9BN24

This site was recorded on the eastern side of Tivoli Creek approximately one quarter mile south of the community of Keller (Pearson and DePratter 1973). It was described as being on a low bluff adjacent to the edge of the marsh and was recognized by a shell scatter extending about 200 meters along the marsh edge and 30 meters inland from the marsh. It was apparently heavily disturbed by pine plantation; however, a surface collection yielded 32 prehistoric artifacts including Irene incised (n=1), Savannah checked stamped (n=1), Savannah cord marked (n=3), grog tempered cord marked (n=1), grog tempered plain (n=7), and sand and grit tempered plain (n=19) sherds. Based on this surface collection, site appears to have been occupied during the Late Woodland, Middle Mississippian, and Late Mississippian periods. It is unclear if the midden deposits accumulated during the Irene phase or throughout its occupation. It may have served as small farmstead during the Late Mississippian.

9BN25 and 9BN26

9BN25 was identified along a logging road west of Tivoli Creek approximately one quarter mile from the marsh edge (Pearson and DePratter 1973) (Figure 5.1). It is reported to have consisted of a single shell midden exposed by the road and a surface scatter yielding three Irene complicated stamped and seven Irene plain sherds along with three lithic flakes. 9BN26 was identified approximately one mile south of 9BN8 as two small shell middens along the marsh edge of a jutting landform overlooking a small creek draining into the Medway River (Pearson and DePratter 1973). These site may represent procurement areas focused on the collection of estuarine shellfish.

9BN522 and 9BN523

These small sites were recorded as primarily historic artifact scatters during the archaeological survey of the Sweet Hill Subdivision. They both contained limited numbers of Irene complicated stamped and plain pottery along with limited amounts of St. Catherines cord marked and sand tempered plain pottery. Both sites are described as heavily disturbed through silviculture and were not recommended for additional archaeological investigation. The aboriginal function of these sites is unclear; however, it is unlikely they represent habitations, but instead short term special use areas.

The Lincoln Trail Group

The small cluster of Irene phase sites dubbed the Lincoln Trail group is located on the southeastern tip of Bryan Neck within the Richmond Hill WMA (Figure 5.1). This group is comprised of four sites, two of which were recorded by Pearson and DePratter in 1973 and one noted by Fred Cook in the 1960s but officially recorded in 2009 (Figure 5.6). It is very likely that other Irene sites of varying complexity are associated with this

cluster. There has been very little investigation conducted thus far within the WMA land; however, perusal of topographic maps and aerial LiDAR data suggests that many locations considered ideal for permanent Irene habitation are present throughout the property (Figures 3.1 and 5.1). The village site within this grouping appears to be the Lincoln Trail Site (9BN17) and is the principal subject of this investigation. It is discussed at length earlier in this chapter and within Chapter 7. The remaining sites are largely undocumented middens with associated artifacts.

9BN13

This resource consists of a late Savannah to Irene phase midden which extends around 60 meters along the southern end of a small coastal hammock overlooking the Kilkenny River (Pearson and DePratter 1973) (Figure 5.1). This midden was described as being up to 1.5 meters tall in places and a feature described as a living floor was identified eroding from southern edge along the creek.

The Retreat Cabin Midden Site (9BN19)

This site was recorded at the southern end of Belle Island Road overlooking Retreat Creek (Figure 5.1). The site was identified as a scatter of disturbed shell midden which stretched for almost a quarter of a mile along a dirt road (Pearson and DePratter 1973). It was unclear how far the site extended into the woods on either side of the road; however, 14 sherds were collected and appeared to be primarily Irene phase pottery. More investigation is needed in order to assess the function of this site.

Belle Isle (9BN1133)

This site was recorded based on the notes donated by Fred Cook to the GASF in 2009. The site was first identified by Cook in the 1960s and was described as containing

numerous shell middens with Irene pottery (GASF 2009). No excavation was conducted and no artifacts were collected. More work is needed in order to assess the site function of this resource; however, the description of "numerous shell middens" suggests a possible cluster of household middens suggestive of a possible small hamlet or other habitation.

Figure 5.1: Irene Sites of Bryan Neck

Material Redacted

This Material has been redacted from general publication to protect sensitive information pertaining to this important archaeological site. This information is available from the Georgia Department of Natural Resources, Historic Preservation Division.

Figure 5.2: The Cherry Hill Group (A)

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Figure 5.3: The Sevenmile Bend Group (B)

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Figure 5.4: The Genesis Group (C)

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Figure 5.5: The Tivoli Group (E)

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Figure 5.6: The Lincoln Trail Group (D)

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CHAPTER 6

RESEARCH DESIGN AND METHODOLOGY

The primary research question that drives the present study is: What type of Mississippian site is represented at Lincoln Trail? Based on the review of prevailing literature in Chapter 2, it is clear there are well documented models designed to archaeologically identify the signature of Mississippian chiefdoms in the interior Southeast (Anderson 1994; Steponaitis 1986; Hally 1993). These models identify individual, site-based components of these polities and intra-site elements that help identify them (Steponaitis 1986; Holley 1999; Kidder 2004; Lewis and Stout 1998). They were created based on data from Mississippian sites concentrated within the ecologically circumscribed floodplains of the South Appalachian region and other interior locales. Can these models be applied directly to the Mississippian sites found within the ecologically diverse coastal zone? It is clear that addressing the primary research question at Lincoln Trail actually implies a secondary question: What does a Late Mississippian chiefdom look like archaeologically on the northern Georgia Coast? The following provides a description of the methods employed during the present investigation to lay the groundwork for a larger project aimed at addressing these primary research questions. This includes a discussion of specific research objectives thought to be attainable within the current research scope and relevant to the primary research question, field methods employed towards meeting those objectives, and the laboratory methods used to analyze and classify the cultural material presented within Chapter 7.

6.1: Research Objectives

A series of research objectives are outlined below that have been designed to achieve early-stage conclusions that address the primary questions. These objective have informed the methodology at Lincoln Trail thus far and will influence future research at the site.

Primary Research Objectives

1) *Determining the Boundaries of the Lincoln Trail Site*

The Lincoln Trail site was recorded as an artifact scatter in 1973 based upon the presence of aboriginal pottery noted on the surface of the dirt road known as Lincoln Trail (Pearson and DePratter 1973). This scatter measured over 1,000 meters in length but spanned only the width of the road. As noted by the Georgia Council of Professional Archaeologists (2001), "Surface visibility and topography alone do not sufficiently define a site." Based on the material found, it was believed that the site dated to the Late Mississippian and it was speculated that the scatter represented an Irene phase village (Pearson and DePratter 1973). Later, informal site visits revealed extensive midden deposits along the marsh edge, however, it was unclear how these features related to the original artifact scatter without effective boundaries for the resource. Determining the boundaries of a site allows it to be compared as a quantifiable unit with other sites. It also allows for intra-site comparison with related differential use areas that may not be evident through visual inspection alone. Pearson (1977) also used site size as a rough indicator of population size and site complexity in order to rank them into four classes. Given the discussion of settlement strategy presented in Chapter 2, it is clear that

determining the extent of the deposits at Lincoln Trail is imperative to identifying its function in comparison with surrounding archaeological resources.

2) *Determining Varied Use Areas*

The boundaries of a site are useful for broad comparison, but determining a sites function during a given occupation requires the identification of the activities that occurred there. Given the broad questions being addressed by this research, it is clear that determining the activities that occurred at Lincoln Trail will be necessary to identify its role within a larger coastal Late Mississippian system. Chapter 2 concluded with a testable model of what a Late Mississippian chiefdom may look like archaeologically on the northern Georgia Coast. This included suggestions for characteristic architecture, community layout, and organization that may help identify specific site-based elements within the proposed chiefdom model. Identifying varied use areas at a site is accomplished through noticeable variation in artifact distribution, artifact types, and cultural features. Comparing these differential observations spatially allows for a determination of the types of activities that occurred at a site and how they were arranged across its landscape. This can be compared to the expectations of site layout and organization proposed within Chapter 2, which will be used to determine what type of Mississippian site is represented at Lincoln Trail.

3) *Determining Temporal Placement for the Irene Culture and Bryan Neck Settlements*

The temporal range for the Irene Period has undergone subtle refinement through the years. Irene pottery types were originally defined by Caldwell and Waring (1939) based on WPA era excavations at the Irene Site (9CH1). Based on the stratigraphy at the

site, they determined that the Irene phase wares occurred after the Middle Mississippian Savannah phase at the site but generally believed that it also pre-dated European contact (Caldwell and Waring 1939; DePratter 1991; Saunders 2000). DePratter (1991) further refined this chronology to extend from AD 1325 to around 1580, specifically noting that the pottery type occurred, at least for a time, during early Spanish colonization. Thomas (2008) presents 24 radiocarbon dates from Irene contexts on St. Catherines island, which suggest a temporal span of AD 1300 to 1580 for the Irene phase on the island. While these new data have helped refine the Irene temporal span, albeit only slightly, it is important to keep in mind that these dates are from a geographically restricted area. More Irene dates are sorely needed for mainland settings, where site specific investigations at Irene sites are more commonly conducted than broad scale Irene Period Landscape studies. The growing cache of data available for Irene settlements within the Bryan Neck has started to form an exception to this mainland research gap, however. Excavations at village sites such as Sevenmile Bend, Redbird Creek, and now Lincoln Trail are supplemented by the identification and testing at smaller habitation and support sites such as those identified at Genesis Point (Sipe 2013). Are these sites contemporary? Are they individual components of one or multiple Irene Period polities? Continued efforts along the path of this current study will undoubtedly help answer these questions.

There have been 10 radiocarbon dates gathered from proveniences associated with four of the Bryan Neck Irene sites (Table 6.1). Most of these dates have been acquired from contexts associated with the Genesis Group; however, three dates have also been acquired from Lincoln Trail as part of the present study. The dates indicate a good bit of overlap and may indicate contemporaneity; however, two of the smaller farmsteads

(9BN104 and 9BN872) yielded date ranges which are broad enough to be considered statistically later (Sipe 2013). This may simply be the result of the less reliable radiometric dates acquired from marine shell. Determining the temporally relationship between the sites of Bryan Neck is vital to understanding how these resources relate to each other and what kind of Late Mississippian system may be present within the region.

Secondary Research Objectives

1) *Documenting Subsistence Variability*

Ethnohistoric accounts of the Guale have suggested that mast and even limited maize horticulture played valuable supplementary roles in the coastal diet. Archaeology at nearby sites, such as Redbird Creek, have revealed the presence of maize within midden and smudge pit features (Sipe 2013; Sipe 2011c). Ethnobotanical analysis of samples from the floor of Structure 5 at the Groves Creek site have also revealed evidence of other horticultural products characteristic to the southeast (Keene 2002, 2004). Shell midden deposits are evident across the Lincoln Trail site and collection of at least one sample from these middens will provide important new data toward this secondary objective.

2) *Documenting Other Native American or Significant Historic Era Deposits*

Based on the initial surface inspection (Pearson and DePratter 1973), it was clear that Lincoln Trail contained at least two components: a Late Mississippian Irene village and a small Late Archaic St. Simons occupation. Background research conducted during the permit application also revealed that the site was part of the Lincoln Plantation, a colonial era farmstead attributed to some of Bryan Neck's earliest residents: the Cubbedge Family. It was clear that deposits associated with these occupations would

also be conducted during the investigations at Lincoln Trail. This material was documented along with the Irene phase artifacts in order to provide any available data that may be used to address other research questions regarding aboriginal or significant historic era deposits on the northern Georgia Coast.

6.2: Field Methodology

Survey

The first two primary research objectives revolve around determining the boundaries and nature of the archaeological deposit represented at the Lincoln Trail Site. As such, the investigation is heavily based on shovel test survey. Mathis (1979) describes several goals that should be considered during a prehistoric survey project. These include:

- The identification of special use areas and site densities
- Identification of occupation chronologies
- Analysis of site function
- Analysis of settlement patterns
- Evaluation of possible refinement to methods and techniques

Pursuit of these basic goals outlined by Mathis (1979) coincides with the basic research objectives outlined earlier within this chapter.

Fieldwork was conducted during two Georgia Southern field seasons, specifically during the Summer 2012 (June and July 2012) and Spring 2013 (January through May 2013) field schools. It included a systematic shovel test survey, pedestrian inspection of the site area, and limited excavation, discussed separately below. Eroded areas, trail

roads, and tree falls were specifically examined; however, surface visibility was limited almost entirely to roads and the marsh edge.

As recommended within the Georgia Standards and Guidelines for Archaeological Surveys (Georgia Council of Professional Archaeologists 2001), all shovel tests measured 30 by 30 cm square and were dug at 30 meter intervals across the site. The boundaries of the site were determined by negative shovel tests, property boundaries, or environmental zones that fit the description of "low probability" areas as outlined by the GCPA (2001). These include areas exhibiting slope greater than 10 percent, very poorly drained soil as determined by subsurface inspection, and areas which have been extensively disturbed (GCPA 2001). For the purpose of this investigation, low probability designations were assigned to the interior wetland along the western boundary of the site and areas of tidal marsh along the site's eastern flank (Figure 3.1). Several negative shovel tests were dug at 90 meter intervals within the interior marsh in order to confirm the poor soil drainage.

The survey commenced by locating the UTM coordinates recorded on the original site form for the resource (**Material Redacted**) and establishing the shovel test grid at arbitrary coordinates 5000 N, 5000 E. From this point shovel tests were dug in cardinal directions at 90 meter intervals in order to get a broad assessment of the site size. This testing strategy was continued outward from the established datum until negative shovel tests, geographic barriers (i.e. the marsh), or the limits of state-owned land were reached. This established a working boundary for the resource. Upon completion of the 90-meter grid, the remainder of the grid was filled in at 30 meter intervals to formally define the boundaries of the resource.

All shovel tests measured 30 by 30 cm square. Vertical control within each test was maintained using natural stratigraphy to a depth of 80 cm or until sterile soil was encountered as prescribed by the GCPA (2001). Contents of each test were screened through ¼ inch (6.4 mm) mesh mounted upon portable shaker screens (Figure 6.1). All sampled cultural material was collected and returned to the Georgia Southern Archaeology lab for analysis. All relevant field notes and photographs have been taken to GSU for curation. At the conclusion of the project, artifacts and field notes will be curated at the University of West Georgia in order to keep assemblages recovered from state held lands in a centralized location.

The location and result of each shovel test is maintained using a Garmin Oregon 450 series handheld GPS and plotted using ESRI ArcGIS software. The resulting map is presented as Figure 7.1 in the following chapter.

Limited Testing

The permit for archaeological testing at the Lincoln Trail site was amended in early 2013 in order to conduct limited site testing as part of the annual Weekend for Wildlife event. The 2013 theme of the event was to showcase Georgia's WMA lands and the Lincoln Trail site was chosen as an ideal candidate to illustrate the type of archaeology that is conducted on such state owned property. A document drafted in January of 2013 and subsequently approved in February by the Georgia State Archaeologist, identified three locations for 1 by 2 meter test units to be excavated as part of the event (Figure 6.2). These locations were selected because they stood to provide important data toward determining special use areas and collected a midden sample to

document subsistence variability. They were centrally-located near a staging area for the events volunteer participants.

These 1 by 2 meter units were established adjacent to Mt. Chance, SM-1 and SM-3 as described in Chapter 7. This portion of the site was dubbed Locus A. The 1 by 2's were set up like block excavations and were labeled Blocks 1 through 3. Each Block was comprised of two 1 by 1 meter units labeled Units 1.01 and 1.02 for Block 1, 2.01 and 2.02 for Block 2, and 3.01 and 3.02 for Block 3. These designations were selected for the excavation units to facilitate block expansion should additional excavation be initiated in the future.

Each unit was excavated in arbitrary 10 cm levels and natural strata when relevant. Vertical control was maintained from a stationary datum point located in the highest corner of each unit. All soil was screened through ¼ inch mesh and artifacts were collected by arbitrary level unless a new stratigraphic zone was encountered prior to the close of a 10 cm level. One exception to this was the 50 by 50 cm portion of Block 2, which was collected as a column sample for fine screening or flotation in order to identify faunal and botanical remains that may help address the secondary research objective regarding subsistence variability. All cultural features were mapped and photographed prior to excavation, and all collected material was transported to the Georgia Southern Archaeology lab for processing and analysis.

6.3: Laboratory Methodology

Materials recovered during the investigations at Lincoln Trail were cleaned, analyzed, and tabulated by students affiliated with Georgia Southern University and all data were entered into Georgia Southern's archaeology database. This database was used

to generate tables discussed in Chapter 7 and the complete artifact analysis catalog presented as Appendix B. The assemblage included both aboriginal artifacts from the Late Archaic St. Simons phase through the Late Mississippian Irene period, as well as historic artifacts that dated from the 18th and early 19th century. A description of the terminology used to describe these artifacts ensues below.

Aboriginal Ceramics

All pottery fragments recovered during this research were washed of surface dirt with water by hand or with a soft-bristled brush and allowed to air dry. Sherds were examined, weighed, and counted, and classified by surface treatment (as apparent to the naked eye), temper, and manufacturing technique. The vast majority of this material was related to the Late Mississippian Irene phase occupation of the site. Several pottery types directly affiliated with this phase are described below along with specific types affiliated with other cultural phases represented at the site. When possible, sherds were classified according to these widely accepted pottery types for the northern Georgia coast; however, efforts were made not to force sherds into existing pottery classifications. Sherds that did not display the exact elements necessary to fall within a diagnostic type were classified by temper and surface treatment; and given a thorough description in the comments section of the database.

Irene Phase Pottery

Irene pottery is a thin-walled, grit tempered Lamar variant found along the northern Georgia coast. The pottery type was first defined by Caldwell and Waring (1939) during fieldwork at the Irene Mound site, a Middle and Late Mississippian mound center near the mouth of the Savannah River. This pottery is most frequently recognized

by the high incidence of a complicated stamped motif known as the filfot cross. This motif is recognized as a combination of curvilinear and rectilinear lines that form a cross out of four scrolls. There is typically a central node surrounded by four sets of four lines which form scrolls extending outward from the node in cardinal directions (Figure 6.3). Overstamping is common on this pottery type, often making the full motif unrecognizable (Caldwell and McCann 1941). Other styles affiliated with this ceramic type included plain/burnished plain and incised vessels. Vessel forms identified at the Irene Mound site included globular jars (or urns), carinated bowls, and sometimes a type of bottle (Caldwell and McCann 1941). The pottery was recognized as distinct from the previous Savannah phase at Irene by more than just its variations in decorative style. It also seemed to be associated with changes in site architecture, layout, and mortuary tradition that developed around AD 1300 (Caldwell and McCann 1941).

Irene Complicated Stamped: Irene complicated stamped is the designation applied to sherds which display stamped designs with identifiable elements of the filfot cross motif, such as the curvilinear scroll or clear central node (Caldwell and McCann 1941; DePratter 1991; Saunders 2000) (Figure 6.4). These sherds clearly represent filfot stamped vessels; however, there was no instance in which the filfot cross was entirely visible. This was due primarily to overstamping or the fragmentary nature of their condition. Irene complicated stamped sherds are typically reflective of globular jar/urn style vessels which are ubiquitous in Irene phase components. Pearson (1984) points out that rare examples of complicated stamped bowls have been identified; however, Sipe (2013) notes that some of these bowls are actually the reclaimed bases of urn style vessels.

Irene stamped/Indeterminate stamped: Sherds labeled with this designation also displayed a paddle stamped design; however, only parallel grooves were apparent. Their presence at a densely occupied Irene village strongly indicates these artifacts are additional representations of filfot stamped vessels, but they lack the curvilinear elements to be definitively classified as a true filfot cross. This designation was largely utilized to maintain strict classification criteria. Artifacts of this type were considered definitively Irene during the interpretation of the Lincoln Trail data.

Irene Incised: While Irene complicated stamped pottery may provide the most definitive evidence of an Irene occupation, it is the incised wares that help define it temporally (Braley 1990; Saunders 2000). The Irene phase is typically divided into at least two temporal categories based on the presence and ratio of incised pottery. The most basic of these divisions divide the phase into Early (AD 1300-1450) and Late (AD 1450-1550+) based on the absence or occurrence of incised pottery, respectively (Saunders 2000). Braley (1990) refines this temporal model and suggests a three-part system: Irene I (AD 1300-1350) refers to the very early period with almost no incising, Irene II (or Pipemakers Creek, AD 1350-1450) corresponds with the appearance of boldly-incised linear and scroll designs, and Pine Harbor (AD 1450-1550) represents the very late period that corresponds with fine-lined incising known as McIntosh Incised (Larson 1955). Incised sherds typically represent specific vessels forms including hemispherical and cazuela style bowls that are plain/burnished plain with the exception of an exterior, incised band below the rim (Figure 6.5). This means only a portion of each vessel's surface area is actually decorated and, even where these vessels proliferate, incised sherds tend to be a small percentage of the total assemblage (Saunders 2000).

Irene plain and burnished plain: Irene plain and burnished plain sherds are typically reflective of cazuela or hemispherical bowls; however, plain jars/urns have also been infrequently documented (Pearson 1984; Saunders 2000). The vessels represented by Irene plain and burnished plain sherds are typically not undecorated. These bowls feature a narrow strip below the rim which is incised with linear and scroll designs (Saunders 2000). The plain sherds tend to be more common than the incised, as they are more representative of the majority of the vessel's surface area. Cook (1980) documents a correlation between an increase in the number of incised sherds at Irene sites with an increase in plain pottery. As such, the frequency of plain pottery can be used to supplement seriation techniques utilizing incised pottery at Irene phase sites.

Grit Tempered UID/Eroded: Artifacts classified under this designation represent grit tempered sherds with a paste similar to that of Irene; however, their surface treatment could not be formally identified due to erosion or fragmentation. Many of these artifacts featured rim styles characteristic of Irene or at least faint signatures of Irene surface treatments. Their classification under this category was to maintain sorting criteria, they were treated as Irene artifacts during interpretation.

Rim Style and Elaboration

Rim treatment has also proven useful in the development of a chronological sequence for Irene pottery. Irene rims are quite similar to those seen on Lamar vessels in the interior Southeast (Saunders 2000). The most common rim treatment by far throughout the Irene phase is plain; however, little temporal data can be gleaned from this type. Pottery from the Early Irene or Irene I periods often displays rim treatments similar to those found on Middle Mississippian Savannah sherds and includes appliqué nodes

(round pieces of clay applied to the vessel wall near rim), appliqué rosettes (smaller pellets of clay with cane punctations), and plain appliqué rim strips. Later variations (which could only correspond to Braley's Irene II period) rarely displayed the Early Irene rim elaborations but often featured an applied clay strip that was segmented with puctations created by a vertical stylus. Segmented and punctated rim strips also seem to appear on occasion during this period. The very late or Pine Harbor Irene series showed a continued increase in the frequency of applied rim strips that were segmented and/or punctated with a reed stylus, and reed punctations directly to the vessel wall beneath the rim. Pearson (1984) compared the incidence of rim elaborations on three Irene sites including the Irene Site (Savannah/early Irene), the Redbird Creek Site in Bryan County, Georgia (presumed early to middle Irene), and the Kent Mound site on St. Simons Island (mid to late Irene). As a result of his study, he determined that plain rims were the most common type at all sites, but there was a clear increase in the use of appliqué rim strips (especially segmented) and a definite decline in the use of nodes over time (Pearson 1984). Rim elaboration at Lincoln Trail was analyzed following Saunders (2000) and included observations based on the presence and type of appliqué elements and the presence or absence of decoration applied to those elements (Figure 6.6). *Other Aboriginal Ceramics*

Ceramics from at least two other aboriginal components were identified at the Lincoln Trial site during the present investigation. These include a Late Archaic component represented by fiber tempered St. Simons pottery and a Late Woodland component represented by Wilmington pottery. There were also several artifacts that represent outliers. These sherds are very sparse (1 or 2 artifacts), dating to the Early

Woodland and Early Mississippian periods that are either reflective of limited activity during those phases or transitional periods at the site. Ceramics associated with these assemblages are described briefly below.

Savannah: This Middle Mississippian pottery type typically consists of a thin-walled, sand-to-medium grit tempered ware that often displays a variety of surface treatments. Decorative techniques applied to Savannah pottery include check stamping, primarily curvilinear complicated stamping, and fine cord marking (Caldwell and Waring 1939) (Figure 6.7). Plain and burnished plain sherds are also frequently associated with this series (Caldwell and McCann 1941).

St. Catherines: This ceramic series is often referred to as a transitional type that straddles the boundary between Late Woodland and Early Mississippian (DePratter 1991); however, intensive investigation on St. Catherines Island seems to indicate that it represents an Early Mississippian phase of its own on parts of the Georgia coastline (Thomas 2008). It was formally defined by DePratter (1991) and can be recognized by a grog tempered paste composed of fine grog particles as opposed to the large chunks of grog seen in Wilmington pottery. St. Catherines pottery often features a fine cord marked exterior (Figure 6.8); however, plain and net marked examples have also been identified (DePratter 1991). The interiors of these vessels are almost always smoothed, usually through shell scraping.

Wilmington: This Late Woodland pottery type is also identified by a characteristic grog tempered paste; however, Wilmington types are recognized by a thick, chunky paste with large grog particles (Caldwell 1952; DePratter 1991). Surface treatments on this

pottery include brushing, check stamping, complicated stamping, fine cord marking, and, most commonly, heavy cord marking (Caldwell 1952; DePratter 1991) (Figure 6.9).

Oemler: This is an Early Woodland ceramic type defined by DePratter (1991). It seems to be associated with the latter years of the Refuge phase or even a transition towards Deptford pottery. It is a sand tempered ware that is typically complicated stamped or check stamped with diamond or rhomboid shaped checks (DePratter 1991). Complicated stamped designs are always rectilinear and feature nested diamonds, herringbone, and "alternating zones of triangle-filled pyramids and rows of diamond shaped lozenges separated by heavy lines" (DePratter 1991) (Figure 6.10).

St. Simons: This fiber tempered pottery type represents the Late Archaic pottery of the Georgia Coast (Caldwell and McCann 1941). Vessels of this type are usually simple bowl shapes, rims are straight or incurvate, and lips and bases are rounded or flattened. St. Simons pottery is typically plain with relatively fine paste, though punctate and incised designs do occur (DePratter 1991) (Figure 6.11). Surface decoration appears to become more common north of the Savannah Delta where it is typically referred to as Stallings Island pottery (Elliot and Sassaman 1995).

Lithic Artifacts

The lithic assemblage at Lincoln Trail was relatively sparse; however, limited debitage and stone tools were encountered during shovel testing and excavation. Crabtree (1972) identifies debitage as "residual lithic material resulting from tool manufacture" that "represents intentional and unintentional breakage of artifacts either through manufacture or function."

Flakes: Most of the lithics at Lincoln Trail were flakes: lithic fragments that have removed from a larger mass through the application of force and which demonstrate a platform and bulb of percussion (Crabtree 1972). Analysis of such artifacts can often be used to interpret the type of the lithic reduction activities that occurred at a site. In order to do this, complete flakes must be measured and size-graded. A complete flake must demonstrate a point of applied force, intact margins, and ventral and dorsal surfaces (Sullivan and Rosen 1985).

Secondary Decortication flake (sdf): These flakes exhibit cortex over less than 90 percent of their dorsal surface. Flakes of this type are typically interpreted as secondary stage reduction (Crabtree 1972).

Non-decortication Flake (ndf): Flakes in this category lack any cortex on their surface. These are the remains of late-stage reduction and re-sharpening activities.

Shatter: These angular, chunky fragments of stone lack flat morphology and display no clear bulb of percussion (Crabtree 1972).

Biface: This basic category of lithic tools is defined by an edge that is intentionally thinned on both sides (Crabtree 1972).

Hafted Biface: This bifacially thinned tool is typically symmetrical and is pointed at one end and exhibits a basal preparation presumably for the purpose of hafting (Crabtree 1972) (Figure 6.12). These tools are alternatively called projectile points or projectile point/knives (pp/k).

Historic Artifacts

Pearlware (1775-1840): This term refers to a refined earthenware constructed from a white paste with a clear lead glaze which displays a characteristic bluish or

greenish cast due to the addition of cobalt (Noel-Hume 1969). This often puddles in the crevices of a vessel (footings, handles, etc.) creating the signature pooling effect, often used to identify this ware. This ceramic type was created in the late 18th century as a cost effective, locally made substitute to Chinese porcelain. By 1810, Noel-Hume posits that this ceramic type was the predominate tableware in the U.S.; however, it began to fall out of fashion in the 1820's, and was almost completely replaced by 1840, "being superseded by various forms of hard white wares that are extremely difficult to date with accuracy (unless bearing factory marks)" (Noel-Hume 1969).

Black Lead Glazed Coarse Earthenware (1700-1770): This is a somewhat generic term which references utilitarian storage ceramics constructed from cream to reddish brown colored paste on which the interior and exterior have been coated with an opaque reflective black glaze (Deagan 1987).

Figure 6.1: Field Crew Shovel Testing at 9BN17

Figure 6.2: Excavation at 9BN17

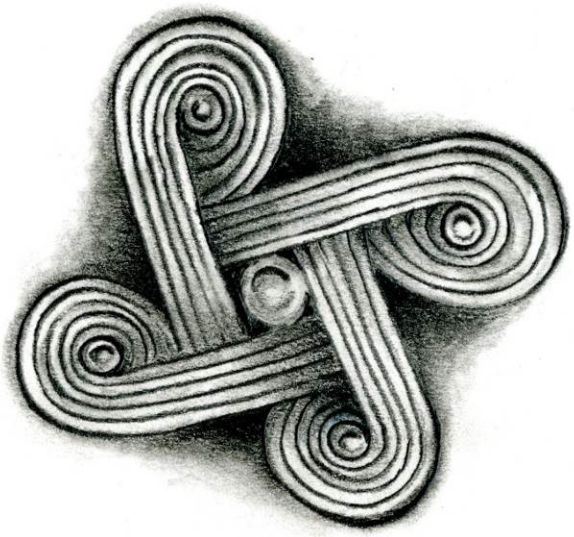

Figure 6.3: The Filfot Cross Motif (Illustration by Ilene Shuman)

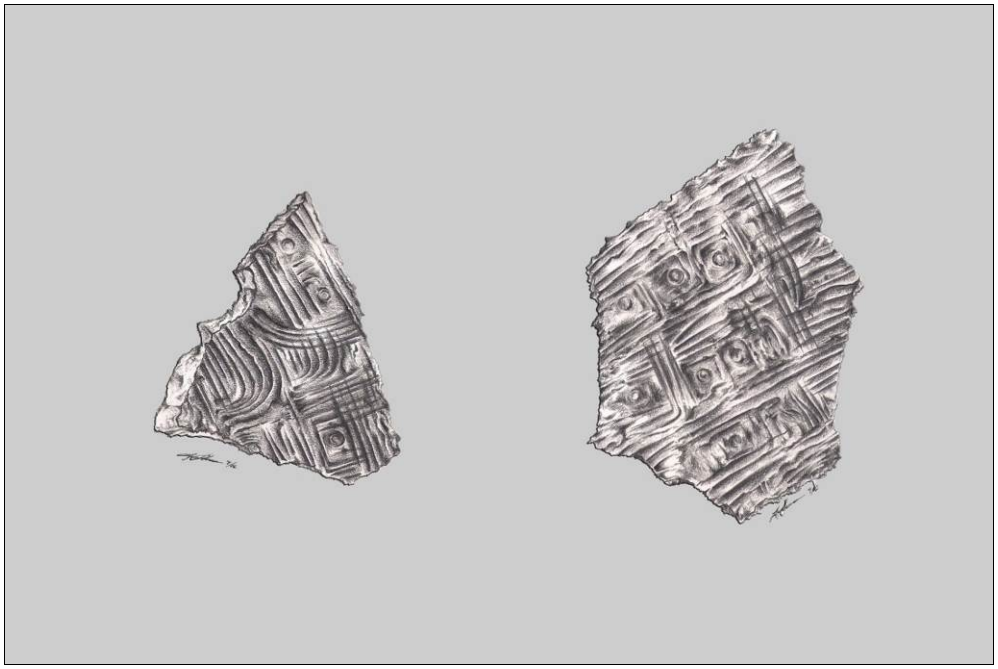

Figure 6.4: Irene Complicated Stamped Pottery (Illustration by Ilene Shuman)

Figure 6.5: Photograph of Irene Incised Pottery at 9BN17

Figure 6.6: Irene Rim Elaboration at 9BN17

Figure 6.7: Savannah Fine Cord Marked Pottery at 9BN17

Figure 6.8: St. Catherines Cord Marked Sherds at 9BN17

Figure 6.9: Wilmington Heavy Cord Marked Pottery at 9BN17

Figure 6.11: St. Simons Fiber Tempered Pottery at 9BN17

Figure 6.12: Hernando Style Hafted Biface at 9BN17

CHAPTER 7

RESULTS

7.1 SHOVEL TEST SURVEY

Shovel testing was conducted at 30-meter intervals, as recommended by the Georgia Council for Professional Archaeologists (GCPA 2001). A total of 381 shovel tests were dug at 30-meter intervals across the landform including 199 that were positive and 182 that were negative. Based on the positive shovel tests, it is clear that cultural deposits associated with the site continue to the north past the boundaries of the WMA property and onto the Kilkenny Marina property; and to the south into an established housing development. Within these boundaries the site has a "north-south" axis stretching 1,110 meters (Figure 7.1). 9BN17 measures approximately 510 meters east-west from the edge of the marsh until the ridge slopes into the interior wetland system to the west of the site. This western boundary was determined by the edge of the wetland and confirmed through negative shovel testing.

A representative soil profile from a centrally located shovel test revealed 3 strata: Stratum I (0 to 30 cm) grayish-brown sand, Stratum II (30 to 60 cm) yellowish-brown sand, and Stratum III (60 to 80 cm) light yellowish-brown fine sand. Tests were suspended at 80 cm below surface (cmbs) as prescribed by the GCPA (2001) unless subsurface deposits continued past this depth. Tests within shell midden deposits revealed a modified stratigraphic sequence which consisted of dense oyster midden with very dark grayish-brown soil that extended between 20 and 80 cm deep, underlain by a

dark grayish brown leachate zone. Beneath this zone was around 10 cm of grayish brown atop yellowish brown sand to the base of the tests.

There were 1,194 artifacts recovered from shovel tests at Lincoln Trail (Appendix A). This included 49 historic artifacts and 1,145 items of prehistoric/aboriginal origin. Artifact density varied between 1 and 228 per positive test (Figure 7.2) and the depth of recovery was between 0 and 70 cm below surface (cmbs). A detailed analysis of the assemblage revealed that materials representing a Colonial/Early American farmstead (n=48) and a Late Mississippian Irene Phase village (n=516); along with smaller Woodland (n=11) and Late Archaic (n=92) components were present at the site. There were also 411 artifacts that were not considered temporally diagnostic; however, many of these were likely associated with the Irene component based on the context in which they were found.

Colonial/Early American Occupation

There were 49 artifacts recovered from shovel tests that were determined to represent a non-aboriginal component at Lincoln Trail. These were concentrated within four distinct nodes within the northern, east-central, and southwestern portions of the site (Figure 7.3). These contained relatively limited deposits of material diagnostic of late 18th/early 19th century activity at the site including architectural (n=21) and domestic (n=28) debris.

The largest of these concentrations was located within the east-central portion of the site between 5000 and 4910 North and 5180 and 5240 East (Figure 7.3). Historic material recovered from this area revealed a relatively high incidence of pearlware including blue transfer print (n=2), plain (n=2), and two scalloped fragments of a green,

edge decorated plate. Architectural debris was also common and included fragments of hand-made brick (n=3) and mortar (n=5) with crushed oyster inclusions. A single kaolin pipe stem was also found within this historic activity area. The pipe appeared burned and its bore diameter was 5/64 of an inch, a size typically considered diagnostic of an early to mid-18th century manufacture. One piece of dark olive glass and a .22 caliber bullet were also found; however, the bullet likely represents a more recent deposition.

This portion of the site also contained a dense concentration of tabby and brick rubble scattered across a 10 meter area between Shovel Tests 4970N/5180E and 4970N/5210E. No intact structural elements could be identified within the tabby concentration; however, much of it displayed impressions of the framework of the building it was applied to. One judgmental shovel test (JT-3) was dug within the concentration of tabby rubble. This test revealed 12 artifacts including nine that were historic and three that were prehistoric. The historic material indicated a high incidence of architectural debris such as handmade brick fragments (n=3), fragmentary mortar (n=1), and rose-head nails (n=3). One piece of blue transfer print and a piece of hand-painted pearlware were also recovered, as well as a single shard of mold blown aqua glass. Three sherds of grit tempered plain pottery were also recovered within the shovel test from beneath the tabby rubble.

The northernmost concentration of historic material consisted of 10 pieces of olive-amber bottle glass found within Shovel Test 5540N/5240E. There was also a small scatter of early 20th century material including milk glass (n=1) and modern brick (n=2) adjacent to Shovel Test 5570N/5330E near the remains of an apparent logging road (see Figure 7.1). South of that was a node comprised of hand-made brick fragments (n=7)

within Shovel Test 5270N/5270E and a single piece of black lead glazed coarse earthenware found within 5180N/5240E. The remainder of the historic assemblage consisted of one piece of lead glazed, coarse earthenware found within the wetland transition on the west side of the landform within Shovel Test 4700N/4850E (Figure 7.3).

While somewhat scant, this historic assemblage does provide quite a few temporally diagnostic specimens. Ceramics, which make up 22% of the assemblage, provide the most useful temporal indicators (Figure 7.4). These were dominated by pearlware (82%), a ceramic type which was produced between 1780 and 1840 (Hume 1969; South 1977; Miller 1991). The pearlware recovered at Lincoln Trail included plain (n=2), blue transfer print (n=3), green edge-decorated (n=2), and hand painted polychrome (n=1) varieties. These decorative techniques provide further evidence of temporally diagnostic traits. The green, edge-decorated designs both feature a scalloped rim and impressed straight lines, an embellishment Miller (1987) associates with a manufacture date between 1809 and 1831. Hand painted, polychrome pearlware was produced throughout Pearlware's manufacture range; however, the example recovered at 9BN17 appears consistent with an earlier motif known as "Gaudy Dutch" which was produced between 1795 and 1820 (Hume 1969, South 1977, Miller 1991). The blue, transfer printed specimens from Lincoln Trail are sparsely represented (n=3) and fragmentary. As such, it is impossible to accurately identify a temporally defined transfer print design. From the small pieces available, however, the patterns are primarily line-based with very little shading. Line-based transfer print designs without shading are often considered diagnostic of a pre-1807 manufacture, as stippling seems to have been introduced around this time (Samford 1997; Sussman 2000). The remainder of the

ceramic assemblage consists of black, lead-glazed coarse earthenware (n=2), a pottery type which was produced between 1700 and 1770 (Deagan 1987). While this assemblage is sparse, if one applies the temporal indicators outlined above and South's (1977) formula, it can provide a Mean Ceramic Date of 1792. Factoring in the kaolin pipe stem with the 5/64 inch bore diameter alters this date to 1785.

Based on the documentary research conducted for the Lincoln Trail site, it is clear that it was occupied during the Colonial and Early American Periods. In 1748, General Oglethorpe granted headrights to a large tract of land (containing 9BN17) to a George Cubbedge of North Carolina. Cubbedge and his family were among the first settlers of Bryan Neck and established a Plantation known as "Linkhorn" or Lincoln with their grant that included the Lincoln Trail Site. They are known to have built a house on their property and were officially deeded the tract in 1756, suggesting that a house had been constructed or the land "improved" by this point (Sullivan 2000). The location of the house was said to overlook the salt marshes "where Kilkenny River, Cubbedge Creek, and Lincoln Creek converge en route to their eventual confluence with the Bear River" (Sullivan 2000: 107). Based on this description, the Lincoln Trail site seems a most likely location for the Cubbedge family home. The presence of a refuse pile made of tabby and brick rubble within the east-central portion of the site seems to bolster this hypothesis. No intact structural elements were identified; however, shovel testing in the vicinity and within the refuse pile revealed architectural debris indicative of mid-to-late 18th century construction (rose-head nails) and the remainder of the assemblage was consistent with domestic debris (i.e. ceramics and a pipestem fragment). It is quite possible that the tabby debris at the Lincoln Trail site represents the location of the

Cubbedge main house at Lincoln (or Linkhorn) Plantation; however, it could also be the remains of an outbuilding or even quarters for the family's five slaves. Further investigation in the form of controlled excavation is necessary to determine the true nature of these deposits.

The documentary evidence of the Cubbedge occupation at 9BN17, or Lincoln Plantation, began as early as 1748 and extended until it was absorbed into Kilkenny Plantation in the 1830's (Sullivan 2000). The artifactual evidence associated with the historic component fits nicely within this window and includes artifacts with a terminus post quem of the early to mid-18th century and a terminus ante quem of no later than 1840. Documentary evidence suggests that when the property was absorbed into the Kilkenny Plantation system, it was no longer used as a domestic residence (Sullivan 2000). The remainder of the land use history of 9BN17 also suggests that the property was vacant or associated with timber activities before becoming part of the WMA land in 1979. As such, it seems appropriate to attribute the historic assemblage recovered at 9BN17 to the Cubbedge family occupation of the site.

Late Mississippian Occupation

Artifacts diagnostic of a Late Mississippian Irene phase occupation were encountered within 118 of the 199 postive shovel tests, making it the most extensive occupation at the site. Artifact density ranged from 1 to 218 sherds per positive test with an average of 9.03 sherds per test. Irene pottery was found on the surface in many portions of the site and as deep as 70 cmbs. For the most part, however, these artifacts were found within the top 40 cm of shovel tests within a stratigraphic sequence that included light gray (10YR 7/1) sand to around 15 to 20 cmbs, underlain by brownish

yellow sand to a depth of 40 or 50 cm. Sterile subsoil was typically encountered at 50 cmbs and was recognized as a zone of very pale brown (10YR 8/2) sand to a depth of 80 cm and below.

The Irene phase occupation was recognized by the presence of diagnostic pottery. There were 345 sherds (28.87% of the entire assemblage) of these types recovered during shovel testing (Appendix A). These sherds included complicated stamped (n=78 or 22.61%), indeterminate stamped (likely the parallel line portion of filfot cross) (n=73 or 21.16%), incised (n=8 or 2.32%), plain (n=81 or 23.48%), and UID/eroded (n=105 or 30.43%) surface treatments. There were also 730 additional grit tempered diminutive sherds (under 2 cm in size) which were not formally typed as Irene. These did not necessarily display clear stylistic traits of Irene phase pottery due to their small size; however, stamped designs, similar paste, and consistent intermixing with other Irene artifacts suggest that these are likely to be associated with the Irene phase occupation. If combined, these categories make up 89.96% of the total shovel testing assemblage.

Table 7.1: Total Percentage of Irene Pottery Types found during Shovel Testing at 9BN17

DecTech	Count	Percentage
Complicated Stamped	78	22.61%
Incised	8	2.32%
Plain	81	23.48%
Stamped (prob. Filfot)	73	21.16%
UID/Eroded	105	30.43%
Total	345	100.00%

Paddle stamping was the most commonly encountered decorative technique found on aboriginal pottery at the Lincoln Trail site. The majority of these sherds were

complicated stamped and display a portion of the filfot cross motif characteristic of Irene phase pottery. Complicated stamping with curvilinear elements was identified on 22.61% (n=78) of the pottery within the Irene assemblage; however, there were an additional 73 sherds with a stamped design comprised of parallel grooves which likely represent incomplete portions of the filfot motif. Combining these categories reveals that filfot stamping is likely present on 43.77% of the Irene assemblage.

Incised sherds made up 2.32% of the ceramic assemblage encountered during shovel testing at Lincoln Trail. These sherds are characterized by bold parallel lines and scrolls ranging from 1 to 2 mm in width. Morphologically, this technique appears consistent with Braley's Pipemaker's Creek incised and, coupled with the relatively low ratio, suggests an Irene II (AD 1350-1450) time-frame for the site's Irene phase occupation.

Pearson (1984) points out complicated stamped surface treatments typically correspond with urn style vessels while incising is typically found beneath the rim or shoulders of otherwise plain or burnished plain cazuela bowls. Increased frequencies of incising within Irene assemblages should also correspond with an increase in the number of plain sherds. Cook (1980) documented such a correlation and Braley et al. (1986) points out a occurrence that continued into the post-contact occupation at the Harris Neck site. At Lincoln Trail, plain Irene pottery made up 23.48% of the total survey assemblage or the second most common Irene pottery type at the site. Pearson (1984) notes that within the assemblage from the Redbird Creek Site (9BN9), plain urns and complicated stamped bowls did occur; however, they were far less common than the reverse scenario. Later observations at Redbird (Sipe 2013) revealed that at least some of the complicated

stamped bowls were actually reclaimed portions of urn-style vessels re-purposed for use after breaking. Based on this, it seems reasonable to attribute the relatively high incidence of plain pottery at Lincoln Trail to be partially correlated to the presence of incised vessel types and further indication of at least a middle Irene or Irene II occupation.

Twenty-five of the Irene sherds recovered during shovel testing were determined to be rim fragments. The lip form of these sherds tends to be round (88%); however, three flat rims are present (12%). Five rims were determined to have an excurvate flare characteristic of the jar or urn style vessel typical of Irene assemblages; and one incised rim displays the incurvate profile frequently assigned to Irene carinated bowls (Pearson 1984; Saunders 2000). Rim elaboration is also present on the majority (n=15) of these rims. This includes five categories of embellishments applied beneath the vessel lip: reed punctate directly to the vessel wall (n=3 or 12%), applied rosettes (n=1 or 4%), applied rim strip with reed punctations (n=7 or 28%), segmented rim strips (n=2 or 8%), and segmented strip with reed punctate (n=1 or 4%). There is also one sherd that features an applied "lug" style element beneath the lip.

Rim elaboration is often used as a temporal indicator as to where an assemblage should fit within the Irene phase (Cook 1980; 1986; Pearson 1984; Saunders 2000). The chronology of these rim treatments seems to be similar to that which is found in the Lamar interior (Saunders 2000). Early Irene phase components are associated with embellishments similar to those found on Late Savannah wares such as applied rosettes and plain rim strips. Later on, these traits declined and segmented rim strips became common including occasional instances of segmented and punctated rim strips (Saunders

2000). Very late Irene phase occupations seem to be associated with the appearance of punctated rim strips and reed punctations directly on the vessel wall as well as a continued increase in the occurrence of the segmented rim strip (Pearson 1984; Saunders 2000). Based on the limited rim assemblage from the Lincoln Trail Shovel tests, it seems that late-style reed punctated rim strips (n=7) and reed punctate directly to the vessel wall (n=3) are the most commonly-occurring rim elaborations at the site. Early-style rims such as applied rosettes or nodes are rare (n=1) and the undecorated applied strip is non-existent within the shovel testing assemblage. Based on the rim assemblage, the material at Lincoln Trail encountered thus far may be indicative of an occupation late within the Irene II period.

Artifact Distribution

The Irene phase ceramics are concentrated within distinct pockets across the site. Figure 7.5 depicts this distribution by count as contour intervals across the landscape. Based on this, it seems there are seven distinct nodes of Irene deposition at Lincoln Trail. It is not surprising that these correspond with the location of shell middens. Fifty-six discrete piles of primarily oyster midden were identified in distinct clusters across the landform and are interpreted as refuse disposal areas during the Irene phase habitation. For the purposes of discussion, the areas where artifact and midden concentrations overlap were labeled Loci A through G (Figure 7.6) and are discussed individually below.

Locus A: This designation is assigned to the cluster of 18 middens and high artifact density located within the east-central portion of the site along the northern edge of a tidally- influenced inlet (Figure 7.6). Some of the largest oyster middens at the site

are identified within Locus A. This includes two very large middens that accumulated as much as 1.5 meters in height and are named after the people who discovered them. These include Mt. Chance (Figure 7.7) (after Frank Chance, the avocational archaeologist that explored the site prior to the present fieldwork) and Blake's Midden (after Blake Ayala, the graduate assistant during fieldwork). Other middens in this complex include four large concentrations that encircle an area of flat ground (SM-1, 2, 3 and 4), a dense ridge of shell extending along the inlet shoreline adjacent to Mt. Chance (SM-6), and several other interior piles of oyster shell that were encountered during shovel testing (SM-5, 7-11). Much of the marsh edge shoreline is also characterized by dense midden deposits that appeared to have been affected by erosion resulting from a tidal tributary of Lincoln Creek.

There were 29 shovel tests dug within this portion of the site, including 20 that were positive. Ten of these positive tests yielded definitive Irene pottery including six that were dug within the middens. The Irene pottery from Locus A (n=26) was made up of complicated stamped (19.23%), indeterminate stamped (n=42.31%), plain (11.54%), and UID/eroded (26.92%) sherds. The frequency of these stylistic traits within Locus A seems relatively consistent with that which was documented for the site as a whole (Table 7.1), with the exception of incised wares.

Locus B: This concentration is located south of the tidal inlet along the marsh edge environs within the southern portion of the site (Figure 7.6). There are 11 middens associated with Locus B including an extremely large ridge of shell that extends along the shoreline from the inlet approximately 70 meters and then bends to the west for another 40 meters (SM-12). This ridge is approximately 12 meters wide and around 60 cm to 1

meter in height. The remainder of the middens represent ovoid concentrations of oyster shell that range between 8 by 11 meters to 12 by 12 meters in size and from 50 cm to around 1 meter in height (SM-13-22). Twenty-two shovel tests were dug within this portion of the site including 16 that were positive. Fifteen of these positives yielded ceramics associated with the Irene phase and eight of these tests were dug within the middens themselves. There were 72 definitive Irene sherds found within Locus B including complicated stamped (22.78%), indeterminate stamped (23.61%), incised (4.16%), plain (6.94%), and UID/eroded (37.5%) varieties.

Locus C: Locus C corresponds with a concentration of high-density shovel tests located within the southwestern portion of the site associated with four discrete deposits of shell midden (SM 23-26). These middens represent compact oval deposits that measure between 6 by 10 meters and 15 by 12 meters in size and between 50 and 70 cm tall. These are adjacent to an elliptical low area on the western slope of the site's landform. This low spot corresponds with poorly drained Leon fine sand that may be seasonally flooded. Based on the surrounding topography, low spots such as this one at Lincoln Trail likely accumulated fresh groundwater in the form of small ponds prior to the adjustment of artesian pressure by the drilling of deep wells in the area (Pearson 1977; Thomas 2008). These would have provided important sources of fresh water for the site's Irene phase inhabitants.

Sixteen shovel tests were dug within this locus including 12 that were positive. Five of these were determined to contain Irene pottery, including one judgmental test within SM-23 that produced the highest density of pottery throughout the site. There were 108 definitive Irene sherds recovered from this sub-area. The same collection of

stylistic traits was identified here as throughout the site and in relatively similar frequencies including complicated stamped (36.11%), indeterminate stamped (1.85%), incised (n=0.93%), plain (36.11%), and UID/eroded (25%) surface treatments.

Locus D: This concentration is located just north of Locus C on the western portion of the Lincoln Trail landform. This area is similar to Locus C in that it consists of four individual oyster middens adjacent to a smaller, almost perfectly round low area, which likely was a fresh water source during the Irene phase occupation of the site. The Locus D middens (SM-27-30) are of similar size and measur 10 by 10 meters and around 60 cm high. Six positive shovel tests were dug within this locus including four within the middens themselves. Four of these tests revealed Irene pottery (n=13) with frequencies of stylistic traits consistent with the other loci: complicated stamped (7.69%), indeterminate stamped (53.84%), plain (23.07%), and UID/eroded (15.38%).

Locus E: This portion of the site corresponds with an almost semi-circular arrangement of 11 shell middens (SM- 31-41) and a relatively dense concentration of Irene pottery. Middens within this locus seem smaller than within other areas of the site and range from 6 by 7 meters to 9 by 18 meters in size and from 30 to 50 cm high. There were 37 positive shovel tests dug within Locus E, 22 of which yielded 46 Irene phase ceramics including complicated stamped (6.52%), indeterminate stamped (36.95%), incised (2.17%), plain (23.91%), and UID/eroded (30.43%) sherds.

Locus F: This concentration is located on a distinct peninsula extending into the marsh within the northeastern portion of the site (Figure 7.6). The peninsula displays a unique morphology formed by erosion on its northern, eastern, and southern sides by a tributary of the Kilkenny River that bites into most of the eastern side of the site. Its

western connection with the remainder of the site has also been eroded on both its northern and southern ends by marsh inlets similar to those that separate Loci A and B. As a result, this landform has developed an appearance similar to the head of a hammer. A Similar, though much larger, landform was documented at Genesis Point and determined to contain dense Irene phase deposits (Sipe 2013). The southern tip of this landform is characterized by dense midden deposits. This includes two discrete midden piles (SM 42 and 43) similar to those found throughout the rest of the site and a broad expanse of midden (SM 44) which forms most of the southeastern shoreline. Shovel testing on the landform revealed that the discrete piles accumulated during the Irene phase occupation; however, the larger midden seems to have begun accumulating during the Late Archaic period. Perusal of the Aerial LiDAR reveals that SM 44 displays an almost perfect half-circle morphology and may represent a portion of a Late Archaic shell ring eroding into the marsh, as discussed later in this chapter. Five shovel tests were determined to contain Irene phase ceramics in this Locus. These tests yielded 14 Irene sherds including indeterminate stamped (7.14%), incised (14.28%), plain (42.85%), and UID/eroded (35.71%) varieties.

Locus G: This seventh locus is somewhat less-defined than the other groupings. It consists of a semi-circular arrangement of nine discrete shell middens associated with pockets of moderately dense Irene deposits within the central portion of the site (Figure 7.6). The middens (SM 45-53) range from 8 by 8 meters to 15 by 12 meters in size and are between 40 and 60 cm tall. Several middens along the marsh edge may have been larger but have been truncated by erosion caused by a tidal tributary of the Kilkenny River which has cut into the east-central portion of the site. Twenty-four definitive Irene

phase sherds were found within 12 shovel tests in Locus G. These include complicated stamped (8.33%), interminate stamped (50%), incised (4.16%), plain (12.5%), and UID/eroded (25%) sherds.

Given the present level of study at the site, it is unclear what each of these clusters may represent. Pearson (1984) suggests that discrete middens separated by areas clear of debris are typical of Late Mississippian habitation sites on the Georgia coast. He speculates that clusters of these middens represent a change in the spatial arrangement or even number of residential structures at a site that one sees from the Middle to Late Mississippian. Based on this, he interprets midden clusters to be reflective of the locations of structures (or groups of structures) at Irene habitations. Pearson's (1984) own excavations at the nearby Redbird Creek Site have bolstered this hypothesis considerably. Here, he exposed a well-preserved portion of an Irene structure adjacent to several discrete oyster middens (Pearson 1984). Furthermore, the signatures of two possible structures were encountered among the concentrated middens within Locus A during the present study. Both of these possible structures are discussed in greater detail later, but were found beneath midden deposits and suggest continued re-use of Locus A as a residential location throughout its Irene phase occupation.

If these clusters of middens do represent single or small groups of domestic structures, it is presently unclear if they are contemporaneous. Artifact seriation suggests that each of the Irene surface treatments identified throughout the site are found within relatively consistent ratios at each locus. This might suggest a level of contemporaneity among the loci; however, the sample size of sherds with temporally diagnostic ceramic traits is relatively limited.

While these loci of artifacts and midden represent the most obvious features of the Irene phase landscape, other areas of varied site use were also identified. Burial 1, for instance, was encountered within Shovel Test 4640N/5000E in the south-central portion of the site separating Locus B and C (Figure 7.6). This was an urn style interment within a large filfot-stamped vessel that was encountered approximately 20 cm below the ground surface. The vessel appeared to be oriented upright within the shovel test and no cover vessel was identified. Portions of the pot as well as two cranial fragments and three tooth crowns were collected during investigation. The sherds recovered from the burial urn included two large fragments of the flaring upper half of the vessel, an equally-large section of the globular lower half, a portion of the rim itself, and two pieces of the constricted "neck" of the urn. These sherds all displayed curvilinear elements and the central node of the filfot stamped pattern; however, overstamping was common across the entire vessel surface (Figure 7.8). The rim sherd was relatively small, however, it was clearly excurvate displaying a rounded lip. Rim elaboration included reed punctation directly to the vessel wall, a trait often considered indicative of Late Irene. Based on the curvature of the rim, this funerary vessel seemed to be quite large and likely had an orifice diameter of around 40 cm. A burial urn of similar size was found after a tree fall impacted a portion of the burial mound at the Sevenmile Bend site and is curated at the Georgia Southern Archaeology Lab (Sue Moore, personal communication 2011). This vessel measures 54 cm tall and has a flaring orifice diameter of 45 cm. It was found with a bowl-shaped vessel as its cover and was determined to have contained the remains of an apparent adolescent or adult. Based on a similar orifice diameter, it is believed that the

urn at Lincoln Trail may have been of similar proportions; however, no cover vessel was encountered within the shovel test.

The human remains were examined by Dr. Matthew Williamson, Associate Professor of Anatomy and Physiology at Georgia Southern University and were determined to have been from a 15+ year old adolescent of indeterminate sex (based on the small sample) (Williamson 2013, Appendix B). The cranial fragments included an unsided parietal bone fragment and a petrous portion from the right temporal bone. The thickness of the parietal fragment indicates that the individual was at least in his or her early teens. No features within these fragmentary cranial bones would indicate the sex of the individual. The tooth crowns were all determined to be from permanent teeth. These included a right, first or second, maxillary molar; a right, first, mandibular molar, and an unidentified third molar. The roots were missing from all crowns; however, it appears that the roots were not present from the third molar because they had not fully formed. No portion of root was visible on the third molar, but the other two had root fragments. The presence of the third molar crown indicates that the individual represented within this sample was at least 15 years old; however, the absence of formed roots suggests that the third molar had not erupted yet. Based on this and the minimal wear observed on the other tooth crowns, the individual represented at Lincoln Trail was probably between 15 and 25 years of age (Williamson 2013). These remains were reinterred at the location they were recovered, as witnessed by Aimee Bouzigard, a representative of the GADNR HPD, and Dr. Heidi Altman, a member of the Georgia Council for American Indian Concerns.

The shovel test in which the urn burial was identified was located in a densely-vegetated portion of the site. Topographic relief within the vicinity of the test was subtle and no clear rise indicative of a burial mound was visible. Perusal of the 2009 Aerial LiDAR Data for Chatham and Surrounding Counties also shows no clear indication of a mound at this location; however, the dense vegetation did limit the number of ground points achieved by the aerial scanner (NOAA 2009).

Irene burial mounds can often be quite subtle, represented by no more than a 40 or 50 cm rise over a diameter of as much as 20 meters, such as Mound B at the Redbird Creek site (Sipe 2013). Sometimes, these low mounds associated with Irene mortuary contexts do not represent burial mounds in the traditional sense, but instead mortuary structures, such as the one documented at the Irene Mound site (9CH1) (Caldwell and McCann 1941). The Mortuary at Irene was a semi subterranean, wattle and daub structure with a linear, wall trench entrance. It was apparently used for mortuary purposes and four burials were placed within its floor. At some point the structure was intentionally burned and pulled down where it was covered in sand fill and used as a cemetery, resulting in its appearance as a "low mound" during its WPA-era excavation (Caldwell and McCann 1941). Interments within the cemetery accumulated on top of the Mortuary included both intact flexed burials and disarticulated remains within a series of two circular enclosures (Caldwell and McCann 1941). More importantly for this discussion, several urn burials were also noted including a double urn burial of children or adolescents (Caldwell and McCann 1941).

Other low Irene phase burial mounds, such as the Burial Mound at Irene and Mound B at Redbird Creek, are comprised of layers of dense oyster midden spread

throughout the extent of the mound fill (Caldwell and McCann 1941; Sipe 2013). At Redbird, invasive interments including one intact flexed burial and a burial urn with lid were dug into the midden layers of the mound (Sipe 2013, Sipe et al. 2011). These invasive burial deposits were characterized by sand-filled voids in the midden within which they were interred. No shell midden was encountered within the shovel test containing Burial 1 at Lincoln trail. This may provide additional evidence for the cemetery-style context described above or may simply suggest that the shovel test only penetrated the void dug into a midden layer to deposit the urn.

Data regarding the mortuary deposits at Lincoln Trail are extremely limited at this point, but the discovery of an urn style burial of an adolescent to adult individual within a shovel test does seem to indicate that mortuary activities occurred here. Perhaps, the initial use of a mortuary structure did not occur at Lincoln Trail and the lack of a topographic rise is an indicator that only second-stage cemetery style burial methods were practiced. The additional use of terrestrial LiDAR or contour mapping with a total station within this portion of the site may be able to provide a more detailed view of the topography obscured by vegetation in order to address this question. The boundaries of this mortuary deposit are, at present, unclear. As a result of this discovery within Shovel Test 4640N/5000E a 60 meter diameter buffer was established around the find at the request of GA DNR, HPD (Figure 7.6). As such, no ground-disturbing investigation has been or shall be conducted within this area. Shovel tests immediately outside the 60 meter buffer did not encounter additional human remains. Based on this, it seems that the limits of the mortuary activities encountered during the present study are contained within the prescribed buffer.

Other Aboriginal Occupations

While the Late Mississippian occupation of Lincoln Trail was the most expansive by far, evidence that the site was utilized by earlier aboriginal inhabitants was encountered during shovel testing as well. This includes sparse assemblages of grog tempered pottery affiliated with Late Woodland Wilmington or Early Mississippian St. Catherines phase activity, and fiber tempered pottery deposited during a Late Archaic occupation of the site. These artifacts were concentrated in distinct nodes throughout the site and indicate that the Lincoln Trail landform had discrete, limited use prior to the Late Mississippian habitation.

Late Woodland/Early Mississippian

This occupation of the site is characterized by grog tempered pottery (n=21) which was concentrated in four distinct locations throughout the site (Figure 7.9). The majority of this pottery displayed the rough, heavy grog inclusions distinctive of Late Woodland Wilmington phase pottery; however, two sherds were constructed from a dense paste with finer grog particles as tempering agents. These two sherds both featured fine cordmarking on their exteriors and represent St. Catherines phase pottery, a type diagnostic of the Early Mississippian for portions of the Georgia coast (Thomas 2008). These two sherds were both found within the northern portion of the site and indicate a very sparse St. Catherines occupation or may be related to transitional Late Woodland-to-Early Irene phase activities at the site.

The chunkier Wilmington phase pottery was much more commonly encountered than the more refined St. Catherines sherds. There were 19 sherds of this type encountered within shovel tests at Lincoln Trail, including cord marked (n=10), plain

(n=1), and eroded (n=4) examples. There are also four diminutive sherds that display Wilmington style paste. One basally-notched, hafted biface of chert was also recovered during shovel testing (see Figure 6.12). This artifact appears to be a Hernando-style point, a type often attributed to the Woodland Period (Bullen 1975). These artifacts were concentrated within four distinct locations throughout the site. The northern, northeastern, and central concentrations correspond with midden deposits associated with Irene phase Loci E, F, and A respectively. This may indicate that some of those middens began accumulating during a limited Late Woodland occupation of the site or that Irene activities disturbed the previous Late Woodland strata. The concentration of Wilmington sherds within the southwestern portion of the site is not associated with shell midden deposits. This may indicate that a different series of Late Woodland activites occurred within this portion of the Lincoln Trail site; however, residential development within the southern portion of the landform has truncated this portion of the site. Each of the nodes of Wilmington activity also seem to correspond with the location of a possible fresh water source, as outlined in Chapter 3. These hydrologic features seem to influence the settlement patterns of both the Late Woodland and Late Mississippian components of the site and likely indicate that the availability of fresh water was one of the driving forces that led to the prehistoric settlement of this coastal landform.

Late Archaic

There were 98 fiber tempered sherds found within shovel tests during the survey of the Lincoln Trail Site. These sherds are typically classified as St. Simons phase pottery in coastal Georgia and are indicative of a Late Archaic occupation of the site. Fiber tempered sherds were distributed across the site in a series of five distinct nodes

(Figure 7.10). These sherds included plain (n=14), punctate (n=2), and eroded (n=43) varieties. There was also a high incidence of diminutive sherds (n=39) made of fiber tempered paste.

The majority of the Late Archaic assemblage was concentrated within dense midden deposits that accumulated along the southern end of the peninsular landform associated within Locus F of the Irene phase habitation (see Figure 7.6). Specifically, most of this pottery was associated with the SM 44, a distinct midden accumulation appearing as a U-shaped arrangement. Perusal of the 2009 Aerial LiDAR data reveals that this feature forms an almost perfect half-circle and may represent a Late Archaic shell ring undergoing severe erosion as a result of marsh encroachment (Figure 7.11). If this is the case, it appears that as much as 50% of the ring has eroded away, leaving only its western half in place. If the eastern half of the ring can be extrapolated based on curvature of the west half, the ring once measured between 40 and 50 meters in diameter. This fits well within the size range proposed by Russo (2006) and appears to be quite similar to the size and shape of the Late Archaic shell rings recorded on St. Catherines Island (Sanger and Thomas 2010).

One shovel test was excavated within the shell formation. Shovel Test 5390N/5210E was dug into the southwestern portion of the feature and revealed 49 fiber tempered sherds including one plain, 33 UID/eroded, and 15 diminutive. Two Late Archaic Shell Rings, the St. Catherines Shell Ring (SCSR) and McQueen Shell Ring (MQSR), were recorded on St. Catherines Island, approximately 5 miles southeast of Lincoln Trail (Sanger and Thomas 2010). These rings are of almost identical morphology to each other and seemed to be contemporaneous; however, the SCSR seems

to be associated with a high incidence of plain pottery and utilitarian artifacts, while MQSR reveals more decorated pottery and exotic items (Sanger and Thomas 2010). The fiber tempered pottery encountered within these Lincoln Trail deposits thus far is all plain or eroded and may indicate a utilitarian function similar to that which was seen at the SCSR. Investigations into this feature have been extremely limited to date, and much more research is needed in order to address its true nature and functionality.

The remainder of the Late Archaic deposits are quite sparse and found within the northern, central, and southwestern portions of the site. Each is associated with midden deposits that were later added to or disturbed by the Irene phase occupation. It is also clear that the location of possible fresh water sources (see Chapter 3) influenced layout of this component as well (Figure 3.1). Based on this it seems that Lincoln Trail served as a limited habitation during the Late Archaic period.

7.2 LIMITED EXCAVATION

The opportunity to conduct limited excavation at the Lincoln Trail site came as a result of the 25th Annual Weekend for Wildlife event conducted on February 9, 2013. The theme of this event was to highlight Georgia's Wildlife Management areas and all the resources they protect. Lincoln Trail was selected as a representative example of the archaeology conducted within Georgia's WMA land and excavations at the site were planned as one of the optional outings for the event's participants. Three locations were selected within Locus A to excavate 1 by 2 meter units (Figure 7.12). These locations were chosen to provide supplemental data for the interpretation of the site as well as to provide logistically feasible access to the event participants. The locations included a flat area clear of midden between SM 1, 2, and 4 (Block 1); the northern slope of Mt. Chance

(Block 2); and the northwestern portion of SM 1 (Block 3) (Figure 7.9). The results of these excavations are detailed below.

Block 1

Block 1 represents a 1 by 2 meter excavation block comprised of two 1 by 1 meter units designated 1.01 (east) and 1.02 (west) in order to facilitate possible future expansion of the block excavation. It was oriented along a magnetic east-west axis west of SM-4 within an area void of midden between SM-1, 2, and 4 in order to investigate for possible structural features at this location (Figure 7.12). Seven 10 cm levels were excavated within this block to reveal a stratigraphic sequence that consisted of three strata (Figure 7.13 and 7.14). Stratum I was a layer of light gray (10YR 7/1) sand with extensive root disturbance that extended to a depth of around 30 cmbd. Beneath this was very pale brown (10YR 7/3) sand to approximately 50 cmbd (Stratum II) and was underlain by Stratum III, very pale brown (10YR 8/2) sand subsoil that extended to the base of the unit at 70 cmbd.

In total, there were 117 artifacts recovered from Block 1. The majority of this assemblage was made up of pottery fragments (n=103); however, lithic debris (n=11) and trace (n=0.6 g) amounts of animal bone fragments were also encountered. Irene phase pottery was the most frequently encountered artifact type and included complicated stamped (n=5), indeterminate stamped (n=7), plain (n=4), and UID/eroded (n=17) surface treatments. There were also 67 grit tempered diminutive sherds which may also be associated with the Irene phase occupation of the site. The majority of the Irene pottery was recovered from Stratum I, which corresponded with Levels 1 through 3. The density of this pottery type drops dramatically within the transition between Stratum I and II

(n=12) and it is almost non-existent within Stratum II (n=3). The grit tempered diminutives follow this trend almost exactly, further evidence that they can likely be associated with the Irene assemblage. Interestingly, there was a sand tempered sherd that featured a diamond with herringbone complicated stamped design recovered from the base of Stratum I. This sherd appears similar to Oemler complicated stamped, an early Woodland variety associated with the Refuge III period of the northern Georgia and South Carolina coasts (DePratter 1991) (Figure 7.15). Lithic artifacts were also recovered from Block 1 including one chert biface fragment, chert nondecortication flakes (n=8) and shatter (n=1). These artifacts began to appear within Level 3, or the base of Stratum I, and continued to appear with a consistent frequency in Stratum I/II transition and throughout Stratum II. Because the appearance of lithics and the possible early Woodland sherd seem to essentially occur beneath the primary Irene zone, it is likely that they are reflective of a limited, but earlier occupation of the site.

Block 2

Block 2 was a 1 by 2 meter excavation block oriented on a magnetic north-south axis within the northwestern edge of Mt. Chance (Figure 7.12). This location was selected in order to acquire a 50 by 50 cm column sample from the large midden and to investigate for the presence of structural features near the deposit. The block was comprised of two 1 by 1 meter units designated 2.01 (south) and 2.02 (north) in order to allow for possible larger block expansion at a later date. Eight 10 cm levels were excavated within Block 2 and revealed a stratigraphic sequence that consists of four strata (Figures 7.16 and 7.17). Stratum I corresponds with the portion of the excavation block that intersects with SM-1. This zone was characterized by dense, primarily oyster

midden and very dark grayish-brown (10YR 3/2) organically stained soil to a depth of 43 cmbd. While oyster midden dominated the southern portion of Block 2, non-midden ground surface was encountered within the northern half of Unit 2.02. This zone was designated Stratum Ia and consisted of gray (10YR 5/1) sand to a depth of 43 cmbd. Feature 1 was encountered directly beneath the midden within the southeastern portions of Block 2. This consisted of a basin shaped zone of brown (10YR 4/3) sand with light-to-moderate oyster shell inclusions to a depth of 62 cmbd, which is discussed in greater detail below (Feature 2). Stratum II corresponds with the zone beneath the midden that had not been impacted by cultural features and is characterized by light brownish gray (10YR 6/2) soil to a depth of 50 cmbd, and is underlain by brown (10YR 5/3) sand to a depth of 64 cmbd (Stratum III). Stratum IV represents very pale brown (10YR 7/4) sterile subsoil that extends to the base of the block excavation at 80 cmbs.

There were 366 artifacts recovered within Block 2. This includes a high frequency of pottery fragments (n=352), but lithic (n=3) and shell (n=2) items were also collected. There were 19.7 grams of animal bone and burned daub fragments (n=8.9 g) that were also documented within the levels of Block 2. The majority of the pottery from this block was determined to be Irene (n=128 or 36.36%). This includes a ratio of surface treatments similar to that which has been documented for the rest of the site including complicated stamped (n=25 or 19%), indeterminate stamped (n=35 or 27.34%), incised (n=2 or 1.56%), plain (n=20 or 15.62%), and UID/eroded (n=46 or 35.94%). The distribution of surface treatments by stratum reveals that the a preponderance of stamping throughout the block including 40.91% within the midden, 50% in Stratum II, and 43.75% within the Stratum II/III transition. Incised pottery was found only within the

midden levels (and Features 1 and 2, discussed later) which revealed 2 incised sherds and a fairly high frequency of plain pottery (n=10 or 22.73%). The levels beneath the midden show a slightly higher instance of stamping in relation to plain and incised pottery.

Ten of the Irene sherds were determined to be rims including excurvate (n=4), incurvate (n=1), and unidentifiable (n=5) forms. The excurvate rims likely represent portions of the Irene globular jar style vessel and the one incurvate sherd likely indicates a cazuela bowl. Rim elaborations were noted on nine of these sherds, the most common of which was reed punctate directly to the rim (n=5); however, reed punctate on applied rim strip (n=1), applied and segmented rim strip (n=1), and segmented and punctate rim strip (n=1) varieites were also identified. There is one interesting sherd that features an exaggerated wedge-shaped rim extension with incising on the flat portion of the rim (Figure 7.18). These rim elaborations are typically associated with Irene globular jar forms; however, the wedge shaped rim may represent a "brimmed bowl" form as identified by Saunders (2000) and also noted at Sevenmile Bend (Cook 1971). If rim elaboration can effectively be used as a temporal indicator, it is interesting to note that the late-style reed punctation direct to the vessel wall and the possible brimmed bowl fragment were found within the midden levels, while the segmented strips were more common beneath the midden.

The remainder of the Block 2 pottery assemblage includes 218 diminutive sherds and a piece of heavily eroded grit tempered clay. The majority (n=217) of the diminutive sherds are grit tempered and, based on their consistent occurrence within Irene levels, can largely be assigned to the Irene phase occupation. One fiber tempered diminutive was identified from the base of Stratum II within Unit 2.01. This sherd represents a portion of

a Late Archaic, St. Simons vessel and its relatively shallow presence may be an indication of artifact mixing due to bioturbation within that portion of the unit. The piece of heavily eroded clay appears grit tempered and may be a byproduct of pottery production or perhaps a dense fragment of burned daub.

Lithic items were also recovered from Block 2 and include one chert secondary decortication flake found within the midden, a chert nondecortication flake from Stratum II, and a quartzite hammerstone/grinder from the base of Stratum II. Two utilized whelk were also identified within Stratum II of Block 2. These included a full grown specimen with most of the body whorl, apex, and columella removed and a juvenile shell with heavy wear on its columella.

Nine cultural features were identified during the excavation of Block 2. These include a linear zone beneath the midden (Feature 1) and basin shaped zone (Feature 2) under which seven posthole/postmolds (Features 12, 14, 17, 18, 19, 20, and 21) were discovered. Each of these features is discussed in detail below.

Feature 1: Feature 1 was encountered at 42 cmbd as a linear stain of very dark brown (10YR 2/2) soil with dense crushed oyster shell in the southeast corner of Unit 2.01 (Figure 7.19). The portion of the feature revealed by Block 1 measured 90 by 40 cm and its obvious edge was oriented along an approximately NE/SW axis. It was basin shaped in profile and extended approximately 20 cm deep (Figure 7.17). There were 27 artifacts recovered from the portion of Feature 1 documented within Block 2. This material includes pottery (n=22), daub fragments (n=4), and a basal fragment of a stemmed projectile point. The pottery within Feature 1 can all be attributed to the Irene occupation and includes complicated stamped (n=2), incised (n=1), plain (n=5), and

UID/eroded (n=2) varieties. There were also 12 grit tempered diminutive sherds found within the feature fill. The remainder of the material found within Feature 1 includes charcoal fragments (n=3.5 g) and 0.6 grams of animal bone, likely from a tortoise carapace. It is difficult to determine exactly what Feature 1 represents due to the limited window provided by Block 1 thus far. Expanding the block to the east would likely provide the details necessary to interpret this feature.

Feature 2: This designation represents an unclear mottled zone encountered under the base of the midden at approximately 45 cmbd. It was characterized by mottled brown (10YR 5/3) and very dark grayish brown (10YR 3/2) sand with pockets of grayish brown (10YR 5/2) ashy soil. The boundaries of this resource in plan were diffuse; however, the east wall profile of the block clearly shows a basin shaped zone that extends from 40 to 63 cmbd (Figure 7.20). At around 58 cmbd, the plan of Feature 2 corresponds with a curvilinear, mottled brown and grayish-brown stain (Feature 2a) that extends toward the center of Unit 2.01 (Figure 7.21). There was a similar stain (Feature 2a) identified within the southern half of Block 2, which extends to almost meet the previous stain and form a rounded corner (Figure 7.17). In at least one instance, Feature 2a was found to contain a post (Feature 20). Other posts, discussed below, were encountered directly beneath the zone broadly designated Feature 2 (Features 12 and 21).

There are 75 artifacts associated with this portion of the block including pot sherds (n=65) and burned daub fragments (n=10 or 8.9 g). The pottery was determined to be primarily Irene including complicated stamped (n=3), indeterminate stamped (n=6), plain (n=4), and UID/eroded (n=11). There was also one grog tempered sherd found within Feature 2. This excurvate rim sherd appeared to have been tempered with grit and

grog and featured a heavily overstamped, fine cordmarked surface with cordmarking on the rim itself. It may represent an Early Mississippian St. Catherines sherd or perhaps a fragment of Savannah fine cordmarked pottery with grog inclusions within this portion of the vessel. In either case, it seems to represent an artifact from a pre-Irene context which may have become mixed into the Feature 2 fill as a result of the activities that created the feature. With the limited view provided thus far, it is difficult to interpret what Feature 2 represents. Interestingly, the "rounded corner" morphology that seems to be represented by Feature 2a appears quite similar to the corner identified for Structure 5 at the Groves Creek Site (9CH71) on Skidaway Island, Georgia (Keene 2002: 90). The linear stains interpreted as walls at Groves Creek, however, were associated with a better defined row of posts and massive concentrations of daub were also associated with the corner (Keene 2002). Still, it does appear that at least one post can be associated with the curvilinear stain and burned daub was identified throughout the Feature 2 zone. Perhaps the mottled zone of ash represented by Feature 2 represents the disturbed zone and floor directly above the corner of an Irene structure. The basin shape of Feature 2 in profile also suggests that the floor may have been semi-subterranean to an extent. Further excavation is needed in order to assess this hypothesis.

Features 12, 14, 17, 18, 19, 20, and 21: This was a series of post features encountered within Block 2 between 70 and 80 cmbd. The posts ranged from 8 to 28 cm in diameter and extended between 10 and 18 cm deep. They were recognized as ovoid stains of dark grayish brown (10YR 3/2) soil within the mottled brown (10YR 4/3) and very pale brown (10YR 7/4) matrix provided by the transition between Strata III and IV. With the limited exposure provided by Block 2, it is difficult to interpret the alignment of

these posts, however, their presence does imply some level of structural activity within this portion of the site. No artifacts were encountered within any of the posts identified. It is likely that most, if not all, of these posts originated higher within the stratigraphic sequence of the block but were obscured by the position of Feature 2.

Block 3

This 1 by 2 meter excavation block was established within the northwestern portion of SM-1 along a magnetic north-south axis (Figure 7.12). The block was comprised of two 1 by 1 meter units designated Units 3.01 (south) and 3.02 (north) in order to allow for future expansion. Nine 10 cm levels were dug within this block in order to reveal a stratigraphic sequence that consisted of four strata (Figure 7.22). Stratum I corresponded to the portion of the excavation block that intersected with SM-1. This zone was characterized by dense, primarily oyster midden and very dark brown (10YR 3/2) organically-stained soil to a depth of 40 cm (Figure 7.23). Stratum II, a layer of light brownish-gray (10YR 6/2) loamy sand, represented a leachate zone beneath the midden that extended from the base of Stratum I to a depth of around 60 cm and was underlain by brown (10YR 5/3) sand to 80 cm (Stratum III). Stratum IV was very pale brown (10YR 7/2) sterile subsoil that extended to the base of the block excavation at 90 cmbs.

There were 1,062 artifacts encountered during the excavation of Block 3 (Appendix A). This assemblage was dominated by pottery fragments (n=617), however, lithic (n=22) items, shell (n=20), and daub (n=403) fragments were also recovered. While pottery is the dominant material within the Block 3 assemblage, only 194 sherds are considered truly diagnostic. Of these, 191 are associated with the Irene Phase

occupation of the site, one is possibly Savannah, and the other is St. Simons fiber tempered. The Irene pottery includes complicated stamped (n=31 or 16.23%), indeterminate stamped (n=45 or 23.56%), incised (n=10 or 5.24%), plain (n=23 or 12.04%), and UID/eroded (n=82 or 42.93%) surface variations. There are also 423 grit tempered diminutive sherds. Based on the scarcity of other grit tempered pottery types at the site, these sherds are also likely affiliated with the Irene phase occupation. The diminutive counts will be removed for the discussion of diagnostic traits.

The majority of the Irene pottery was recovered from within Stratum I (n=74 or 38.74%). This portion of the unit corresponded with Levels 1 through 4 (0-40 cm), which intersected with the shell midden (SM-1). Irene pottery within the midden levels revealed a type distribution similar to that of the whole unit and includes complicated stamped (n=14), incised (n=6), indeterminate stamped (n=22), and UID/eroded (n=25). Other material within the midden layers of Block 3 includes diminutive sherds (likely Irene, n=97), a chert biface fragment, burned daub (n=6 g), shell fragments (n=6.8g), and charcoal (6.1 g). There was also 57.1 grams of animal bone within the midden. Much of this appeared to be turtle carapace, however, fish vertebrae and white-tailed deer remains were also represented. The transitional zone (Stratum I/II) beneath the midden corresponded with the latter half of Level 4. It yielded 27 Irene sherds including complicated stamped (n=6), incised (n=2), plain (n=3), indeterminate stamped (n=1), and UID/eroded (n=15) varieties. One sooted, Irene complicated stamped rim sherd with reed punctation directly to the vessel wall was recovered within the southeast corner of Unit 3.01 at 62 cmbd. A sample of soot scraped from this sherd's surface was submitted for AMS dating (UGAMS-14463), which returned a calibrated 2 sigma range that was split

between cal AD 1450 to 1524 (62.7%) and cal AD 1572 to 1630 (32.7%), discussed below. Other material from this zone includes grit tempered diminutive sherds (n=42), burned daub fragments (n=4.8 g), indeterminate animal bone (n=3.3 g) and fragmentary shell (n=1.3 g). Feature 6 was encountered within this transition and is discussed below.

Stratum II corresponded with Level 5 and represented the Irene phase ground surface directly beneath SM-1. This zone yielded 219 artifacts including Irene pottery (n=72), diminutive sherds (n=145), burned daub fragments (n=20.4 g), one Savannah fine cord marked sherd, a quartzite pebble, a periwinkle shell, and indeterminate animal bone fragments (n=3.5 g). The Irene sherds in this zone revealed a similar variety as was found throughout the midden and transitional levels: complicated stamped (n=5), incised (n=1), plain (n=11), indeterminate stamped (n=17), and UID/eroded (n=38) sherds. The ratios of decorative technique remain fairly consistent from the midden to the Irene phase ground surface beneath, however, the frequency of stamping increases apparently in relation to incising. This is likely due to the small numbers being compared but could also be suggestive of an earlier phase of Irene occupation. The presence of a single Savannah fine cord marked sherd, the only definitive example at the site, may bolster the latter hypothesis. One fiber tempered St. Simons sherd, indicative of Late Archaic activities, was also recovered from this depth. The transitional zone between Stratum II and III was characterized by a high incidence of burned daub (n=167.5 g). There were 17 Irene artifacts associated with this zone including complicated stamped (n=5), incised (n=1), plain (n=2), indeterminate stamped (n=5), and UID/eroded (n=4) varieties. Grit tempered diminutive sherds (n=127) were also common, and one grit tempered, shell scraped sherd was encountered at this depth. Two quartzite pebbles, four chert

nondecortication flakes, and animal bone fragments (n=9.3 g) consisting of turtle carapace and a fish otolith were also associated with this transition.

Level 7 and the top of Level 8 correspond with Stratum III and revealed an increased concentration of burned daub fragments (n=324.7 g), and a series of postmolds, as discussed below. Artifact density dropped off considerably in this zone. Ten grit tempered diminutive sherds and a fragment of a whelk's inner whorl were found with an increased frequency of chert nondecortication flakes. One fish scale was also associated with Stratum III. A single grit tempered diminutive sherd, a chert nondecortication flake, and an greatly reduced density of burned daub (n=13 g) were the only artifacts recovered from the transitional zone between Stratum III and the sterile subsoil represented by Stratum IV.

There were six cultural features identified during the excavation of Block 3. These initiated at a depth of between 62 and 92 cmbd and included a low spot beneath the midden and five postmolds. A discussion of each follows:

Feature 6: This cultural feature was encountered at 62 cmbd within the east-central portion of the excavation block. The portion of the feature encountered within the excavation measured 82 by 42 cm, but extended east past the limits of the block. The feature was roughly ovoid in plan and was recognized by a distinctly darker grayish-brown (10YR 5/2) zone from the surrounding matrix. It was removed and screened separately, and determined to be only 4 cm deep with a basin shaped profile. There were 11 artifacts and a trace amount (0.1 g) of animal bone recovered from the feature. The artifacts include three utilized whelk columellas (Figure 7.24), one filfot stamped sherd, and grit tempered diminutive (n=7) sherds. Based on its shallow morphology and

position within the midden transition, Feature 6 likely represents a shallow depression in the ground surface upon which SM-1 accumulated. This depression may have formed as a result of the possible structure that stood at this location prior to the accumulation of the midden, as discussed below.

Features 7, 8, 9, 10, and 11: This was a series of five postholes encountered within Unit 3.01 at the base of Level 7 (90 cmbd) (Figure 7.25). All were ovoid in plan and ranged from 12 to 24 cm in diameter. Each post was bisected and screened separately from the surrounding matrix. The profiles of the posts ranged between 6 and 16 cm deep with flat bottoms. Features 7, 8, and 9 were 1.2 to 4 times larger than Features 10 and 11 and formed an alignment parallel to Block 3's east wall. Features 10 and 11 were spaced approximately 50 cm west of the other posts, parallel to the west wall. It is also interesting to note that between 1.4 and 4.9 grams of burned daub were recovered from within Features 7, 8, and 9; however, no daub was found in Features 10 and 11. There were two grit tempered diminutive sherds recovered from within Feature 7 and a chert nondecortication flake and a piece of quartzite shatter were also found within Features 8 and 9 respectively.

These post features are likely indicative of a structure at the location of Block 3 which pre-dates the accumulation of SM-1. The remains of this structure seem to be primarily represented within Stratum III, a zone that corresponds with Irene pottery (n=17) and diminutives (n=139) that are also likely Irene. The levels immediately preceding the initiation of Features 7-11 (Level 6 and 7) and those that contain them correspond with a relatively high frequency of burned daub fragments (n=394 fragments or 548.2 g). This occurrence of daub continued until approximately 105 cmbd, the depth

at which the deepest post terminated. Based on this, it seems the structure encountered within Block 3 was at least partially daubed and constructed of single-set posts. The depth at which the posts originated may be the result of a semi-subterranean construction, as was seen in Block 2. Further excavation in this area will be necessary to identify the size and more specific architectural traits of this Late Mississippian structure.

7.3 RADIOCARBON RESULTS

Three sooted sherds from the Lincoln Trail Assemblage were submitted to the University of Georgia's Center for Applied Isotope Studies for ^{14}C Radiocarbon AMS Analysis. Each of these sherds was from a midden context, including a burnished plain sherd from a shovel test dug within a dense midden along the marsh edge between Locus G and A (UGAMS-14461), a filfot stamped sherd from a test dug into SM-23 within Locus C (UGAMS-14462), and a filfot stamped sherd with reed punctations directly applied to the rim (UGAMS-14463) recovered from the base of SM-1 in Block 3 (Table 7.2). Each of these samples revealed 2 sigma calibrated ranges that were split with wide probability gaps. A discussion of the returned results from each assay is presented below.

Table 7.2: Radiocarbon Data from Lincoln Trail

Site	ID	Provenience	Type	2 Sigma Calibrated Range
Lincoln Trail	UGAMS-14461	oyster midden	AMS (sooted sherd)	cal AD 1437-1494 (91.4%) and cal AD 1601-1613 (4%)
Lincoln Trail	UGAMS-14462	oyster midden (Locus C)	AMS (sooted sherd)	cal AD 1446-1522 (72.4%), cal AD 1575-1583 (1.3%), and cal AD 1590-1623 (21.6%)
Lincoln Trail	UGAMS-14463	oyster midden (Locus A)	AMS (sooted sherd)	cal AD 1450-1524 (62.7%) and cal AD 1572-1630 (32.7%)

UGAMS-14461: This AMS date was attained from a sample of carbon acquired by scraping the soot from the surface of an Irene burnished plain sherd recovered from a marsh side midden between Locus G and A (see Figure 7.6). This sample yielded a split 2 sigma calibrated date range cal AD 1437 to 1494 (with 91.4% probability) and cal AD 1601 to 1613 (with 4% probability) (Figure 7.26). This result provides the tightest AMS interval achieved through radiocarbon dating at Lincoln Trail thus far, and suggests a Late Irene II to Pine Harbor period deposition (Braley 1990). These results also seem to fit nicely with the temporal range suggested by artifact seriation.

UGAMS-14462: This assay was from taken from soot scraped off the surface of an Irene complicated stamped sherd found within SM-23 of Locus C (see Figure 7.6). It yielded a 2 sigma calibrated range that was split three ways: cal AD 1446 to 1522 (72.4% probability), AD 1575 to 1583 (1.3% probability), and AD 1590 to 1623 (21.6% probability) (Figure 7.27). The first, and most statistically probable, of these ranges fits well with the age suggested by UGAMS-14462 and the analysis of Irene artifact seriation conducted for the site.

UGAMS-14463: The soot from a rim sherd was submitted for the third AMS date at Lincoln Trail. This sherd was recovered from the base of SM-1 in Locus A, within the Block 3 excavation unit. It was a complicated stamped sherd with rounded rim and reed punctation applied directly to the vessel wall beneath the lip. The returned results from this sample provided a split 2 sigma calibrated range from cal AD 1450 to 1534 (62% probability) and AD 1572 to 1630 (32.7% probability) (Figure 7.28). The former date also works well with the temporal data suggested by artifact seriation. Reed punctate

directly to the vessel wall has been interpreted as late within the Irene phase and the most likely of these returned ranges suggests a Pine Harbor period deposition (Braley 1990).

7.4 Interpretation: The Irene Landscape of Lincoln Trail

Based on the survey and limited excavation conducted at the Lincoln Trail site thus far it is clear that the site was first occupied between 4,500 and 3,000 years ago by Late Archaic St. Simons phase residents. The site was selected as a strategic location to exploit the varied resources of the marsh edge environment and areas of limited and possibly temporary habitation (as indicated by midden accumulations) were selected across the landform based on access to fresh water. The site may have also been selected for the accumulation of a Late Archaic Shell Ring; however, additional research is needed to interpret this hypothesis. After this initial occupation, activity at the site seems to be sparse during the Early and Middle Woodland. There was a small occupation during the Late Woodland but it seems to be almost abandoned during the Early/Middle Mississippian. This may be due to the population nucleation created during the rise of nearby Middle Mississippian chiefdoms (such as that at Sevenmile Bend, Middle Place, and even the Irene Site) in the vicinity of Lincoln Trail.

The site experienced its most intensive occupation during the Late Mississippian Period, a time characterized by the general increase and dispersal of population across a broader landscape than that of the previous Savannah polities (Pearson 1977, 1979, 1980, 2001; Thomas 2008). Lincoln Trail undoubtedly became a sizable focus of Irene phase activity but what role might it have played among a population of Late Mississippian residents of southeastern Bryan Neck? The following section provides an interpretive synthesis of the data collected thus far at Lincoln Trail and compares it with the models

of Irene settlement outlined in Chapter 2. The synthesis will present a discussion of site layout and architecture, general population size, and comparisons with nearby sites that can be drawn from the research so far.

Site Layout and Organization

Chapter 2 outlined a model of the expected archaeological signature of a Late Mississippian chiefdom on the northern Georgia coast based the site-based composite parts which make it up. This proposed system is characterized by dispersed towns made up of clusters of small Irene phase components oriented around larger village cores. This model also proposed a series of traits, which can be used to identify a site's role within the dispersed town (i.e. village core vs. farmstead, etc). Chapter 5 presents the previously recorded Irene sites on Bryan Neck. These are arranged within distinctive clusters and each seems to be associated with a larger site identified as a village. The Lincoln Trail site is included within one of these clusters and, based on the dispersed town model, would seem to represent the village core of such a signature on Bryan Neck. Based on this, a few expectations can be made about the community layout and activities that should be expected within the archaeological record at Lincoln Trail. The distribution of artifacts and cultural features at 9BN17 should show evidence of distinct special use areas and possible segregated zones such as the dual occupation areas and divisive walls identified at Redbird Creek. There should also be examples of community architecture such as burial mounds or plazas as seen at both the Sevenmile Bend and Redbird Creek sites. Finally, distinct evidence of a resident population is expected in the form of household middens and structural features. Each of the possible Bryan Neck village

centers displayed distinct concentrations of discreet household middens, and examples of preserved Irene structures were identified at both Sevenmile Bend and Redbird Creek.

The subsurface survey at Lincoln Trail revealed that Irene phase artifacts and midden deposits were differentially distributed across the site in a series of distinct concentrations. These were designated Loci A through G (Figure 7.6) and can be used to inform the discussion of what activities occurred at the site and how these areas were arranged during the Irene phase occupation. The loci were assigned based on the overlap between shell concentration and artifact density, which, for the most part, were in direct correlation. Fifty-six middens were identified in distinct clusters across the landform. These are interpreted as distinct refuse disposal areas associated with habitiation. As was cautioned before, it is presently unclear, however, if these middens can be considered broadly contemporaneous. Using distinct surface treatments and rim styles as a seriation technique, it does seem that each locus displays similar ratios of these traits, and AMS dates across three different areas of the site reveal overlapping results. This seems to suggest a level of contemporaneity that is consistent enough to facilitate the following discussion of general site layout.

Residential Zones

Pearson (1984) suggests that these discrete middens separated by areas clear of debris represent a disposal pattern typical of Late Mississippian habitation sites on the Georgia coast. He posits that the clusters these middens form represent changes in the spatial arrangement or even number of residential structures through time. The presence of these clusters can be used as a predictor of the general location of Irene phase structures (Pearson 1984). Based on this, the southern half of the site seems to be

characterized by four large midden clusters situated adjacent to former freshwater ponds. These seem to form two distinct zones of habitation separated by a broad flat area largely devoid of midden and artifacts which may represent a plaza (discussed below). The midden clusters in the northern portion form a less organized almost half-circle arrangement and are of smaller size. This may reflect a different residential arrangement and possibly a distinct portion of the village.

Community Architecture

Platform style mounds, typically considered the hallmark of Mississippian community architecture (Steponaitis 1986; Holley 1999), are typically absent from Irene phase civic centers. The growing database of Irene archaeology, however, does suggest there are a series of community structures which one can expect to find at an Irene phase centers. These include burial mounds or mortuary structures (as seen at the Irene site), plazas, divisive walls, and council houses (Caldwell and McCann 1941; Pearson 1984; Sipe 2013).

Isolated Urn Burial

The gap within the shovel testing grid between Locus B and C represents a 60 meter buffer established around Burial 1 which was encountered within Shovel Test 4640N/5000E (see Figure 7.1). This shovel test revealed an urn-style interment within a large filfot-stamped globular jar that was encountered approximately 20 cm below the ground surface. Only a limited portion of the vessel and its contents was inspected before realizing the nature of the find and suspending the shovel test. Portions of the pot (see Figure 7.8), two cranial fragments, and three tooth crowns were documented and determined to be the remains of an adolescent between the ages of 15 and 25. The rim

diameter of the vessel suggests it may have been similar in size to a large urn recovered from the Sevenmile Bend site which measured 54 cm tall and had a flaring orifice diameter of 45 cm (Sue Moore, personal correspondence 2011).

The burial was located in a densely vegetated portion of the site characterized by very subtle topographic relief. As a result, no clear indication of a burial mound could be identified in the field. Furthermore, perusal of topographic maps and the 2009 Aerial LiDAR Data for Chatham and Surrounding Counties were also inconclusive (NOAA 2009). Irene burial mounds are typically low, but can usually be recognized by a 40 or 50 cm rise over a diameter of around 20 meters (Mound B at Redbird Creek, Sipe 2013). Such a signature is undetectable at this location. Isolated burials, especially urn burials, are not typically reported for Irene sites; however, relatively little of the broad scale investigation that would be necessary to identify such isolated interments has been conducted at Irene phase villages. If Irene urn burials truly do not occur within isolated contexts, then perhaps the lack of a detectable mound associated with Burial 1 represents a different type of mortuary treatment, similar to the cemetery interments associated with the mortuary structure at the Irene site itself (Caldwell and McCann 1941).

Dubbed the Mortuary, this was a semi subterranean, wattle and daub structure with a linear, wall trench entrance. It was apparently used for mortuary activities, perhaps even preparing a body for a bundle or urn-style interment. At some point during the structure's use, four burials were placed within the floor, but eventually it was intentionally burned and demolished. Soon after being pulled down, the structure was covered in sand fill and used as a cemetery delimited by two concentric circles of posts interpreted as fences/enclosures that may indicate expansion (Caldwell and McCann

1941). Interments within this cemetery included a double urn burial of children or possibly adolescents (Caldwell and McCann 1941).

It is possible that the urn burial encountered at Lincoln Trail was interred within a cemetery similar to that which was deposited on top of the Mortuary at Irene. Even the Mortuary, however, was recognized by a low rise. Maybe the absence of such a rise indicates that this possible cemetery was not preceded by a mortuary structure. While no sign of any kind of "standing" architecture is present here, if the area immediately surrounding Burial 1 was used as a cemetery or mortuary area, it does seem that this area is reflective of community architecture in the sense that it represents space utilized by the public in service of the community norms (in this case mortuary practices). Public spaces such as these are typically associated with village cores within the dispersed town model; however, it is far too early to draw definitive conclusions about this portion of the site and additional work here is unlikely. A 60-meter buffer was established around the shovel test that revealed Burial 1. This was to prevent further subsurface disturbance to this culturally sensitive zone. The precaution was initiated at the request of GA DNR, HPD and no additional remains have been encountered elsewhere in the vicinity. Based on this, it seems that the limits of whatever mortuary activities that may have occurred here are restricted to the limits of the prescribed buffer.

Plaza(s)

Plazas can be found at most Mississippian period administrative centers or large villages (Holley 1999; Lewis et al. 1998; Stout and Lewis 1998). These architectural features are the opposite of other features in that they are characterized by space (Wood 2009). Based on this, their archeological signature can often be difficult to detect

because they are recognized by a lack of artifact density and can vary widely in size and shape (Holley 1999; Kidder 2004; Lewis et al. 1998; Pauketat 2007; Stout and Lewis 1998; Wood 2009). These spaces are typically delineated by the presence of other important community buildings, most notably platform mounds on their perimeter (Holley 1999; Kidder 2004; Schroedl 1998; Wood 2009). Plazas represent public space and, as such, were maintained by the public in the form of sweeping the area clean of debris and keeping it level. The archaeological signature of such an area would be characterized by a lack of midden and most artifacts. The few artifacts that are found will likely be lithic flakes or diminutive sherds representative of material small enough to be overlooked or even pulverized under foot.

Figure 7.29 depicts areas at Lincoln Trail thought to represent the signature of three possible plazas. Plaza 1 designates the flat, open area within the southern portion of the site (Figure 7.29). This relatively rectangular (or possibly ovoid) space seems to be the best defined of these possible features. It measures approximately 100 meters (east-west) by 200 meters (north-south) along the axis of the ridge-like landform within the space between Locus A, B, C and D. The empty space is recognized by a sharp contrast between the concentrations of midden and artifacts along its eastern and western (Locus A and D) boundaries and on its southeastern and southwestern corners (Locus B and C). The clarity of the western edge of Plaza 1 is somewhat exaggerated by the impacts caused by construction of the Lincoln Trail (the road) within this portion of the site; however, the eastern edge is equally clear (Figure 7.29). Interestingly, the southern boundary of this area is formed by the possible mortuary area suggested by Burial 1. If this does represent community architecture, such as a mortuary, then this layout is

consistent with other Mississippian centers at which plazas were delineated by platform mounds or other important civic architecture. The northern boundary of the plaza is less defined but an increase in artifact density was encountered during shovel testing within this area. Based on this, it seems this portion of the site was differentially utilized than the remainder of the plaza and can be reasonably assumed to be outside of it. Only a handful of artifacts were encountered within the area designated as Plaza 1. This included Irene phase pottery under 2 cm in size (n=7) and five sherds that were large enough to classify (complicated stamped [n=1], plain [n=1], UID eroded, [n=1], and indeterminate stamped [n=2] Irene sherds).

Plaza 2 represents the less defined space between Loci A, B, C, and D and the less concentrated Loci E, F, and G (Figure 7.29). This area is depicted by a rectangular zone on the map; however, this is just to delineate a zone of low artifact/shell density. If a plaza exists within this space it may be another shape entirely. The northern and southern limits of this possible plaza are loosely defined by Locus G and A respectively and the western boundary is suggested by a slightly higher artifact concentration that does not seem to corresponds with midden deposits (Figure 7.29); and the eastern boundary is assumed to be the marsh edge.

The space between Loci E, F, and G within the northern portion of the site is designated Plaza 3 (Figure 7.29). This area is completely devoid of Irene phase artifacts and is delineated by the dense artifact concentrations and midden within Locus E to the North, Locus G to the southwest, Locus F to the southeast, and the marsh edge to the east. Interestingly, the southern boundary of this space is identified by a moderate concentration of Irene sherds from four shovel tests that do not appear to be correspond

with midden deposits. Perhaps this zone is indicative of a special use area that delineated the edge of this community space.

It is not clear if the plazas at Lincoln Trail were ever as sharply defined as is depicted in Figure 7.29; however, these areas do seem to stand in contrast to differential uses of space within the areas of artifact concentration that surround them. Parallel nodes of residential concentration surround Plaza 1 as evidenced by clusters of discrete household middens (Pearson 1984). If Burial 1 is indicative of a type of cemetery, then this area represented community architecture used to delineate the southern edge of a plaza, consistent with the layout of other Mississippian centers. These plazas may represent important public spaces for, not only the immediate residents of the Lincoln Trail, but the people living among the scattered hamlets and farmsteads of the dispersed town. Further investigation in the form of reduced interval shovel testing and possibly limited excavation is needed within the limits of these plazas, and along their borders in order to elaborate on this hypothesis.

Residential Occupation

Hundreds of artifacts and thousands of cubic meters of oyster midden provide clear indication that Lincoln Trail was occupied during the Late Mississippian period. Pearson (1977) indicates that the pattern of deposition at the site is consistent with the location of Irene phase structures, and limited excavation at the site has confirmed the presence of at least two structures within Locus A (Blocks 2 and 3). Is it possible to tease more data regarding the residential occupation of 9BN17 from this somewhat limited sample? The following discussion provides some speculative calculations regarding

structural size and morphology, and the size of the Irene phase population that resided here.

Irene Structures

Regarding Irene structures, Keene (2002) posits that variation seems to be the rule not the exception. Only a handful of these features have been archaeologically documented (n=10) and, only two were fully exposed (Feature 55 and 61 at the Irene site) to the point of offering accurate observations of size and shape. The portions of these structures that have been documented suggest variable construction and are poorly reported in many cases. Features 55 and 61 represent residential structures at the Irene Mound site which seem to be associated with the Irene phase occupation (Caldwell and McCann 1941). Feature 61 may be more appropriately described as a transitional Savannah/Irene phase structure; however, it provides the only true size dimensions available for a structure associated with Irene pottery. It measured 3 by 3 meters (interior floor area of 9 square meters) and was roughly square with rounded corners. Only the interior walls of the structure were plastered with daub and were constructed using a single set post technique (Caldwell and McCann 1941). The signature suggests wall trench entryways similar to those that were seen at the Mortuary; however, Feature 61 does not seem to be a semi-subterranean structure. One "shallow fire basin" was also mentioned within the structure (Caldwell and McCann 1941). Feature 55 was a truly Irene structure. This was described as rectangular with squared corners and made from single set posts with wattle and daub construction. Unfortunately, no exact dimensions of this structure were reported. It is simply described as being "considerably larger than the Savannah period structure" that was encountered below it (Caldwell and McCann 1941).

This Savannah structure measured 10 by 9 meters and implies that Feature 55 may have been quite large and possibly a community building. With the absence of exact dimensions, its size will be considered similar to the Savannah structure with an interior dimension of around 90 square meters.

Table 7.3: Known Irene Phase Structures and their Dimensions

Structure #	size	area ($m^{2)}$	Comments
Groves Creek			
Structure 5	6 x 6	36	size estimate
Structure 1	?	?	single set posts, trash pits, clay hearth
Structure 2	?	?	single set posts, daubed, clay floor
Structure 3	?	?	one post, fallen daub wall
Structure 4	?	?	?
Irene			
Feat 55		90	considerably larger than 10 by 9 m
Feat 61	3 x 3	9	transitional savannah/Irene, central hearth, single set post, daubed
Sevenmile			
Structure 1	?	?	daub, incised wall decoration, pit of burned corncob
9CH112			
Structure 1	10 x 7	70	not daubed?, several shell middens, hearth, fire pit/trash pit
Harris Neck			
seven postmolds	?	?	
Redbird Creek			
Structure 1	5.2 m across	30	daubed, central hearth

Half of all the Irene phase structures identified on the Georgia coast were uncovered at the Groves Creek Site (9CH71) on Skidaway Island, Georgia. Structure 5 provided some of the most compelling data available for this architecture. This structure was originally identified through geophysical survey and ground truthing revealed the presence of a rounded corner of an approximately rectangular structure (Keene 2002, 2004, 2013). The size of this feature was estimated as 6 by 6 meters; however, it was not fully exposed. If this size estimate can be used for discussion, the interior floor area is

roughly 36 square meters. Exterior walls of Structure 5 were constructed of single set posts and apparently not covered in daub. Keene (2002) posits that the outer walls of this building may have been formed by cane matting, an architectural trait apparently noted by several European observers (Keene 2002). The structure also seemed to have interior divisions created by walls that did appear to be of wattle and daub construction. This interior daubing may have been to help support a substantial roof construction or to make the structure more resistant to fire (Keene 2002). No other examples of interior divisions are documented for Irene structures at other sites; however, Fray Andres de San Miguel specifically mentions that the chief's house was made of several rooms at the Guale town of Asao (San Miguel 2001). Perhaps Structure 5 at Groves Creek represents the residence of an important community leader. Unfortunately, little can be gleaned from the other four structures at 9CH71 because the notes collected during these excavations within the 1980's and 1990's have been lost. Keene (2002) reconstructs a few architectural details from these structures and notes that three of them were characterized by single set post construction, one was associated with a trash pit and a possible clay hearth, one displayed a prepared clay floor, and three of them were apparently daubed, and no data could be reconstructed from the excavation of Structure 4.

As has been previously noted, two Irene phase residential structures have been previously recorded at sites on Bryan Neck. These include wattle and daub buildings identified at Sevenmile Bend (9BN7) and the Redbird Creek (9BN9) Sites (Cook 1971; Pearson 1984). The structural signature at Sevenmile Bend was a rounded corner formed by two exterior walls of wattle and daub construction (Cook 1971). Exterior portions of the daub for this structure suggested a façade comprised of fine clay slip and incised

motifs across its outer surface. The walls were built using single set posts and it is not known if any portion of the structure was semi-subterranean. Unfortunately, the structure was not fully exposed and no dimensions are available. Structure 1, at the Redbird Creek Site, displayed a similar wattle and daub construction (minus the incised façade) and was also recognized as an exterior daubed wall comprised of single set posts of yellow pine (Pearson 1984). A clay-lined hearth was also identified within the interior of this structure. If the hearth can be assumed to represent the center of the building, then Structure 1 may have measured 5.2 meters wide (Pearson 1984). If it were square to rectangular, it likely displayed an interior floor area of around 30 square meters.

Another apparently Irene structure was identified at 9CH112 on Skidaway Island. This was recognized as an alignment of postmolds which seemed to measure 10 by 7 meters in size, with an interior floor area of around 70 square meters. No daub was present, which likely indicates this was a simple unplastered wooden structure built from single set posts. The floor appeared to be depressed but not enough to be classified as semi-subterranean (Goad 1975). A clay lined hearth and a fire/trash pit were documented within the interior of this structure (Goad 1975). Seven postmolds filled with burned daub were also documented at the Harris Neck Site in McIntosh County, Georgia. This portion of a structure was clearly of wattle and daub construction and seemed to be related to the Irene phase occupation of the site and not the protohistoric occupation (Braley et al. 1986). As it is only a portion of a wall, it provides little data regarding the size and layout of an Irene house.

Based on this limited dataset, it seems Irene structures are typically square to rectangular, often with rounded corners, and may or may not be plastered with fibrous

clay daub. The walls are made from single set posts and they often contain a central, clay-lined hearth feature. Based on the limited size measurements provided by the Irene structures documented thus far, it seems an average Irene structure may display an interior floor area of around 47 square meters. If square, these would be constructed from walls measuring 6.85 meters in length.

The signatures of two structures were encountered at Lincoln Trail during the limited excavation within Blocks 2 and 3 beneath midden deposits associated with Mt. Chance and SM-1 respectively. The 1 by 2 meter view provided by these units revealed very little of the total structural signatures; however, both are recognized by a series of post features encountered within levels associated with concentrations of fragmentary burned daub.

The posts within Block 2 are associated with the location of a possible structure floor and quite possibly, a rounded exterior corner. A mottled stain (Feature 2) was encountered beneath the midden which seemed to display a rounded, rectangular morphology similar to the corner of Structure 5, revealed at the Groves Creek Site (9CH71). The majority of this feature was mottled; however its edges seemed to be characterized by a darker stain (Feature 2A) (Figure 7.16). At least one post (Feature 20) was encountered within this stain, which is consistent with the corner hypothesis. The possible floor (Feature 2) appeared basin shaped in profile which seems to indicate that it was formed by a shallow depression during its use. This is similar to the floor which was reported for the structure at 9CH112. Burned chunks of fragmentary daub were encountered within Feature 2 and the post features; however, this was not the concentration that would be expected for an exterior plaster. Based on this, the daub

associated with this structure may have only covered interior walls, or perhaps portions of the roof. The portion of the corner identified within Block 2 is so small, that calculations of dimension are not presently feasible.

Posts within Block 3 were identified in a soil matrix characterized by a relatively high concentration of fragmentary burned daub. It is unclear if these posts represent a portion of an exterior wall or perhaps interior constructions such as partition walls. Given their small size and the scatter of relatively small pieces of daub, it is likely they reflect the latter. It is expected that a daubed exterior wall would be recognized by significantly larger posts as well as a dense concentration of large chunks of daub representative of wall fragments.

It is clear that both structures precede the midden deposits under which they were found. A comparison of artifact seriation between the zones' affiliated structural features and the midden levels above revealed that the middens seemed to be associated with a higher frequency of incised pottery while the lower levels seem to show a higher frequency of stamping in relation to incised and plain wares. If frequency of incising can truly be used as a temporal indicator, then it would seem that both structures were affiliated with the early stages of Irene occupation at the site. If these Lincoln Trail structures are contemporaneous and the average Irene structure size is assumed to apply they represent two enclosed areas of 42 square meters located approximately 30 meters apart.

Population Estimates

Approximations of Mississippian populations have been proposed based on the number and size of contemporary domestic structures located at the site, and the average

number of occupants per structure. This is often difficult because total exposure or even broad scale excavation is usually not feasible in research scenarios. Hally et al. (1990) propose a technique based on work conducted at the King, Ledford Island, North Mouse Creek, South Mouse Creek, and Rymer sites which allowed the number of domestic structures to be estimated at other Mississippian sites where surface collection or shovel testing provides an ideas of a site's areal extent. To achieve this, Hally and colleagues divided the total area excavated at these sites by the number of distinct domestic structures identified. Based on this they came to the conclusion that one Mississippian structure is represented within every 470 square meters of total site area (Halley et al. 1990). Wood (2009) applied this technique while calculating the representative population at the Lawton, Spring Lake, and Red Lake Middle Mississippian mound sites in the Savannah River valley and determined there were approximately 32, 46, and 81 domestic structures represented at each site respectively.

The application of this formula worked well at these Mississippian centers; however, they represent smaller concentrations of domestic activity within a more clearly defined space (platform mound complexes, divisive ditches, plazas, etc.) than that which has been documented for Lincoln Trail. If the formula is applied unmodified to 9BN17, a site which spans 1,110 meters (north-south) by 510 meters (east-west), it suggests around 780 residential structures may have been present at the site. This number seems quite high.

The most obvious flaw in the application of this formula at Lincoln Trail, is that the artifact distribution (as seen in Figure 7.5) clearly indicates that habitation was not uniform across the site. If the formula proposed by Hally et al. (1990) is applied to only

the site area of the hypothesized residential loci (Loci A-G), it brings the estimated number of structures to 166 structures. It is also quite likely that there is enough variation between Irene phase structures of the Georgia Coast and Late Mississippian structures found within Northwestern Georgia to cause a significant difference in the minimum spacing for each structure. Steere (2007) compiled a data set of 230 domestic structures from 20 South Appalachian Mississippian sites in Georgia, the Carolinas, and Tennessee. One hundred and forty-nine of these structures were from Late Mississippian contexts and displayed a fairly standardized form with a mean interior floor area of 37.7 square meters. Based on the mean Irene phase floor area calculated here, it seems that Late Mississippian structures in Coastal Georgia are approximately 19.79% larger than their counterparts in the interior Southeast. If this increase in floor area can be directly applied to the minimum spacing per residence, it seems there should be one house for every 563.01 square meters of site area. By dividing the total area of the specific residential loci (areas which correspond with clusters of household midden and dense artifact concentration) by this minimum spacing, then 139 domestic structures may have been present at the Lincoln Trail site.

Naroll (1962) suggests that the number of occupants within a prehistoric structure can be calculated as one tenth of its interior floor area. Using this average with the 166-structure total calculated based on the South Appalachian Mississippian spacing (Halley et al. 1990) calculated above provides an estimate of around 780 people. The modified Irene phase structure spacing (n=139 structure) suggests approximately 653 individuals at Lincoln Trail. Caselberry (1974) refined this hypothesis and suggested that the inhabitants of a prehistoric structure can be more accurately calculated as one sixth of a

structure's interior floor area. This yields higher population estimates including 1,300 individuals using the Hally et al (1990) formula and 1,161 individuals for the modified Irene phase house spacing. Based on these formulas, it is suggested that a resident population ranging from 653 to 1,300 individuals once occupied the Lincoln Trail site.

These numbers still seem quite high, however. Worth (2004) estimated that the total Guale population on the Georgia Coast at the time of European contact was as low as 3,000 people. To refine this calculation further, it would be interesting to apply a more simplistic technique using observations directly from Lincoln Trail. Two possible structural signatures were identified within the cluster of household middens dubbed Locus A. These signatures are believed to be contemporary based on artifact seriation and are separated from each other by approximately 30 meters. If these signatures are consistent with the mean interior area of an Irene phase structure, and this spacing can be considered a roughly standardized pattern within this locus, then there may have been as few as one residential structure per every 900 square meters of Locus A. Applying this minimum spacing for each of the site's residential nodes yields a total of 87 structures and population estimates of between 408 and 681 individuals. Another possible application of this spacing reveals that Locus A may have been specifically associated with 16 structures amongst 18 discrete middens. This forms an 8:9 ratio of structures to middens. If this ratio is simply applied to the total number of middens across the site it yields an estimate of 49 structures at the site and a population 230 and 383 individuals**.** These calculations suggest a wide range of population estimates for the site, spanning from as many as 1,300 people to as few as 230. In a letter to the Crown dated 1579, Antonio Marinez Carvajal estimates 400 inhabitants of the northern town of Cosapoy, in

modern day South Carolina (Connor 1930). Based on this example and the protohistoric population estimates of Worth (2004) it seems that the more conservative populations estimates may be more appropriate for the Lincoln Trail site.

Temporal Data and Role within the Irene Phase on Bryan Neck

Chapter 5 outlines five clusters of Irene sites that are hypothesized to represent distinct dispersed towns evenly spaced across Bryan Neck (see Figure 5.1). Each of these polities included a large village site that represented the town center or central village core, surrounded by smaller hamlets or farmsteads similar to the model proposed by Jones (1978). Based on the data regarding site layout, community architecture, and residential population gleaned from this present investigation, it seems that Lincoln Trail can be appropriately interpreted as the village core of a dispersed town on the southeastern tip of Bryan Neck; however, its relationship among the other Bryan Neck groups is presently unclear.

The Sevenmile Bend Site (9BN7) seems to stand out among the other village centers of Bryan Neck. Its complexity, unique architecture, and exotic assemblage set it apart from the others (Cook 1971). It also seems to have been an important Middle Mississppian civic center during the Savannah Period, while the remainder of these sites seem to have almost no Savannah components. The only site comparable to Sevenmile Bend in the Bryan Neck area is the Middle Place site on Ossabaw Island. If the Bryan Neck towns can be considered contemporary, these two large sites may be proposed as the alternating principal towns of a chiefdom similar to the Guale chiefdoms proposed by Jones (1978). An examination of the limited (but growing) database of radiocarbon data for the Bryan Neck Irene phase reveals that the situation may be a bit more complicated.

There have been 10 radiocarbon dates acquired from Irene components on Bryan Neck (Table 7.3). These were primarily acquired from sites associated with the Genesis Group; however, three dates have also been gleaned from the present study. Seven dates were collected from four sites at Genesis Point including three dates from Redbird Creek (9BN9), one from Hammerhead Point (9BN887), two from the Genesis Midden (9BN104), and one from 9BN872 (Sipe 2013). Two of the dates from Redbird Creek (Beta 270236 and 297416) and the date from Hammerhead Point (Beta 297415) were acquired using AMS techniques and revealed 2 sigma ranges that were broadly contemporary and suggestive of an occupation dating to around the first half of the 15th century (Table 7.3). The third date from Redbird (UGA-5350) was achieved using radiometric techniques in the 1970's and appears to be an extreme outlier or erroneous reading and should be viewed with caution (Pearson 1984). The remainder of the dates acquired from the Genesis Midden (Beta 258627 and 258626) and 9BN872 (Beta 263675) were acquired using liquid scintillation from samples of oyster midden. These results were calibrated using Thomas and Sanger's (2013) calibration ratio for marine shell in the vincinity of St. Catherines Island and revealed broad 2 sigma ranges than spanned from cal AD 1420 to 1650 (Sipe 2013). While there is significant overlap between the 2 sigma ranges gathered from both groups, the radiometric ranges collected from marine shell are broad enough to be considered statistically later than the AMS dates from the larger sites. This may be indicative of two different Irene occupations among the sites of the Genesis Group. Alternatively, it may simply reflect the limitations of the less refined radiometric technique, or the small sample size being used for the comparison (Sipe 2013).

Table 7.4: Radiocarbon Dates from Bryan Neck Irene Components

Site	ID	Provenience	Type	2 Sigma Calibrated Range
Redbird Creek	Beta 270236	oyster midden	AMS (charred corn)	cal. AD 1440-1540 (cal BP 510-420) and cal. AD 1540 to 1630 (cal. BP 400-320)
Redbird Creek	Beta 297416	Vessel 2	AMS (sooted sherd)	cal. AD 1420-1460 (cal. BP 530-490)
Redbird Creek	UGA-5350	roof beam, Structure 1	radiometric (charred wood)	circa AD 1145±60
9BN104	Beta 258627	Midden I	radiometric (shell)	cal AD 1450-1650
9BN104	Beta 258626	Feature 1	radiometric (shell)	cal AD 1420-1620
9BN872	Beta 263675	oyster midden	radiometric (shell)	cal AD 1450-1640
Hammer head	Beta 297415	oyster midden	AMS (sooted sherd)	cal AD 1400-1440 (cal BP 550-510)
Lincoln Trail	UGAMS-14461	oyster midden	AMS (sooted sherd)	cal AD 1437-1494 (91.4%) and cal AD 1601-1613 (4%)
Lincoln Trail	UGAMS-14462	oyster midden (Locus C)	AMS (sooted sherd)	cal AD 1446-1522 (72.4%), cal AD 1575-1583 (1.3%), and cal AD 1590-1623 (21.6%)
Lincoln Trail	UGAMS-14463	oyster midden (Locus A)	AMS (sooted sherd)	cal AD 1450-1524 (62.7%) and cal AD 1572-1630 (32.7%)

The dates acquired from Lincoln Trail (UGAMS 14461, 14462, and 14463) were obtained through AMS techniques and revealed split 2 sigma ranges with disparate results (Table 7.4). The ranges with the highest probabilities, however, suggest a timeframe between cal AD 1437 and 1524. This range shows a degree of overlap with the AMS dates from Redbird Creek and Hammerhead; however, it is also quite broad and may be considered statistically similar to the date ranges obtained from marine shell at the smaller sites within the Genesis Group.

Based on this collection of dates, it is possible that the Genesis Group and Lincoln Trail were contemporaries. There is a good bit of overlap within their radiometric

sequences, but the samples submitted for dating were rather limited at each site. Statistically speaking though, it may be that the large sites at Genesis are earlier habitations dating to the middle portion of the Irene II period; and the village center at Lincoln Trail and smaller habitations at Genesis were established later, straddling the line between Irene II and the Pine Harbor periods (Braley 1990). The 2 sigma ranges of Sites 9BN104 and 9BN872 even extend well into the Spanish Mission Period. While the true occupation dates of both the Genesis Group and Lincoln Trail are statistically possible anywhere within their 2 sigma ranges, the artifacts recovered at these sites suggest that a late Irene II designation is appropriate for all of them (Sipe 2013, 2011a, 2011b, 2011c). If this small database of Bryan Neck dates truly does represent two sequential groupings, then perhaps the Irene components of Bryan Neck are indicative of the movement of Late Mississippian groups over time, instead of one large political entity. This may be the result of a regional system similar to the "patch dynamics paradigm" described by Hally (2006) for Mississippian sites in the interior Southeast. The clusters of sites represented on Bryan Neck may have been organized into multiple political entities, which have yet to be defined. These chiefdoms rose and fell, and shifted location in a system that seems unstable on the local level, but actually ensures the sustainability of a Mississippian way of life for the broader region (Hally 2006). More radiocarbon dates are needed from the Bryan Neck groups are needed in order to inform this hypothesis.

Figure 7.1: Shovel Test Results

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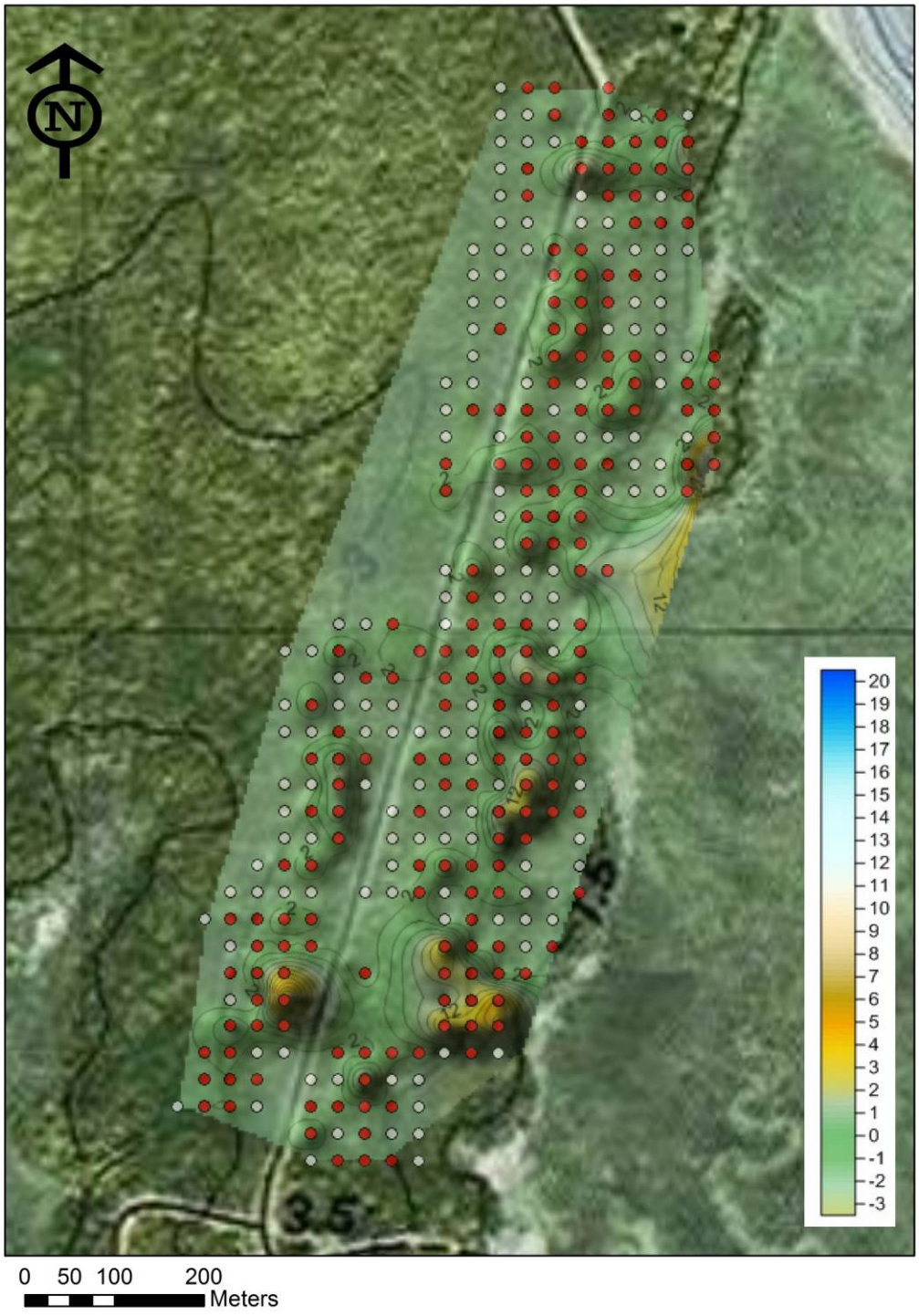

Figure 7.2: Total Artifact Distribution by Count at Lincoln Trail

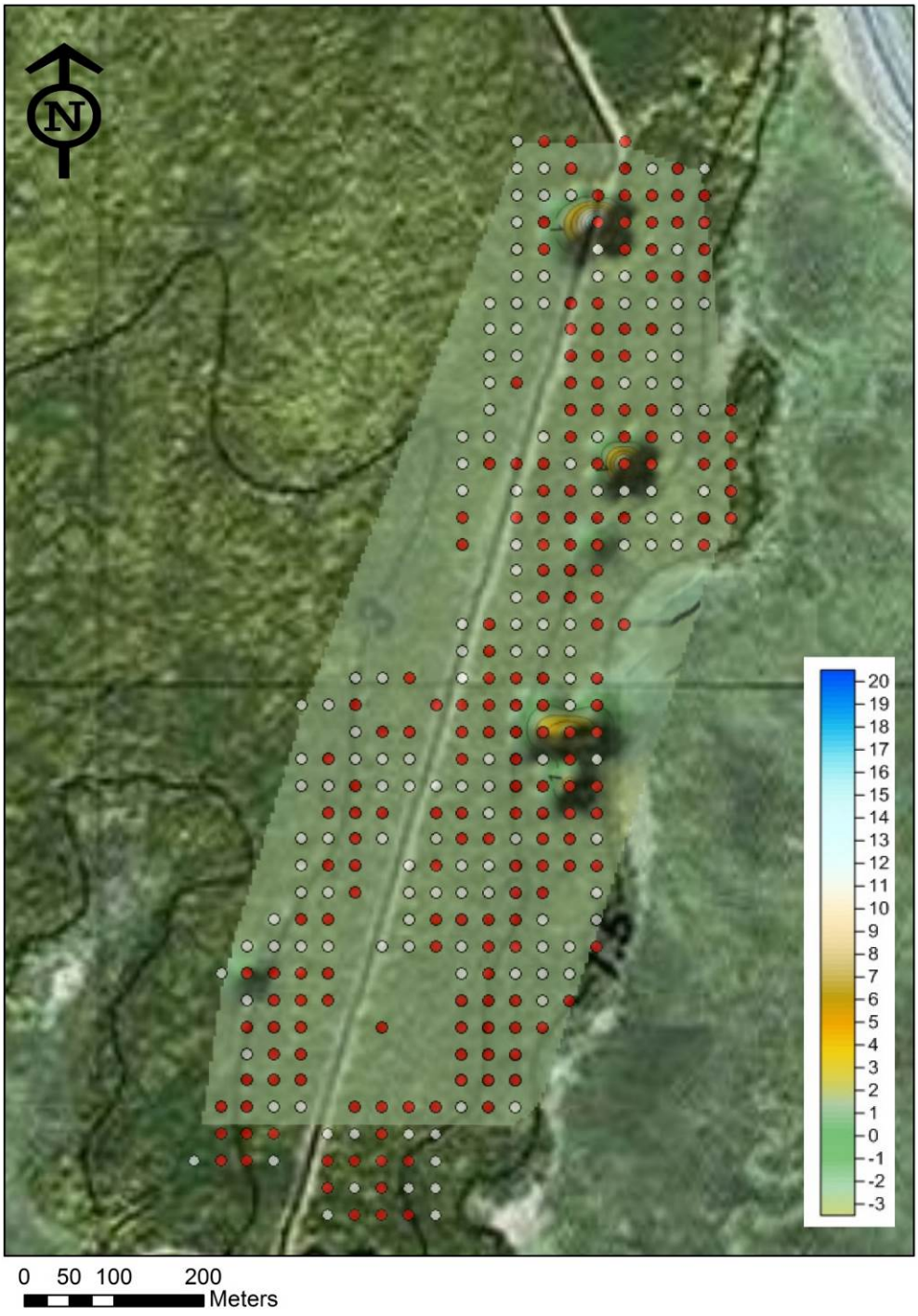

Figure 7.3: Distribution of Historic Artifacts by Count at 9BN17

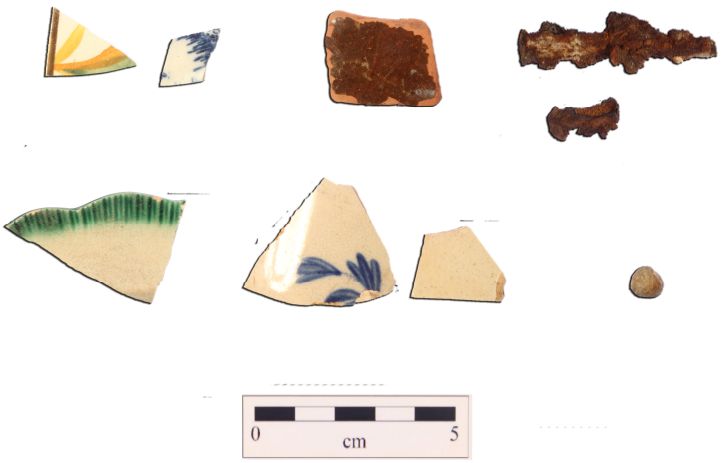

Figure 7.4: Photograph of Representative Historic Artifacts from 9BN17

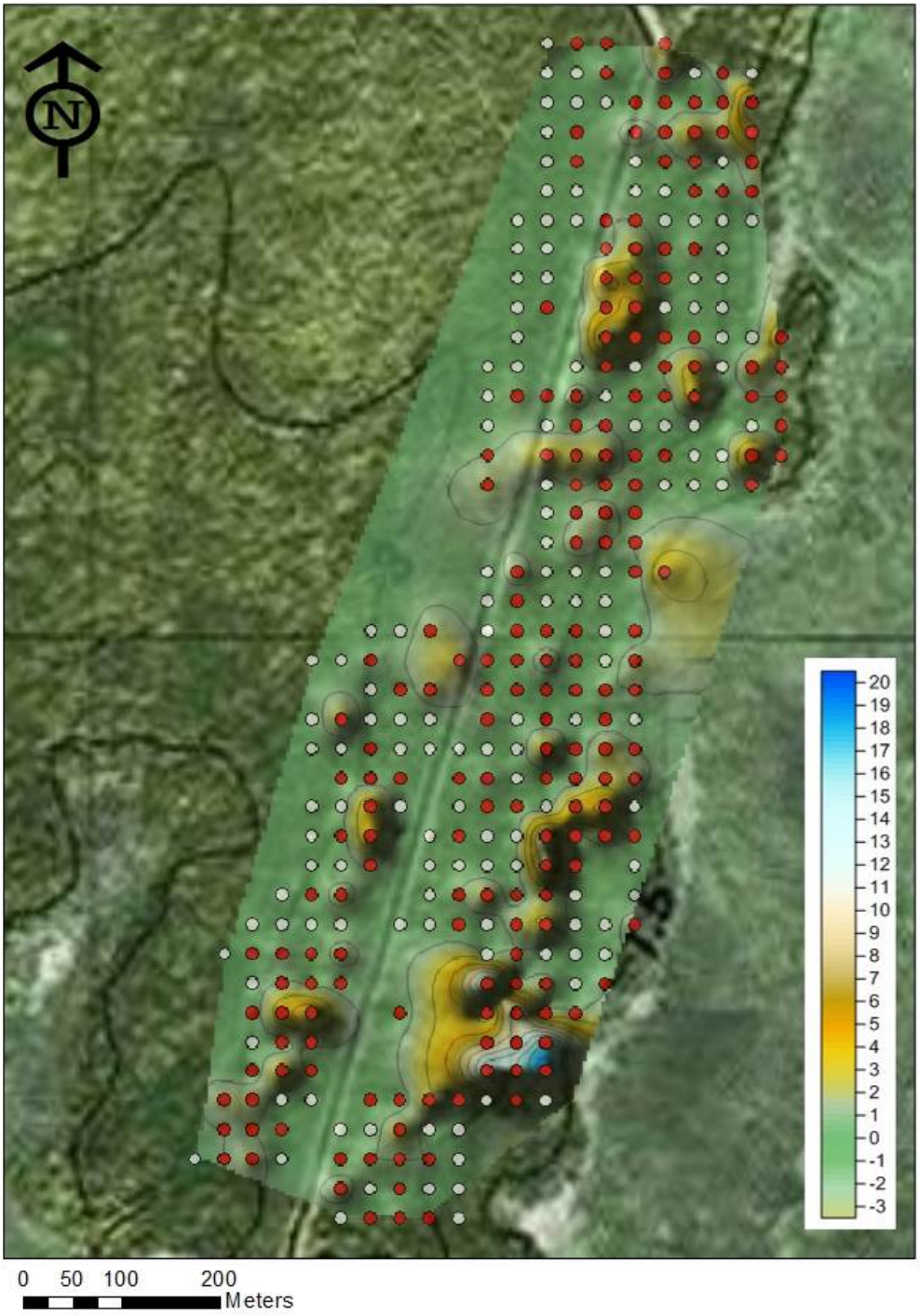

Figure 7.5: Irene Artifact Distribution by Count at 9BN17

Figure 7.6: Irene Loci of Concentration

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Figure 7.7: Photograph of Mount Chance Shell Midden

Figure 7.8: Fragments of the Burial Urn Encountered in Shovel Test 4640N/5000E

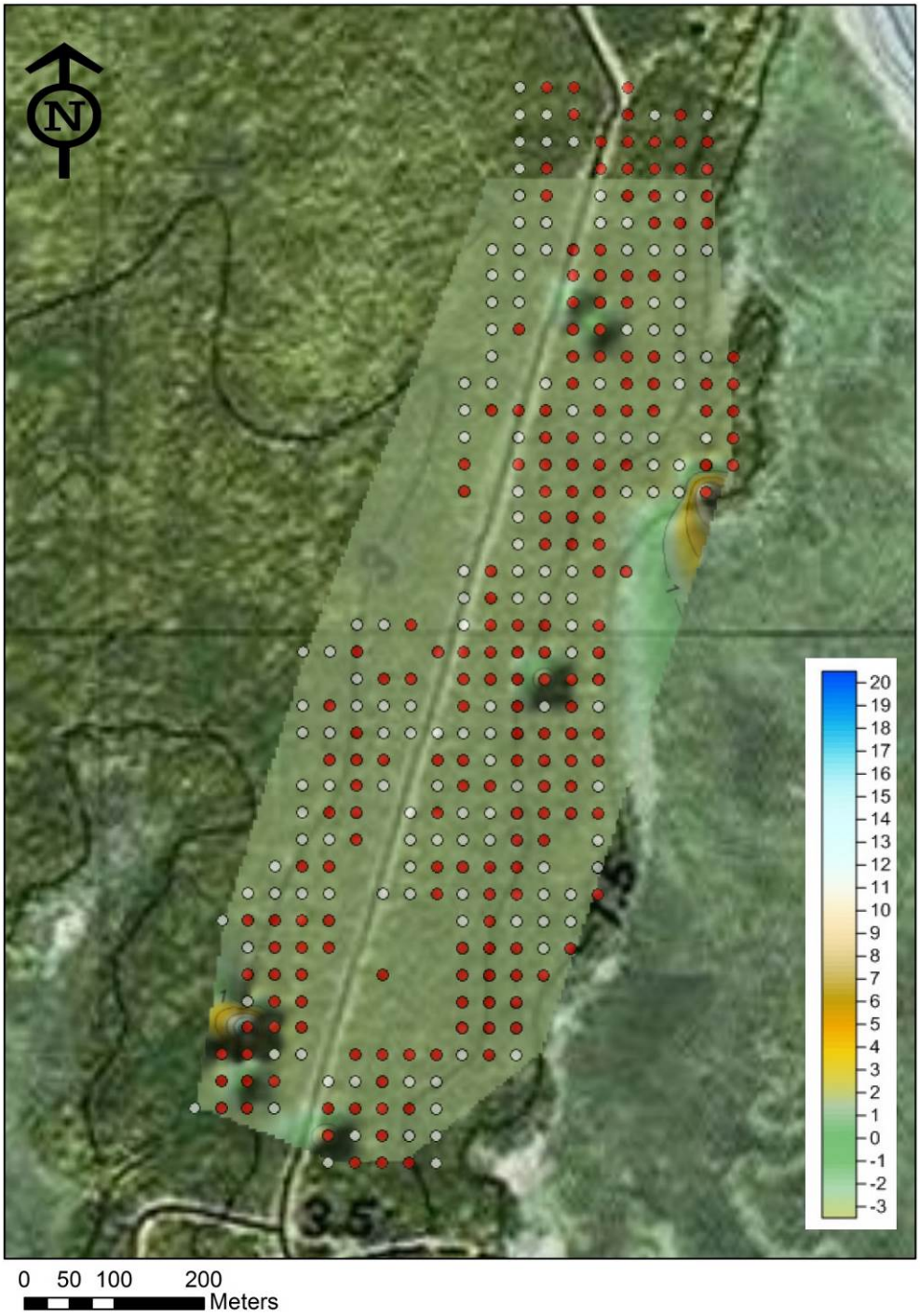

Figure 7.9: Late Woodland Artifact Distribution by Count at 9BN17

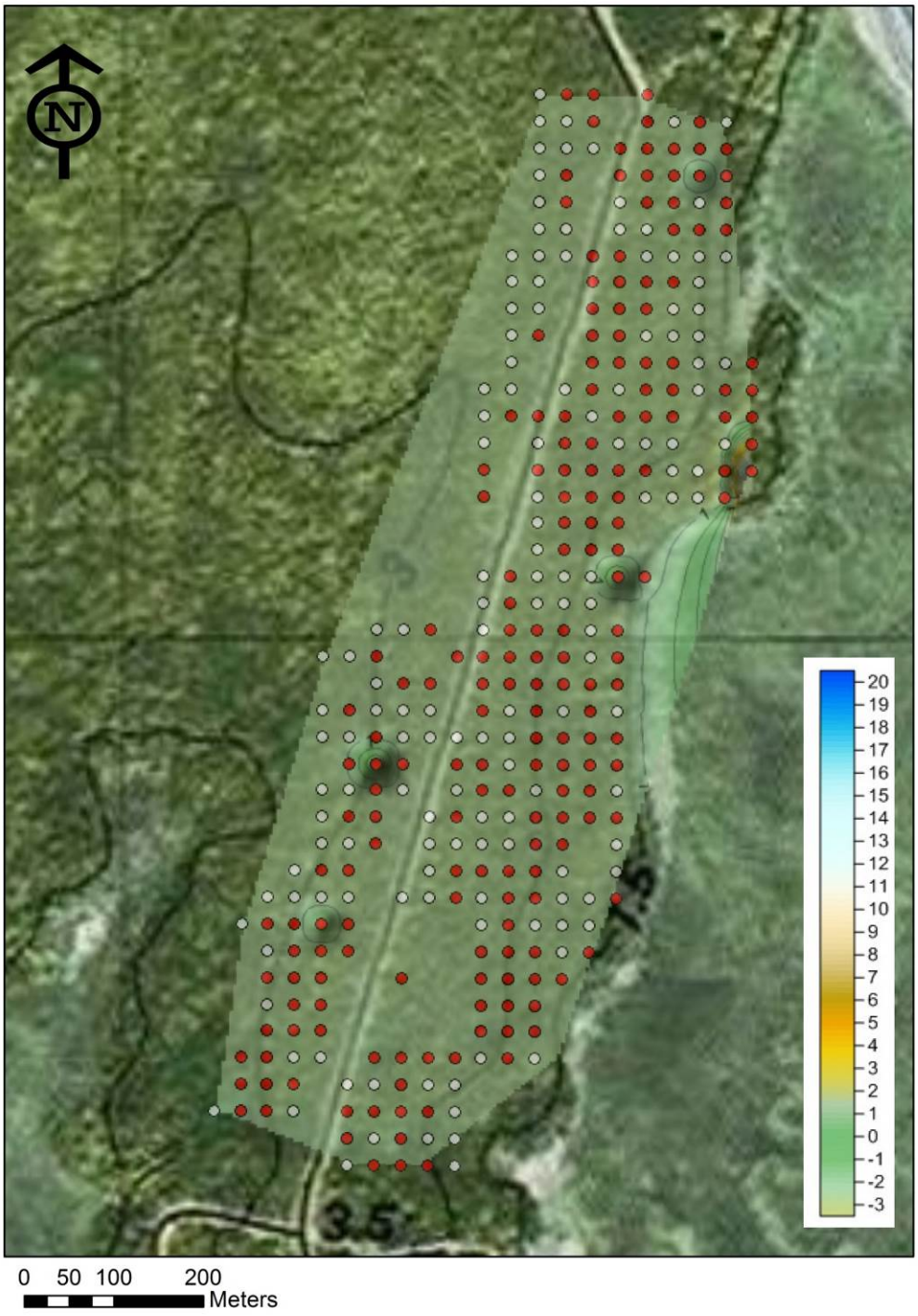

Figure 7.10: Late Archaic Artifact Density by Count at 9BN17

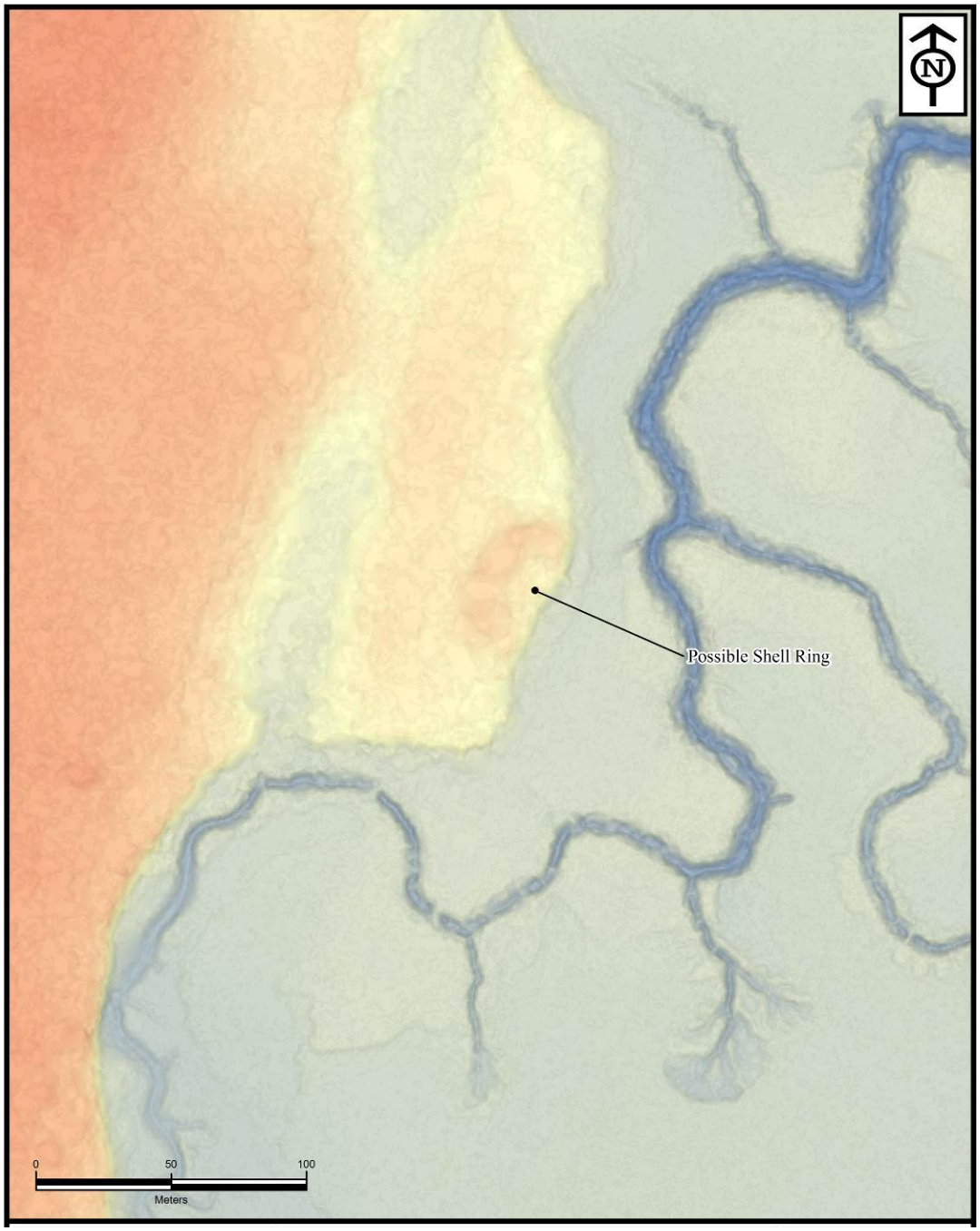

Figure 7.11: Possible Shell Ring at Lincoln Trail on 2009 Aerial LiDAR Map

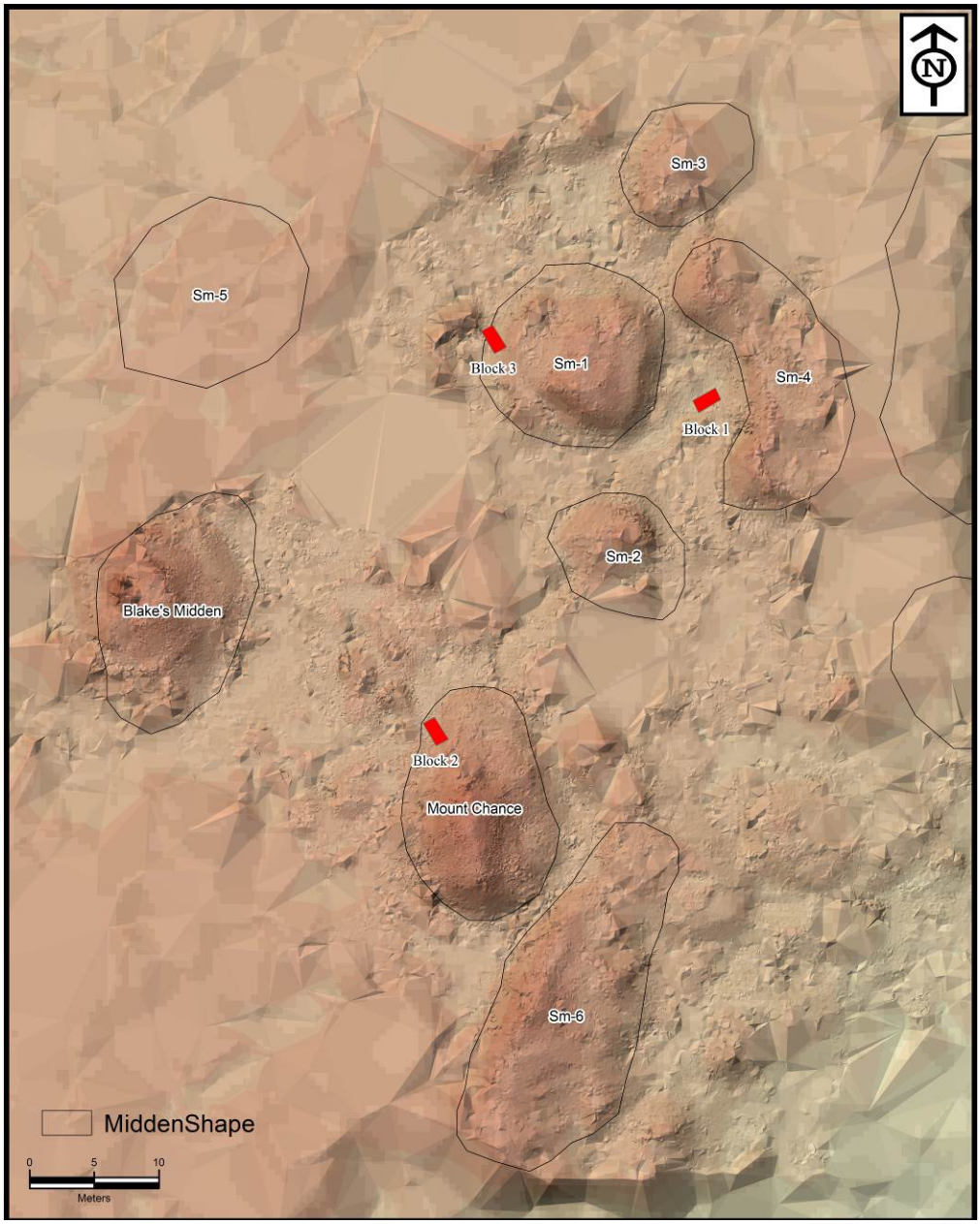

Figure 7.12: Locus A Plan Map Showing Excavation Blocks at 9BN17

Figure 7.13: Photograph of Block 1, North Wall

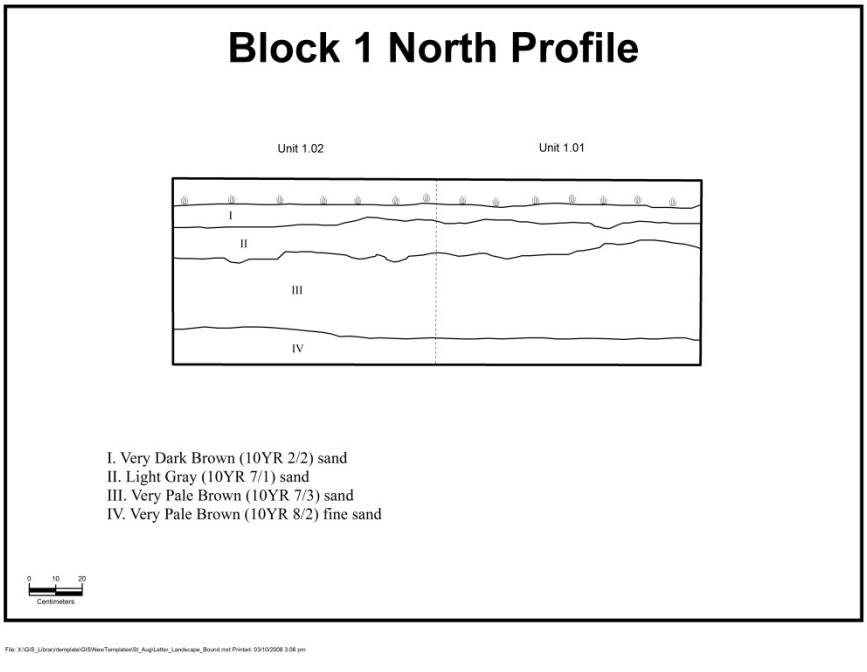

Figure 7.14: Block 1, North Profile

Figure 7.15: Possible Oemler Complicated Stamped Sherd

Figure 7.16: Photograph of Block 2, East Wall

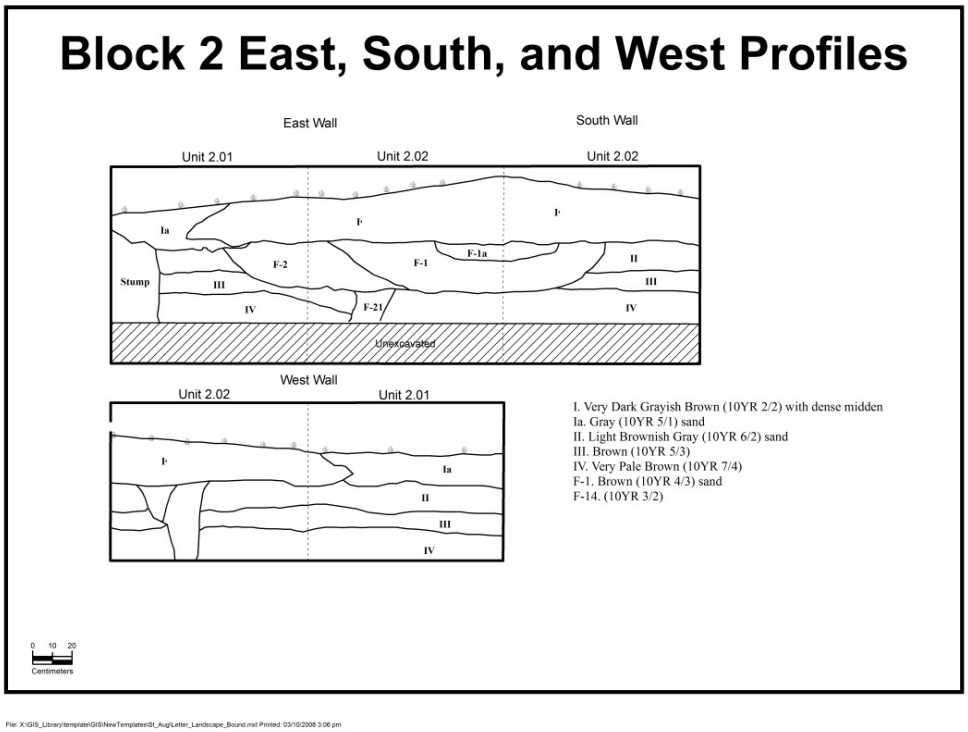

Figure 7.17: Block 2, East Profile

Figure 7.18: Photograph of Incised "Brimmed Bowl" Sherd at 9BN17

Figure 7.19: Photograph of Feature 1 at 9BN17

Figure 7.20: Photograph of Feature 2 at 9BN17

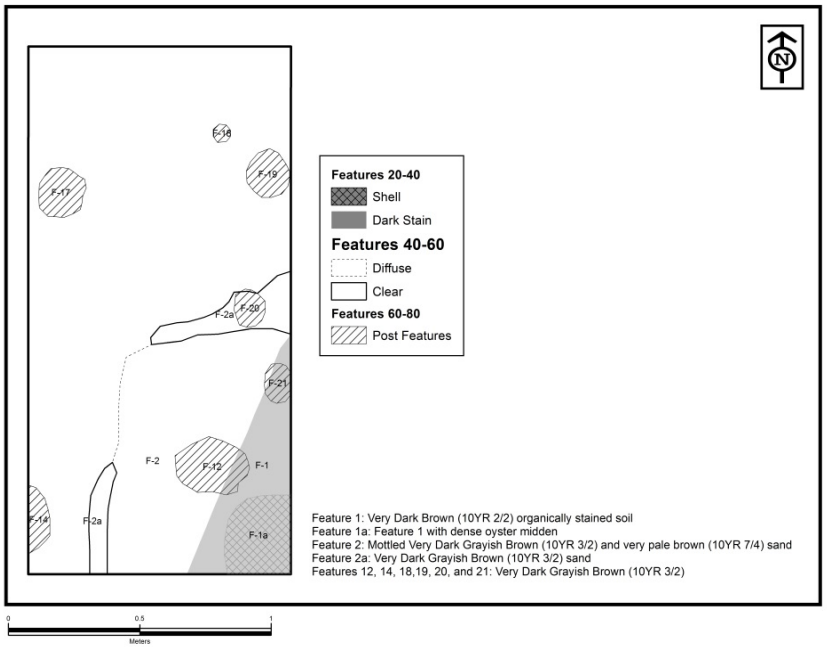

Figure 7.21: Plan View of Feature 2 at 9BN17

Figure 7.22: Photograph of Block 3, East Wall

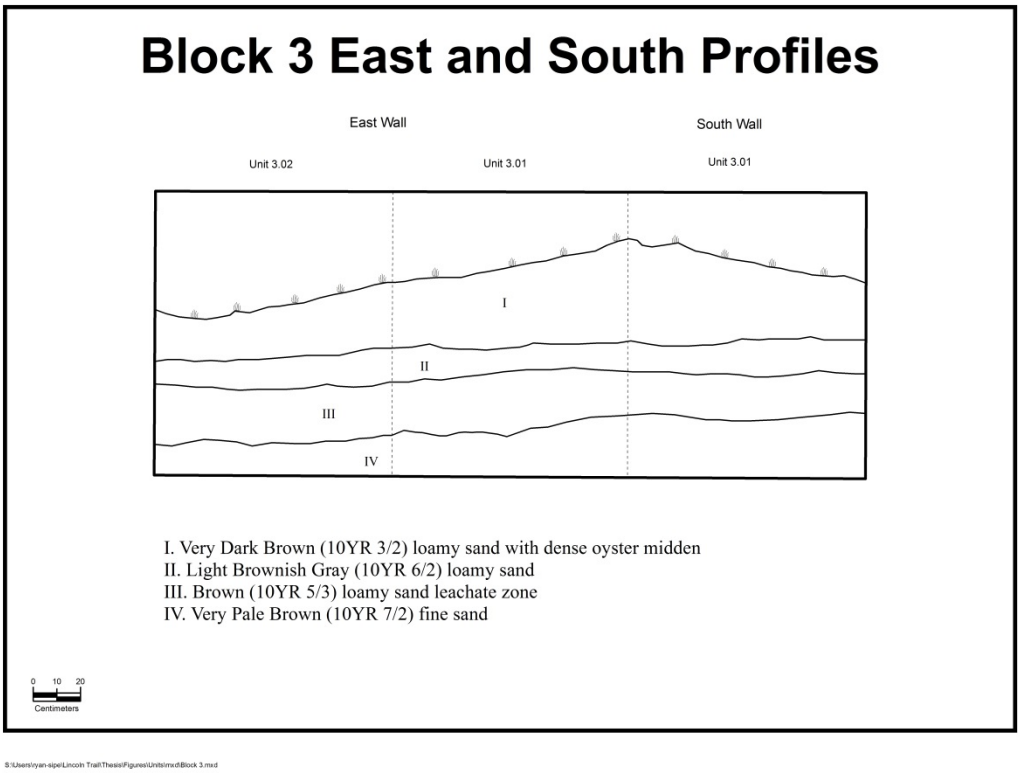

Figure 7.23: Block 3, East Profile

Figure 7.24: Photograph of Whelk Columella Tools from Block 3 at 9BN17

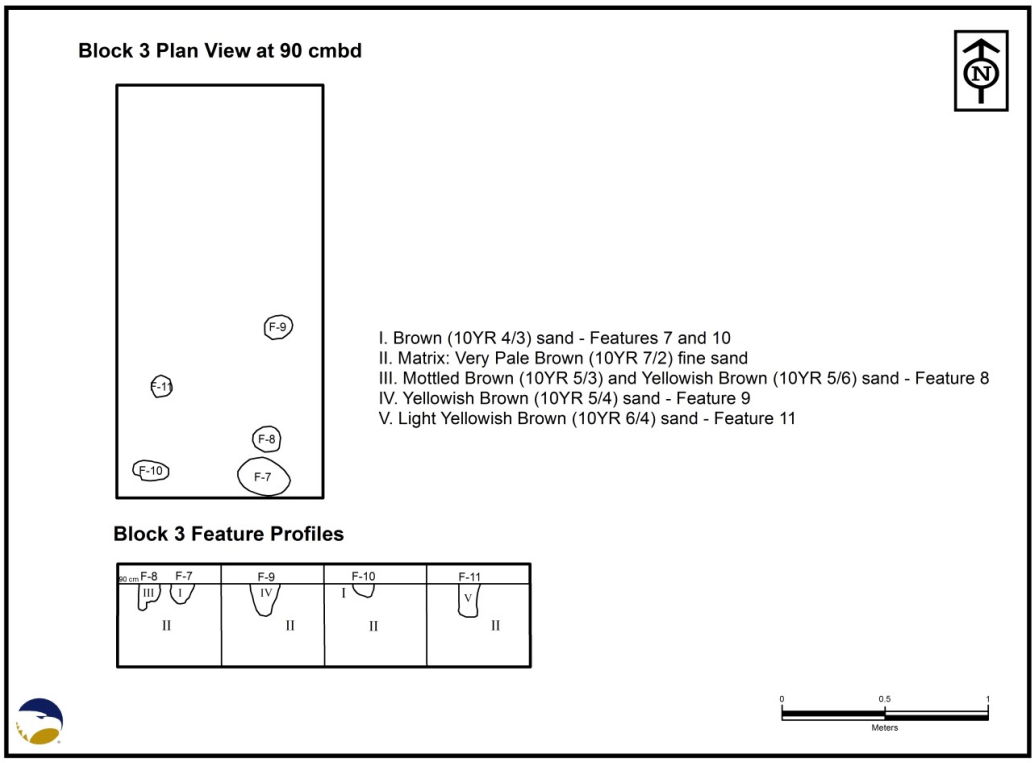

Figure 7.25: Plan View of Post Features within Block 3 at 9BN17

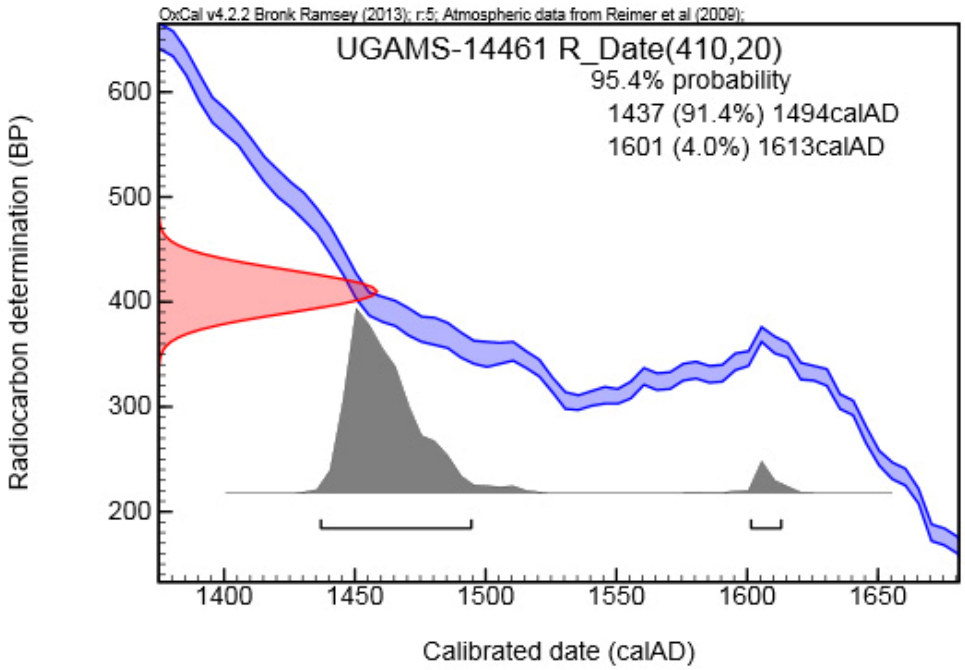

Figure 7.26: Calibrated 2 Sigma Range for UGAMS-15561

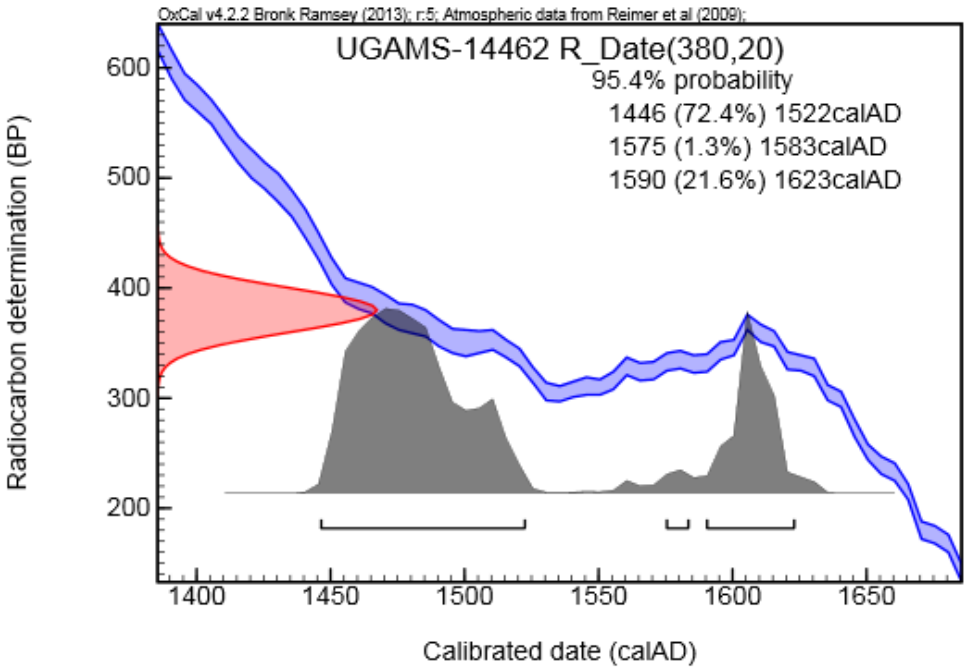

Figure 7.27: Calibrated 2 Sigma Range for UGAMS-14462

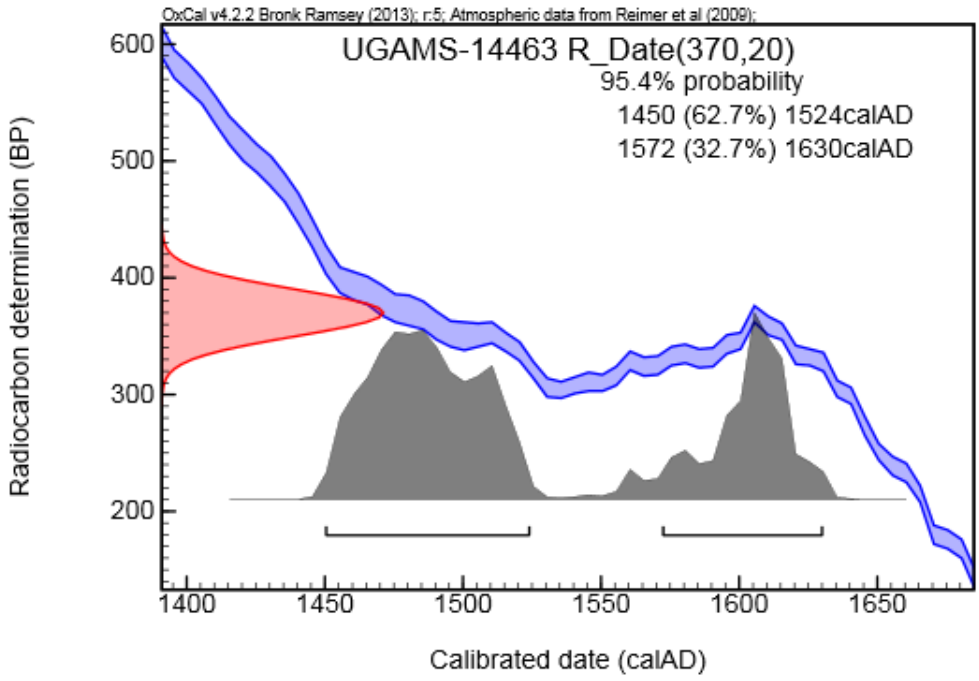

Figure 7.28: Calibrated 2 Sigma Range for UGAMS-14463

Figure 7.29: Village Layout Map at 9BN17

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CHAPTER 8

CONCLUSIONS AND RECCOMENDATIONS

8.1: CONCLUSION

Between June 2012 and May 2013, archaeologists affiliated with Georgia Southern University conducted intensive archaeological survey and limited excavation at the Lincoln Trail Site (9BN17) in Bryan County, Georgia. The basic goals of this project were to define the boundaries of the site and determine the nature of the components represented there. Beyond that, however, this research also sought to inform broader queries about coastal Mississippian settlement patterns, settlement hierarchy, and layout. Specifically, this project aimed to address the primary research questions: What does the archaeological signature of a Late Mississippian polity look like on the northern Georgia Coast, and what aspect of such a polity is represented at the Lincoln Trail Site?

A Village Core

As a result of the fieldwork, it is clear that the site was occupied as early as 4,500 years ago by a small group of St. Simons inhabitants. During this occupation, the site represented a relatively small and possibly seasonal habitation selected to take advantage of the productive marsh edge environment. Deposition during this period suggests that activities related to these Late Archaic residents seemed to be focused on upland areas adjacent to former fresh water sources in the form of the ponds or artesian-fed seep heads described in Chapter 3. These portions of the site correspond with oyster midden deposits as well as concentrations of fiber tempered pottery. 9BN17 appeared to have been unoccupied during the Early and Middle Woodland but experienced a limited wave

of settlement during the Late Woodland. During this period, deposits of grog tempered, Wilmington phase pottery accumulated in a similar pattern that focused on fresh water sources. This suggests that the site may have served the same role for the Wilmington phase inhabitants as it did the St. Simons residents. A sparse assemblage of Late Woodland/Early Mississippian St. Catherines phase pottery was also identified at Lincoln Trail. This may be reflective of very limited Early Mississippian activity or a transitional development in the Late Woodland or early Irene occupation.

The site was intensively inhabited during the Late Mississippian period when it became the village core of a dispersed Irene phase town. This assessment was based on the signature of a dispersed town and its village core proposed in Chapter 2 (Jones 1978; Pearson 1977, 1979; Thomas 2008). Based on this, a village core should be home to a relatively concentrated population and reveal evidence of community architecture such as mounds, plazas, and segregated areas of special use. Differential artifact distribution across the site certainly suggests areas of concentrated use. These high concentrations of Irene artifacts typically correspond with clusters of discrete piles of oyster midden and form seven areas of intensive activity (Loci A-G) within the northern and southern portions of the site. These clusters are interpreted as domestic habitations at Lincoln Trail. The handful of Irene phase residential structures recorded at other sites thus far have been identified among such clusters of middens (Cook 1971; Pearson 1984; Keene 2002, 2013; Sipe 2013). Evidence for such structures at Lincoln Trail is suggested by two possible structures associated with the midden clusters in Locus A.

Given the hypothesized association of structural signatures with midden clusters, there were seven concentrations of residential structures at Lincoln Trail which formed

two concentrations of population within the northern and southern portions of the site. Based on the somewhat limited observations recorded for Irene phase residential structures, it is posited that the structures at Lincoln Trail were square to rectangular with rounded corners. Their frames were constructed of single set posts, and many (if not all) may have been plastered with some level of clay daub (Cook 1971; Pearson 1984; Keene 2002; Keene and Garrison 2013). According to the limited size comparisons, Irene phase houses displayed a mean interior floor area of 47 square meters. The structural signatures identified at Lincoln Trail were spaced approximately 30 meters apart which suggests there was a house for every 900 square meters within each residential zones. This suggests a total of 87 residential structures across the site. However, if there is a correlation between the number of middens versus the number of houses, there may have been as few as 49. Using formulas proposed by Naroll (1962) and Caselberry (1974) this suggests a total resident population at Lincoln Trail of between 230 and 680 people. This is a much higher population estimate than would be expected at the smaller hamlets or farmsteads within a dispersed town.

Based on the distribution of artifacts by count and type it is clear that portions of the site display differential use. One example of a special use area is suggested within the southern portion of the site where a single urn burial was identified within a shovel test (4640N/5000E). This large, globular Irene jar was filfot stamped across its exterior and featured a late-style rim elaboration of reed punctation directly to the body of the vessel. It contained the remains of a 15 to 25 year old adolescent/adult, which were reinterred at the location they were found under the supervision of GA DNR, HPD and a representative of the Georgia Council for Native American Concerns. Isolated urn

burials are not reported for Irene phase sites, however, broad scale investigations at these sites are uncommon. So far, Irene mortuary contexts tend to be associated with low mounds or cemeteries, such as the Mortuary at the Irene site (9CH1) (Caldwell and McCann 1941). The burial at Lincoln Trail was identified within a heavily wooded portion of the site, obscuring much of the topography. With the absence of a topographic signature indicative of a burial mound, this portion of the site could represent a mortuary area similar to the cemetery which was accumulated over the mortuary structure at Irene. If this area did represent such a feature, it likely would have been segregated from the rest of the village by a divisive wall or screen and could be considered as an example of community architecture in much the same way a burial mound would. It is far too early to make this assertion about the remains encountered at Lincoln Trail. The single urn burial was encountered within one shovel test and no additional investigation was conducted within a 60-meter radius around the burial, as prescribed by GA DNR, HPD.

Other examples of community space were recognized as possible plazas by the absence of artifact accumulation. These were three distinct zones determined to be void of midden and display very low artifact density. The first and most clearly defined of these is located within the southern portion of the site. It is delineated by Loci A and D to its east and west respectively and Loci B and D form the southeastern and southwestern corners. The second area of low domestic debris is represented within the center of the site. This area is poorly defined by the presence of the residential clusters to the north and the south along the axis of the landform. A similar area was recognized within the northern group of residential clusters (Loci E, F, and G). No community buildings were identified at the limits of this cleared space; however, this portion of the

site appears to have been effected by erosion caused by a tributary of Kilkenny River. The northern boundary of the site has also been truncated by modern development and the limits of the state owned WMA land. This area is delimited by dense midden along the marshline to the east and light clusters of artifacts and middens to the north and southwest. The function of this space as a plaza is less clear within this location; however, it does appear that it was kept relatively free of debris and it appears similar to the layout suggested for the Redbird Creek site (Sipe 2013).

An Irene Phase Chiefdom on Bryan Neck

Chapter 5 presents the previously recorded Irene sites for the Bryan Neck region. These include 51 sites that form five relatively, evenly distributed clusters across the landform (Figure 5.1). Based on the records maintained by the GASF, each cluster is made up of several relatively small sites described as shell middens or artifact scatters arranged near a larger site that is formally recorded or appropriately interpreted as an Irene village. In Chapter 5, each cluster was named based on the village site which represents it including the Cherry Hill Group (A), the Sevenmile Bend Group (B), the Genesis Group (C), the Lincoln Trail Group (D), and the Tivoli Group (E). Each of these clusters appears to display the traits of a dispersed town as outlined in Chapter 2. The smaller sites in the cluster seem to represent dispersed farmsteads and special use areas, while the Irene village sites are the village cores. Limited investigation at several of these smaller sites within the Genesis group has revealed that they do contain limited structural signatures indicative of a small residential population, midden deposits in the form of two or three shell heaps, and two of these sites revealed seasonality indicators indicative of year round occupation (Sipe 2013; Sipe et al. 2011a, 2011b, 2011c). Shovel

testing at the other small sites within the Genesis Group has shown there is a level of variation within the smaller components similar to that identified by Pearson (1977; 1979) on Ossabaw Island. This includes sites characterized by small midden clusters similar to Class II and III sites and small artifact or midden scatters more consistent with Class IV types. Given the proposed model in Chapter 2, the Class II and III sites are interpreted as farmsteads and the Class IV sites represent special use or resource extraction areas.

Intensive investigation at three of the five village sites of Bryan Neck has also revealed that these resources display the traits that would be expected for a village core of a dispersed town. Excavations at the Sevenmile Bend site (9BN7) revealed at least one burial mound and other mortuary contexts (community architecture), the corner of a wattle and daub structure (residential habitation), and apparent middens across the site (site layout and organization) (Cook 1971). Excavations at the Redbird Creek site (9BN9) helped create the model of an Irene phase village core. This site revealed evidence of community architecture in the form of two burial mounds, an earthen mound created by successive structural building episodes (possible community building), and a possible central plaza (Sipe 2013). It revealed evidence of residential habitation in the form of remains from a wattle and daub structure, several other structural features, and a collection of midden clusters representative of site structural placement. The present study at the Lincoln Trail Site (9BN17) has also revealed traits indicative of a village core, as detailed above. While intensive research has not been conducted at the Cherry Hill or Tivoli Groups, descriptions in site reports and informal visits have revealed these sites to be characterized by midden clusters spread across the site (Mitchell et al. 1983).

A series of radiocarbon dates has also been collected for the Genesis and Lincoln Trail groups. These were discussed in greater detail in Chapter 7, and include three AMS dates from carbon samples acquired at the Redbird Creek and Hammerhead Sites, a probably erroneous date from a charcoal post at Redbird Creek, three dates from marine shell samples from two of the farmsteads in the Genesis Group, and three AMS dates from sooted sherds at Lincoln Trail. The 2 sigma calibrated date ranges from these span from 1400 to 1460 for the Genesis Group AMS dates, from 1420 to 1650 for the marine shell samples at Genesis Point, and from 1437 to 1524 for the Lincoln Trail AMS dates. These ranges show significant overlap for the occupation of these sites that may suggest contemporaneous occupation spanning from around AD 1420 to 1460. This temporal span also corresponds nicely with the artifact seriation noted at these sites. The excavations at the Genesis Group and the current study at Lincoln Trail revealed incised sherds consistent with the pipemakers creek incised type considered diagnostic of an Irene II occupation (AD 1350-1450) (Braley 1990) and mid-to-late Irene rim ebellishments (Saunders 2000). Alternatively, several of these 2 sigma ranges were quite broad. Specifically, the dates acquired from marine shell within the Genesis Group span from the Irene II period to the Spanish Mission Period (there is no artifactual evidence of the latter, though). The Lincoln Trail AMS dates also extend from AD 1437 to 1524. These ranges could be considered statistically later than the other dates from Redbird Creek and Hammerhead. More dates are needed for a proper statistical comparison, however.

If these clusters of sites across Bryan Neck can be considered to be contemporary, it is hypothesized that they represent a series of dispersed towns that were organized into

a Late Mississippian Chiefdom based on the model outlined in Chapter 2. These dispersed towns are evenly spaced across the Bryan Neck landform with a mean distance of 6.89 km between them. This highly patterned layout is similar to the regular spacing seen in Mississippian polities described by Hally (2006). Based on documentary sources, these dispersed towns may have been hierarchically organized. If they were, at least one of the Bryan Neck Groups should display traits that identify it as the principal administrative town among the other clusters. Ethnohistoric accounts (Francis and Kole 2011; San Miguel 2001) suggest that each of the Guale principal towns were characterized by a large circular council house, similar to the rotunda that was identified archaeologically at the Irene Site (9CH1). If this community structure can be used as the archaeological indicator of an Irene principal town, then which one of the Bryan Neck sites might contain such a structure? Presently, there is no evidence of this type of architecture at any of these sites, but the Sevenmile Bend site displayed an interesting artifact assemblage that contained exotic artifact types in Irene contexts that have not been reported for other Bryan Neck sites (Cook 1971). It also revealed a corner of a wattle and daub structure that featured a slipped exterior, decorated with complex incised designs (Cook 1971). This façade appears to be unique among the other Irene sites on the Georgia Coast and may indicate the residence of a high status individual, such as a chief. This is highly speculative, however, because Irene structures are underreported and many of these were not daubed or not well preserved enough to identify a decorated façade. Even so, at this early stage in the hypothesis, the Sevenmile Bend site appears to be noticeably more complex than the other Bryan Neck Groups. Unfortunately, further

investigation at this site may be unlikely due to private ownership and significant data has been lost due to extensive erosion and development.

Interestingly, the only other Irene phase site in the vicinity of Bryan Neck that approaches the level of complexity suggested at Sevenmile Bend is the Middle Place site on Ossabaw Island. This site is also separated from the eastern Bryan Neck Groups (The Genesis and Lincoln Trail Groups) by the same distance as the other groups and it is separated from the Sevenmile Bend site by a distance of 14.77 km. Perhaps Ossabaw and Bryan Neck were connected within the same Mississippian polity similar to the Guale chiefdoms described by Jones (1978). Documentary accounts of these chiefdoms suggest that each of them had two principal towns at which chiefly authority alternated over time. Jones (1978) identified three of these chiefdoms within the documentary evidence from AD 1587 to 1606. One of these was the Guale/Tolomato Chiefdom which alternated between the town of Guale, on St. Catherines Island, and Tolomato, which was probably on Harris Neck (Worth 2007). These locations are seperated by around 15 km. If this political system extended to the pre-contact Irene phase, then it is possible that the Middle Place Site and the Sevenmile Bend Site represent two principal towns within an Irene phase chiefdom that alternated between Ossabaw Island and Bryan Neck. Interestingly, the documentary evidence suggests that these towns moved over time and even indicates a general southward movement away from the mouth of the Savannah River, a region which was almost completely abandoned by the time of European contact (Jones 1978, Bushnell 1994; Worth 2007). Jones (1978) indicates that the town of Guale may have been located on Ossabaw Island in the early part of the 16th century. It is interesting to think that, perhaps the hypothesized chiefdom for Bryan Neck actually

represents a prehistoric manifestation of what became Jones' (1978) late 16th century Guale/Tolomato Chiefdom. Further research is needed at both the Bryan Neck and Ossabaw sites in order to test this hypothesis, but this proposed chiefdom may be a useful tool for conceptualizing and testing chiefdom models on the northern Georgia Coast.

8.2: RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the fieldwork conducted thus far, it seems that Lincoln Trail has revealed the traits necessary to assign it the role of village core within an Irene phase dispersed town. Further investigation will greatly improve hypotheses about site layout at Lincoln Trail and help refine the model proposed for the Irene phase dispersed town. The following section provides a series of suggested research objectives at Lincoln Trail, its dispersed but associated sites, and Bryan Neck as a whole.

Site Specific Research

The intensive survey conducted at 9BN17 thus far helped provide a hypothesis for site use and layout; however, it was primarily designed to locate the boundaries using methods prescribed within the Georgia Standards and Guidelines for Archaeological Surveys (GCPA 2001). Now that the boundaries have been determined and the general nature of the deposits determined, a Phase II investigation is proposed for the site. This includes reduced interval testing within areas of artifact concentration and additional test units to identify cultural features. Additional shovel tests will help refine hypotheses about village layout. Specifically, areas of artifact concentration may be reflective of the location of cultural features. A testing interval of 15-meters within these zones will help identify appropriate locations for additional test units. Applying a 15-meter interval

shovel testing grid to each locus of concentration will require at least 250 additional shovel tests and approximately 14 man-days.

More importantly, reduced interval testing is imperative within the proposed plaza locations. These areas have displayed low artifact density; however, they have only been tested at 30-meter intervals. In order to definitively define these areas as plazas a 10-meter grid must be applied. This will likely refine the boundaries or even disprove the plaza hypothesis completely. In order to accomplish this an additional 430 shovel tests will need to be dug at a cost of approximately 22 man-days. A team of four experienced field workers could complete this additional shovel testing in approximately nine days.

The excavation of additional test units are also suggested in order to test the hypotheses put forth by the present investigation. Six square meters were excavated within Locus A as part of the 2013 Weekend for Wildlife. This revealed the possible signature of two Irene phase structures (Blocks 2 and 3), however, the nature and size of these features are undetermined. An additional four square meters of controlled excavation at each of these blocks will likely provide enough exposure to determine if these are structures and possibly provide data on construction technique and size. In addition to these four square meters proposed in Locus A, 36 more square meters should be distributed roughly evenly among the other six loci based on the results of the reduced interval shovel testing. This will provide important data regarding specific activities conducted within each loci and potentially additional structural signatures. One 50 by 50 cm column sample should also be acquired from at least one midden within each cluster during these test excavations. These excavations could be completed in around 16 days with an experienced field crew of six people.

Additional excavation across the site will also provide an opportunity to address questions about seasonality and temporal span. Controlled excavation units within middens will aid in the collection of at least one column sample at each locus. These samples will provide important seasonality and subsistence data. They will also be secure contexts from which to draw samples of sooted sherds and shell for radiocarbon. A series of such dates from definitive contexts will help refine the temporal data already provided by the present study.

Bryan Neck Research Queries

The present study has provided valuable new information for the Lincoln Trail site; however, it has also proposed hypotheses regarding settlement patterns and dispersed town layout. To test these hypotheses, the investigation must extend well outside the boundaries of the Lincoln Trail site. Chapter 5 introduced five possible dispersed Irene phase towns for the Bryan Neck area. These were regularly-spaced and provided intriguing suggestions about the spacing of Irene phase dispersed towns within a chiefdom; however, it is unclear if these sites are contemporaneous. Radiocarbon dates have been acquired from several sites within the Genesis Group and from the Lincoln Trail site as part of the present investigation. These have suggested that there may have been some overlap between the occupations of the Genesis and Lincoln Trail groups; however, the Lincoln Trail dates appear statistically later. The Cherry Hill and Sevenmile Bend groups seem to be associated with moderate-to-extensive Middle Mississippian Savannah phase components which may suggest that they are earlier towns. Unfortunately both of these groups have been heavily impacted by modern development and/or erosion. It is unlikely that any secure radiocarbon samples could be

acquired for the Cherry Hill group at all. It may be possible to identify existing midden deposits among the wooded portions of the housing development built at the Sevenmile Bend Site. Acquiring a secure carbon sample for an AMS date from a context associated with the Sevenmile Bend site would be extremely useful in determing the function of this unique site and its relationship among the other dispersed towns of Bryan Neck. It may also be possible to aquire an AMS sample from material known to have been collected from the site. Site 9BN70, among the Tivoli group, appears to be largely intact and undisturbed by development. It is also located within WMA land and acquiring an AMS date from deposits associated with this site seems quite feasible.

Further work at the northern Bryan Neck groups seems unlikely. Development has all but completely destroyed the signatures of Cherry Hill and Sevenmile Bend. The Genesis group has provided the majority of the Irene phase data for Bryan Neck thus far; however, it is privately owned and development is underway. Additional reporting and possibly fieldwork may provide additional details on these resources in the near future. It is the southern groups, however, that provide the most promising opportunity to address these dispersed town and site layout models.

The Lincoln Trail site has undergone initial investigation as part of the present study; however, the other sites within this dispersed settlement are poorly understood. Furthermore, very few of the smaller Irene sites affiliated with the Lincoln Trail group have been recorded. This is due to the lack of development in the area. Thousands of acres of vacant wooded land surround the Lincoln Trail Site. Most of this property is owned by the Rayonier timber corporation or is part of the state-owned WMA land. The Retreat Cabin Midden and Belle Isle sites are located on private property and permission

to investigate these resource may be possible. Likewise, the small hammock which includes 9BN13 is located on Rayonier property and permission for a cursory investigation may not be difficult to obtain. The more intriguing opportunity, however, is located west of Lincoln Trail in the 23,000 acres of unsurveyed and undeveloped coastal hammock associated with the remainder of this portion of the Richmond Hill WMA.

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APPENDIX A

PROVENIENCED ARTIFACT INVENTORY FOR 9BN17

fs	unit	unit_level	depth	feature	Easting	Northing	Count	weight	desc	desc2	sub_type	comments
1			0-20		5180	5000	4	7.1		diminutive		prob Irene
1			0-20		5180	5000	1	0.4	Transfer Print, Blue		Pearlware	
1			0-20		5180	5000	4	10.4				oyster fragments
2			0-60		5150	5000	4	3.3		diminutive		
2			0-60		5150	5000	1	14.8	Unidentifiable			eroded ext., burnished int.
2			0-60		5150	5000	1	3.7	Plain			burnished ext.
3			0-60		5090	5000	3	4.5		diminutive		
4			20-60		5060	5000	2	7.9	Plain			
4			20-60		5060	5000	1	2.9	stamped			prob. Irene filfot stamped
4			20-60		5060	5000	1	13.4				oyster shell
5			0-40		4970	5000	1	12.5	complicated stamped	Irene		filfot stamped all the way to rim
5			0-40		4970	5000	4	4.3		diminutive		
6			surface				2	28.4	complicated stamped	Irene		filfot stamped, med to large grit, dense paste
6			surface				1	37.2	stamped			heavily sooted, 3 mend, burnished interior
7					5180	5030	1	3.7		diminutive		
8			4-50		5180	4820	13	27		diminutive		prob Irene
9			4-40		5180	4910	1	5.4		diminutive		
10			0-20		5180	4730	3	0.5				berries - modern
11					5180	4640	1	1.8	Plain			burnished int and ext.
12					5090	4640	1	9.2	stamped			prob filfot
12					5090	4640	11	15.8		diminutive		
13					4910	4640	7	166.9	Plain			6 mend, burnished interior, all prob same vessel
13					4910	4640	7	6.5		diminutive		
14					5000	4550	1	2.1		diminutive		
15					5000	4460	1	8	Plain	St. Simons		dense paste, grit inclusions
16			0-40		5270	5540	6	9		diminutive		
16			0-40		5270	5540	1	2.8	Unidentifiable	Irene		applied, segmented rim strip
17					5270	5630	4	8	Unidentifiable			eroded, prob irene
18			20-60		5360	5540	1	0.6				prob. Charred nut shell
18			20-60		5360	5540	3	6.1		diminutive		
19					5180	5540	1	1		diminutive		
20					5180	5360	1	1.4		diminutive		
20					5180	5360	1	0.2				oyster shell fragment
21			10		5360	5270	1	3.6	Unidentifiable			grit temp eroded
22			0-40		5270	5270	7	16.3			Brick	

23			5180	5270	1	6.4	Plain		highly fired, fine to med grit
23			5180	5270	1	2.3	Unidentifiable		eroded ext.
24			5180	5180	1	15.7	complicated stamped		filfot stamped, central node present, large coarse grit
25	0-40		5270	5090		0.4			charcoal
25	0-40		5270	5090	1	29.7	Unidentifiable		3 mend, heavily used as abrader, highly fired
25	0-40		5270	5090	1	8.9	Plain		burnished int. sooted ext., 3 mend
25	0-40		5270	5090	2	10.2	stamped		fine to med grit, prob. Irene
25	0-40		5270	5090	1	7.3	Plain		burnished int. and ext., prob Irene
25	0-40		5270	5090	4	0.9			possible small bird
25	0-40		5270	5090	1	0.2			small snail shell
26	15-25		5120	5030	1	2.1		diminutive	
27	15-25		5150	5030	1	1.2		diminutive	
28	20-30		5120	5060	2	5		diminutive	
29	20-50		5120	5090		0.2			
29	20-50		5120	5090	2	10.5	stamped		fine to med grit, dense paste, stamp prob filfot
29	20-50		5120	5090	4	8		diminutive	
29	20-50		5120	5090	1	0.3		secondary decortication flake	tested river cobble?
30	0-60		5240	5090	2	2.8		diminutive	
30	0-60		5240	5090	6	7.8	Plain	St. Simons	prob same vessel
31	0-60		5180	5120	2	9.3	Unidentifiable		eroded exterior
31	0-60		5180	5120	7	8.2		diminutive	
32	0-40		5210	5120	3	2.2		diminutive	
32	0-40		5210	5120	1	7.2	Plain		very rough, coarse paste
33	0-50		5180	5150	1	13.6	stamped		fine to medium grit, dense paste, overstamped ext. almost forming check design, poss. Linear portions of filfot overstamped
33	0-50		5180	5150	3	4.1		diminutive	
34	0-40		5210	5150	1	0.3		non-decortication flake	
34	0-40		5210	5150	2	22	Unidentifiable		med to large grit, dense paste, eroded exterior, grog and fibrous inclusions, prob same vessel
35	0-15		5210	5180	1	2.2		diminutive	
36	0-50		5180	4970	1	2.2		Bullet	.22 bullet, fired
36	0-50		5180	4970	1	0.8			Olive eroded surface
36	0-50		5180	4970	4	7.7		diminutive	
36	0-50		5180	4970	2	6	Unidentifiable		2 mend, med grog, eroded surface
36	0-50		5180	4970	1	7.1			Mortar crushed oyster inclusions

36		0-50	5180	4970	1	5.1	Transfer Print, Blue		Pearlware	
36		0-50	5180	4970		0.5				
36		0-50	5180	4970	1	2.6	Plain		Pearlware	
37		0-50	5240	5120	1	4.1	stamped			
37		0-50	5240	5120	3	6.3		diminutive		
38		0-50	5240	5150	9	9.9		diminutive		
39	0-60		5240	5180	1	5	stamped			heavy grit, dense paste, prob filfot
39	0-60		5240	5180	1	1			Red Bodied Ware	
39	0-60		5240	5180	1	0.4		diminutive		
40		0-40	5150	4910	5	6.7		diminutive		
40		0-40	5150	4910	1	0.1		secondary decortication flake		
40		0-40	5150	4910	3	12.2	complicated stamped			dense paste, med to large grit, stamp prob filfot
40		0-40	5150	4910	1	9.8	Unidentifiable			heavy grit, dense paste
41		0-50	5150	4940	1	27.8		Biface		
41		0-50	5150	4940	2			diminutive		
42		0-40	5150	4970	5	7.5		diminutive		
43		0-40	5120	4970		1.1				marsh clay
43		0-40	5120	4970	2	6.9		diminutive		
44			5090	4850	1	2.5		diminutive		
45		0-50	5120	4850	1	1		secondary decortication flake		
45		0-50	5120	4850	1	0.5		diminutive		
46		0-40	5180	4850	4	7.7				fired clay, daub?
46		0-40	5180	4850	7	6.7		diminutive		
46		0-40	5180	4850	1	3.6	Unidentifiable			med to large grit, dense paste, eroded ext.
46		0-40	5180	4850	3	16.6	stamped			med to large grit, dense paste, prob filfot stamped
46		0-40	5180	4850	1	15.2	Plain			med to large grit, dense paste
47		0-30	5090	4880	1	0.6				pebble
47		0-30	5090	4880	1	3.1	stamped			med to large grit, dense paste
48		0-60	5150	4880	6	7.8		diminutive		
49		0-40	5180	4880	5	4.8		diminutive		
49		0-40	5180	4880	2	1.3				
49		0-40	5180	4880	1	7.1				possum jaw, right mandible
50		0-40	5090	4940	1	2.3	stamped			eroded ext. prob filfot
51		0-50	5090	4970	1	2.3		diminutive		
51		0-50	5090	4970		8.9				marsh clay
52		10-40	5240	5000	1	2.6	Plain		Pearlware	
52		10-40	5240	5000	2	2.6		diminutive		

52	10-40	5240	5000	2	10.9	stamped		fine to med grit, dense paste, prob filfot stamped
53		5240	5030	1	1.1		diminutive	
54	surface			2	17.4	stamped		prob. Irene
54	surface			1	14.7	incised	Irene	broad parallel incisions, prob. One clminated in a scroll design
54	surface			1	4.6	Unidentifiable		prob. Irene
54	surface			1	12.6	incised	Irene	incised scroll design, probably from around rim
54	surface			1	0.1		diminutive	
55	0-40	4970	4820	1	9.1	Plain	Irene	burnished int. and ext., applied rosette w/ reed punctate
55	0-40	4970	4820	2	12.5	stamped		burnished int., prob Irene, eroded stamped design
55	0-40	4970	4820	2	6.7	Unidentifiable		eroded exterior, prob Irene
55	0-40	4970	4820	1	0.2			calcined bone
55	0-40	4970	4820	2	4.8		diminutive	
56	15-30	4940	4820	3	4.6		diminutive	
57	15-40	4970	4850	4	1.6		diminutive	
57	15-40	4970	4850	5	15.6	stamped		burnished int., prob filfot stamp
58	15-30	5000	4880	1	0.4		secondary decortication flake	
58	15-30	5000	4880	1	0.8		diminutive	
59	5-20	5060	4880	2	1.6		diminutive	
60	0-40	5060	4730	3	3.7		diminutive	
61	0-20	5060	4760	1	3.9	Unidentifiable		eroded exterior
62	20-40	5060	4820	1	3		diminutive	
63	0-40	5090	4760	1	11.4	Unidentifiable		used as an abrader
63	0-40	5090	4760	1	6.5	Plain		
63	0-40	5090	4760	1	8.8			UID fired clay, burned daub?
63	0-40	5090	4760	3	2.8		diminutive	
63	0-40	5090	4760	1	15.9	complicated stamped	Irene	filfot stamped
64	10-70	4940	4760	2	9.4	Plain		med to large grit, dense paste, burnished int.
64	10-70	4940	4760	3	3.8		diminutive	
65	5-20	4970	4790	1	6.5	complicated stamped	Irene	filfot stamp, burnished int.
65	5-20	4970	4790	4	5.5		diminutive	
66	0-40	4910	4580	1	0.1		non-decortication flake	
66	0-40	4910	4580	6	10.9		diminutive	
67	0-60	4910	4610	1	5.6	Plain		fine to med grit, dense paste, burnished int. and ext.
67	0-60	4910	4610	26	21.5		diminutive	
68	10-30	4940	4880	1	1.9		diminutive	

68	10-30	4940	4880	3	2		diminutive		
69	5-70	4970	4880	1	0.5		diminutive		
69	5-70	4970	4880	5	2.9		diminutive		
69	5-70	4970	4880	3	10.5	Unidentifiable	St. Simons		eroded ext.
70	20	4910	4760	1	23.6		shatter		
71	surface			1	4.8	stamped			stamped design prob filfot
71	surface			2	4		diminutive		
72		4880	4630	3	8.3	stamped			prob filfot
73		4850	4630	1	4.8	stamped			prob. Irene comp stamped, burnished int.
73		4850	4630	5	13.2	Unidentifiable			eroded ext., prob Irene
73		4850	4630	1	6	complicated stamped	Irene		Irene filfot stamp
73		4850	4630	1	4.9	Unidentifiable			prob. Irene, poss. Reed punctation, burnished interior
73		4850	4630	27	22.8		diminutive		prob. Irene
74	35	4940	4670	1	0.3		diminutive		
75	20-30	4910	4670	1	1.3		diminutive		
76		4910	4700	4	19.4		St. Simons		
77	0-40	4520	4820	1	4.1	stamped			poss. Filfot
77	0-40	4520	4820	2	3.7		diminutive		
78	0-40	4850	4700	1	4.7	Plain		Red Bodied Ware	
79		4913	4653	1	4.3	Plain			incised along top of rim, burnished interior
79		4913	4653	27	136.8	Unidentifiable			stamped, eroded surface…possible filfot
79		4913	4653	2	2				oyster shell fragments
79		4913	4653	1	1.8		shatter		
79		4913	4653	120	127.5		diminutive		most probably Irene
79		4913	4653	4	1.5				1 burned
79		4913	4653	1	0.8				charred wood
79		4913	4653	27	94.9	Plain			burnished int and ext
79		4913	4653	1	11.1	Plain			applique rossette with reed puctate near rim, very fine grit, dense paste with some grog inclusion
79		4913	4653	1	4.7	incised	Irene		burnished int. and ext., three broad incised lines parrallel to rim, probably a carinated bowl
79		4913	4653	1	3.7	Plain			burnished int. and ext., applied lug type element
79		4913	4653	1	49.2				whelk columella
79		4913	4653	6	59.6	complicated stamped	Irene		filfot stamped, burnished int., some heavily sooted
79		4913	4653	29	180	complicated stamped			prob. Irene filfot stamped

79			4913	4653	4	24.8	complicated stamped	Irene	rim strip with reed punctate, burnished int., prob same vessel
79			4913	4653	1	1.2			prob. Tortoise carapice
79			4913	4653	1	5.5	Plain		flattened rim, burnished int.
80	0-30		5270	5210	3	6.6		diminutive	
81	0-20		5270	5300	1	2.7	Unidentifiable		eroded ext., med to fine grit
82	20-40		5270	5330	1	1.5		diminutive	
83	0-30		5210	5390	1	1.6		diminutive	
84	0-30		5420	5270	1	4.6	complicated stamped		large grit, dense paste, prob filfot design
84	0-30		5420	5270	2	3.4		diminutive	
85	0-30		5270	5510	1	2.4		diminutive	
86	0-40		5270	5570	1	1.1		diminutive	
87	20-30		4970	4910	1	2.8		diminutive	
88	10-40		5180	5210	2	2.7		diminutive	
88	10-40		5180	5210	1	1.6		Biface	
88	10-40		5180	5210	2	16.5	stamped		large grit, dense paste, burnished interior eroded ext., stamped design prob filfot
88	10-40		5180	5210	1	2.7	incised	Irene	fine to medium grit, dense paste, broad incision, prob near the rim
89	0-20		5180	5240	3	3.5		diminutive	
90	0-30		5180	5540	1	0.1		diminutive	
91	70		5150	5630	1	3.5	Unidentifiable	Irene	ext. eroded, applied rim strip with reed punctate, burnished interior, med to large grit, dense paste
91	70		5150	5630	1	2.5	stamped		med to large grit, dense paste, eroded ext.
91	70		5150	5630	1	11.8	cord marked	St. Catherines	fine grog, fine cord markings, ext. eroded, int. smoothed, poss. St. Catherines fine cordmarked
92	0-40		5214	5571	5	7.5		diminutive	
92	0-40		5214	5571	5	35	Plain		med to large grit
93	10-40		5210	4910	2	10.1	Unidentifiable		eroded ext.
93	10-40		5210	4910	1	16.3	complicated stamped	Irene	filfot stamped
93	10-40		5210	4910	2	1.2		diminutive	one rim, incised parallel to rim
93	10-40		5210	4910	3	2.9			Brick
94	10-40		5210	4940	4	4.2		diminutive	
94	10-40		5210	4940	1	7.2	Edge Decorated, green		Pearlware
95	10-40		5210	4970	4	43.9			Mortar crushed oyster inclusions
95	10-40		5210	4970	1	56.3	Plain		dense paste, small to med grit

95	10-40	5210	4970	4	4.3		diminutive		
95	10-40	5210	4970	1	5.4	Edge Decorated, green	Plate	Pearlware	
96	10-50	5192	4972	2	8.9		Nail		rose head nails
96	10-50	5192	4972	1	0.5	Molded		Aqua	molded glass, very thin, probably something decorative
96	10-50	5192	4972	3	2.4			Brick	coarse and filled with inclusions
96	10-50	5192	4972	1	2			Mortar	looks to have been attached to brick
96	10-50	5192	4972	1	1.2	Hand-Painted, Polychrome	Cup/Mug	Pearlware	hand painted leaf design, brown strip painted alon rim
96	10-50	5192	4972	1	0.7	Transfer Print, Blue	Indeterminate	Pearlware	transfer print on both sides
96	10-50	5192	4972	3	8.5	Plain			fine to med. Grit
97	0-60	5000	4640						
98	0-40	5240	5420	3	19	stamped			fine to med. Grit, dense paste, poss filfot stamped (eroded)
98	0-40	5240	5420	3	3.5		diminutive		
99	0-50	5240	5450	1	2	Punctate	Irene		reed punctate directly to body of vessel along rim, med to large grit
100	0-30	5240	5540	10	51		Bottle Glass	olive-amber	dark olive amber
100	0-30	5240	5540	1	5.8	Plain	Irene		2 mend, very fine grit (sand), dense paste, applied rim strip with small punctations
100	0-30	5240	5540	2	2.3		diminutive		
100	0-30	5240	5540	1	5.9	Unidentifiable			2 mend, prob stamped (eroded), fine to med. Grit, dense paste
101	0-40	5240	5570	1	0.7		diminutive		
102	0-30	5270	5600	2	7.8	Unidentifiable			eroded exterior…prob stamped
102	0-30	5270	5600	1	0.6		diminutive		
103	30-50	5240	4910	1	5.7	complicated stamped	Irene		fine to med grit, dense paste, filfot stamped
104	0-60	5240	4970	2	0.8		Tobacco Pipe, Ceramic		5/64, burned
104	0-60	5240	4970	1	3.3	Unidentifiable			med to large grit, dense paste, possible stamped exterior (eroded)
105	0-40	5150	5210	1	3.3	Unidentifiable			eroded exterior
105	0-40	5150	5210	1	1.2				sandstone concretion, 2 mend
105	0-40	5150	5210	2	9.7	stamped			eroded exterior, stamped, looks linear, prob filfot
105	0-40	5150	5210	1	47.4	complicated stamped	Irene		thick, dense paste, medium to large grit - *photo*
105	0-40	5150	5210	1	0.1				
106	20-40	5150	5300	1	3.2	Cast	Musketball		8 mm
107	0-26	5300	5570		2.2				prob. Charred nut shell fragments

107	0-26	5300	5570	3	2.7		diminutive		possible daub fragments, very small
108	60-70	5300	5540	4	6.8		diminutive		
109	15-30	5300	5510		0.2				charred nut shell?
109	15-30	5300	5510	1	5.7	stamped			eroded ext., possible filfot stamped
110	50	5300	5480	1	14.2		secondary decortication flake		
110	50	5300	5480	1	0.2		non-decortication flake		
111	30-50	5330	5600	2	1		diminutive		
111	30-50	5330	5600	2	0.9		Wire		
112	surface	5330	5570	1	13.6	Molded		White	milk glass
112	surface	5330	5570	1	68.2			Brick	modern brick
113	15-70	5330	5540	2	2.7		diminutive		
113	15-70	5330	5540	3	12.8	Plain	St. Simons		
114	20	5330	5480	1	2.1	Unidentifiable	diminutive		
115	0-40	5360	5570	1	3.6	stamped			prob. Filfot stamped, only linear portion of stamp visible
115	0-40	5360	5570	1	12.1	complicated stamped	Irene		prob. Filfot stamped, central node visible
115	0-40	5360	5570	8	11.6		diminutive		
115	0-40	5360	5570	2	0.1				charred nut shell
116		5360	5540	1	5				whelk columella, worked, *photo*
116		5360	5540	1	5.6				*photo*
116		5360	5540	1	5.7	stamped	Irene		prob. Filfot stamped, eroded, burnished interior
116		5360	5540	1	0.1				prob. Charred nut shell
116		5360	5540	5	10		diminutive		
117	0-40	5360	5510	1	3.2	complicated stamped	Irene		
117	0-40	5360	5510	1	1.9	Plain			
117	0-40	5360	5510		1				charred wood
118	0-50	5360	5480	1	3.1	Unidentifiable			heavy grit, eroded ext.
119		5360	5300	3	61.4	Plain			large grit, dense paste, probably same vessel
120		5360	5210	1	3.1	Unidentifiable			used as an abrader
120		5360	5210	1	0.9				burned bone
120		5360	5210	3	4.7		diminutive		
121	0-40	5390	5330	1	4.2	stamped			probably linear portion of filfot stamp, thin, large grit
121	0-40	5390	5330	2	2.3	incised	Irene		Irene incised, incisions 1 mm wide, burnished interior, prob same vessel
121	0-40	5390	5330	2	2.8		diminutive		eroded
121	0-40	5390	5330		0.9				
122		5390	5300	4	1.4				charred wood

122		5390	5300	2	2.6			concretions
122		5390	5300	1	9.2	Plain		2 mend
123	0-40	5390	5270	1	0.6		diminutive	
123	0-40	5390	5270		0.1			
124	0-80	5390	5240	1	6.6	Punctate	St. Simons	linear rows of punctations
124	0-80	5390	5240		0.8			
124	0-80	5390	5240		34.1			fish vert, rodent jaw, deer, etc.
124	0-80	5390	5240	9	17.6		diminutive	
124	0-80	5390	5240	2	9.1	Punctate	St. Simons	
124	0-80	5390	5240	1	17.1	Unidentifiable	St. Simons	grit inclusions, very dense
124	0-80	5390	5240	2	6.4	Plain	St. Simons	dense, grit inclusions in paste
124	0-80	5390	5240	2	1.2			oyster shell fragments
125	30-60	5090	5180	2	3.5		diminutive	
125	30-60	5090	5180	1	6.4		Projectile Point/ Knife	basal notched, broken tip, poss. Hernando point *photo*
125	30-60	5090	5180		2.1			charred wood fragments
126	0-30	5090	5210	1	0.8		diminutive	
127	0-65	5120	5270	1	5.5			prob. Burned daub fragment, impressions of wattle apparent
127	0-65	5120	5270	1	1.4		diminutive	
128	0-60	5210	5390	1	6.9	cord marked	Wilmington	
128	0-60	5210	5390	5	7.8		diminutive	
128	0-60	5210	5390	1	5.7	Unidentifiable		eroded surface treatment
129	0-40	5210	5330	1	4.3	incised	Irene	prob. Near rim, burnished interior, curvilinear incising, incised grooves approx. 2 mm wide
129	0-40	5210	5330	5	7.5		diminutive	
129	0-40	5210	5330	3	8.1	stamped		eroded ext., linear stamping (probably part of filfot), burnished interior
130	0-30	5210	5360	1	2.9	Unidentifiable		eroded exterior, uid decoration,
130	0-30	5210	5360		2.1			dried marsh clay
130	0-30	5210	5360	2	2.2		diminutive	
131	0-50	5210	5600	1	2.3		diminutive	
131	0-50	5210	5600		0.3			
131	0-50	5210	5600	2	0.1		non-decortication flake	
132	0-30	5210	5300	1	1.9		diminutive	
133	0-30	5210	5240	1	3.8		diminutive	poss. Filfot stamped
134	0-40	5210	5210	1	2.8	stamped		linear stamping, probably part of filfot, used as abrader

134	0-40	5210	5210	2	3		diminutive	
135	0-60	5210	5450	1	0.3		non-decortication flake	
135	0-60	5210	5450		0.7			charred wood
135	0-60	5210	5450	1	0.3			
135	0-60	5210	5450	1	4.6	stamped		eroded ext., linear stamped elements, prob filfot
135	0-60	5210	5450	1	1.5			sandstone concretion
136	30-35	5240	5270	1	0.1		non-decortication flake	
137	40-50	5240	5420	1	1.6		diminutive	
138	40	5240	5210	1	0.4			calcined bone
139	20-60	5240	5390	2	5	stamped		linear stamped design, prob. Irene
139	20-60	5240	5390	1	1.8		diminutive	
139	20-60	5240	5390	2	1.2		shatter	
140	20-60	5240	5330	2	9.7	Plain		
140	20-60	5240	5330	2	2		diminutive	
141	15-50	5240	5360	2	11.3	Unidentifiable		eroded exterior
141	15-50	5240	5360	1	14.8	Plain		
141	15-50	5240	5360	1	43.4	cord marked	Wilmington	
141	15-50	5240	5360	2	1.8		diminutive	
141	15-50	5240	5360	1	3.4	complicated stamped	Irene	
141	15-50	5240	5360	1	2.5		non-decortication flake	
142	0-40	5360	5180	4	3.3		diminutive	
142	0-40	5360	5180	1	11.8	Unidentifiable		fine grog, grit in temper as well, eroded surface treatment - 2 mend
143	10-50	5300	5330	1	0.1		non-decortication flake	
143	10-50	5300	5330	1	6.1		secondary decortication flake	large reduction flake, use wear along edges
143	10-50	5300	5330	1	1.1		non-decortication flake	
144	0-20	5300	5300	1	7	complicated stamped	Irene	burnished int. and ext.
144	0-20	5300	5300	1	19.6		Abrader	sandstone abrader
144	0-20	5300	5300	3	2.9		diminutive	
144	0-20	5300	5300	2	0.3		non-decortication flake	
145	20-50	5300	5420	1	0.7		diminutive	
146	10-60	5300	5270	1	4.2	complicated stamped	Irene	burnished int.
146	10-60	5300	5270	3	3.1		diminutive	
146	10-60	5300	5270	1	0.2		non-decortication flake	2 mend
147	0-60	5360	5210	1	11.9	cord marked	St. Catherines	grit inclusions - *photo*
147	0-60	5360	5210		1			

147			0-60	5360	5210	3	9.6	Unidentifiable		prob. Stamped, prob. Irene
147			0-60	5360	5210	1	13.2	Plain		thick, dense paste, medium to heavy grit/gravel
147			0-60	5360	5210		3.6			mostly turtle carapace
147			0-60	5360	5210	1	238.7			whelk shell, body whorl largely removed, possible shell dipper?
147			0-60	5360	5210	1	13.4	Plain		2 mend, burnished interior
147			0-60	5360	5210	2	1.9		diminutive	
148				5390	5210	12	198	Unidentifiable	St. Simons	very eroded, thick, chunky pottery - also seems to have shell inclusions in the paste
148				5390	5210	6	12			deer and possibly tortoise
148				5390	5210	1	15.5	Plain	St. Simons	
148				5390	5210	1	1.3			burned shell frag
148				5390	5210	1	3.3			limestone/cortex fragment
148				5390	5210	3	21.9			fired fiber tempered chunks - impressions within form almost like daub
148				5390	5210	5	5.3		diminutive	heavily eroded diminutive fiber tempered
148				5390	5210	10	11.2		diminutive	
148				5390	5210	6	20.9	Unidentifiable	St. Simons	heavily eroded, prob same vessel
148				5390	5210	4	20	Unidentifiable	St. Simons	thin, heavily eroded, reddish color, prob same vessel
148				5390	5210	9	28.7	Unidentifiable	St. Simons	heavily eroded, thick and chunky
148				5390	5210	2	8.4	Unidentifiable	St. Simons	very thin, heavily eroded, prob. Same vessel
148				5390	5210	2	7.3			fired clay chunks - possibly daub?
149	1.01	3	Stratum I			3	7.3		diminutive	
149	1.01	3	Stratum I			3	5.1			sandstone concretions
149	1.01	3	Stratum I				0.5			
150	1.02	2				7	7.2		diminutive	
150	1.02	2				1	8	Unidentifiable		eroded ext. surface treatment, prob. Filfot stamped
151	2.01	2	Stratum I			16	21.3		diminutive	
151	2.01	2	Stratum I				11.2			
151	2.01	2	Stratum I				1.6			
151	2.01	2	Stratum I			2	7.6	Unidentifiable		eroded ext.
152	2.01	3	Stratum I			29	34.5		diminutive	
152	2.01	3	Stratum I			4	15.4	stamped		eroded, prob. Irene
152	2.01	3	Stratum I				32.6			
152	2.01	3	Stratum I			6	103.3	Plain		
152	2.01	3	Stratum I				2.9			oyster shell fragments

152	2.01	3	Stratum I			6.7			1 deer tooth fragment included
152	2.01	3	Stratum I		1	30	Unidentifiable		3 mend - dense paste, med to large grit
152	2.01	3	Stratum I		1	8.1	Unidentifiable		burnished int, poss eroded filfot stamp
152	2.01	3	Stratum I		1	7	complicated stamped	Irene	reed punctate design directly on pottery near rim
152	2.01	3	Stratum I		1	6.3	Plain		
152	2.01	3	Stratum I		1	4.9	incised	Irene	exaggerated flat rim with incised design on the rim itself - *photo*
152	2.01	3	Stratum I		2	4.6	Plain		
153	2.01	4	Stratum I		1	0.9		secondary decortication flake	
153	2.01	4	Stratum I		1	2.3	Plain	diminutive	rounded on one side?
153	2.01	4	Stratum I		6	3.3			sandstone fragments?
153	2.01	4	Stratum I		2	12.2	Unidentifiable	Irene	reed punctate rim treatment, eroded exterior decoration, burnished interior
153	2.01	4	Stratum I		6	26.1	complicated stamped	Irene	eroded, but likely filfot stamped
153	2.01	4	Stratum I		25	35.7		diminutive	
153	2.01	4	Stratum I		1	2	Punctate		round rim
153	2.01	4	Stratum I		6	8.8			heavily eroded, grit tempered,, fired clay
153	2.01	4	Stratum I		2	11.8	Unidentifiable		eroded exterior
153	2.01	4	Stratum I			1.8			fish vert, possible bird
153	2.01	4	Stratum I		1	1.3	incised	Irene	prob. Near rim, burnished int. and ext., incising 1.8 mm wide
153	2.01	4	Stratum I			50.4			charred material from midden
153	2.01	4	Stratum I		1	3.6	Plain		
154	2.02	2	Stratum I		1	0.1			prob. Turtle carapace
154	2.02	2	Stratum I		1	1.3		diminutive	
155	2.02	3	Stratum I		3	7.1	Unidentifiable		eroded ext.
155	2.02	3	Stratum I		2	6.9	Unidentifiable		poss stamped exterior, large grit, prob same vessel
155	2.02	3	Stratum I		6	6.9		diminutive	
155	2.02	3	Stratum I		1	0.2			
155	2.02	3	Stratum I			1.3			large chunks of charred wood
155	2.02	3	Stratum I		1	3.6	stamped		burnished int., eroded linearelements evident in stamped design, prob Irene
156	2.02	4	Stratum I		1	3.5			fired clay piece, 2 mend, poss. Daub
156	2.02	4	Stratum I		1	17.7	stamped		linear design in stamping - prob Irene
156	2.02	4	Stratum I		1	0.1			
156	2.02	4	Stratum I		1	4.4	stamped		linear element in stamped design - prob. Irene

156	2.02	4	Stratum I		3	2.9		diminutive	
157	3.01	1	Stratum I		1	3.3	complicated stamped	Irene	
158	3.01	2	Stratum I		2	62.4	complicated stamped	Irene	burnished int., *photo*
158	3.01	2	Stratum I			1.1			
158	3.01	2	Stratum I		1	4.1	incised	Irene	int. shell scraped and burnished, 3 parallel incised groove, each 1.5 mm wide
158	3.01	2	Stratum I		2	8.8	incised	Irene	prob near rim, portion of curvilinnear incised design, grooves are approx. 2 mm wide, prob from same vessel, burnished int.
158	3.01	2	Stratum I		1	2.7	incised	Irene	parallel and linear elements of incised design visible, grooves are 2 mm wide
158	3.01	2	Stratum I		1	2.9	incised	Irene	linear parts of incised design - 3 mm wide
158	3.01	2	Stratum I		2	12.5	Unidentifiable		eroded surface treatments
158	3.01	2	Stratum I		1	10.2	Unidentifiable		eroded surface, portions almost appear intentionally rounded like a gaming piece
158	3.01	2	Stratum I		6	9.4		diminutive	
158	3.01	2	Stratum I		1	1.4		Biface	
158	3.01	2	Stratum I			5.7			largely turtle carapace
158	3.01	2	Stratum I		8	35.1	stamped		linear stamped elements, prob. Irene
159	3.01	3	Stratum I		5	36.3	complicated stamped	Irene	burnished interiors
159	3.01	3	Stratum I		1	2.5			fiber temp. fired clay with grit inclusions, poss. Fragment of fired daub
159	3.01	3	Stratum I			1.9			
159	3.01	3	Stratum I			2.3			
159	3.01	3	Stratum I		4	2			prob. Turtle carapace
159	3.01	3	Stratum I		5	17.2	Unidentifiable		eroded ext.
159	3.01	3	Stratum I		2	5.6	Plain		
159	3.01	3	Stratum I		1	4.4	Unidentifiable	Irene	eroded surface treatment, reed punctate applied directly under rim, no rim strip, burnished int.
159	3.01	3	Stratum I		1	6.4	stamped	Irene	applique strip with reed punctations, strip is applied 4.1 mm from rim, burnished interior
159	3.01	3	Stratum I		13	12.2		diminutive	
160	2.02	4A	Stratum I		2	0.6			
160	2.02	4A	Stratum I		3	3.4		diminutive	
160	2.02	4A	Stratum I		4	23	stamped		linear design in stamping - prob. Irene

160	2.02	4A	Stratum I			2.6			
161	2.02	4B	Stratum II		15	13.4		diminutive	
161	2.02	4B	Stratum II		1	3	Plain		burnished int. and ext.
161	2.02	4B	Stratum II		4	26.6	stamped		eroded - prob Irene
161	2.02	4B	Stratum II			4.9			
162	2.01 & 2.02	4B	Stratum II		4	9.1		diminutive	
162	2.01 & 2.02	4B	Stratum II		1	3.8	complicated stamped	Irene	burnished interior
162	2.01 & 2.02	4B	Stratum II			0.3			
162	2.01 & 2.02	4B	Stratum II			2.9			
162	2.01 & 2.02	4B	Stratum II		1	2.2	Unidentifiable	Irene	burnished int., reed punctate on rim
162	2.01 & 2.02	4B	Stratum II		3	22.4	Unidentifiable		eroded ext.
163	2.02	5	Stratum II		8	2.3			sandstone concretions
163	2.02	5	Stratum II		1	60.9			heavily utilized whelk shell - most of the body whorl and columella removed, apex removed, edges worn
163	2.02	5	Stratum II		1	0.7		non-decortication flake	
163	2.02	5	Stratum II			6.2			
163	2.02	5	Stratum II		1	5.7	complicated stamped	Irene	burnished int., prob near rim - applied rosette with punctate partially visible
163	2.02	5	Stratum II		1	14.8	Unidentifiable	Irene	eroded surface treatment, applied at the top of rim almost as if folded, probably just eroded applique strip, segmented and reed punctate
163	2.02	5	Stratum II		10	34.3	Unidentifiable		eroded surface treatment
163	2.02	5	Stratum II		5	63.2	complicated stamped	Irene	
163	2.02	5	Stratum II		4	19.9	Plain		burnished int.
163	2.02	5	Stratum II			1.1			
163	2.02	5	Stratum II		48	57.7		diminutive	
163	2.02	5	Stratum II		2	1.4			fired clay - poss. Burned daub
163	2.02	5	Stratum II		8	39.5	stamped		prob. Irene
164	2.01				1	7.4	complicated stamped		burnished int, central node and linear elements visible - probably Irene
164	2.01					0.9			
164	2.01				4	4.8		diminutive	
164	2.01					2.2			
164	2.01				3	15.7	Unidentifiable		eroded exterior

165	2.01	5		1		4	4.8		diminutive	
165	2.01	5		1		4	1.4			sandstone concretions
165	2.01	5		1		2	19	Unidentifiable		eroded surface treatment
165	2.01	5		1		1	1.9		Projectile Point/ Knife	concave base of a likely stemmed projectile point - *photo*
165	2.01	5		1		1	6.1	incised	Irene	linear and curvilinear incised elements - incised grooves approx. 1.9 mm wide, *photo*
165	2.01	5		1			3.5			charred wood
165	2.01	5		1		1	0.2			prob. Turtle carapace
165	2.01	5		1		4	4.7			fired clay pieces, poss. Daub
166	2.01	5	Stratum II			12	13.5		diminutive	
166	2.01	5	Stratum II			4	25.4	Unidentifiable		eroded ext., prob. Irene
166	2.01	5	Stratum II			5	22	stamped		prob. Irene filfot stamped, eroded and unclear, burnished int.
166	2.01	5	Stratum II				0.9			
166	2.01	5	Stratum II			1	4	complicated stamped	Irene	
166	2.01	5	Stratum II				0.3			
167	1.01	2	Stratum I				0.8			
167	1.01	2	Stratum I			6	2.9			sandstone concretions
167	1.01	2	Stratum I			6	6.7		diminutive	
167	1.01	2	Stratum I			1	2.7	Unidentifiable	Irene	reed punctate directly on vessel wall at the rim
168	1.01	3	Stratum I			11	18.1		diminutive	
168	1.01	3	Stratum I			3	21.1	stamped		
168	1.01	3	Stratum I			4	24.5	Unidentifiable		eroded surface treatment
168	1.01	3	Stratum I			1	5.7	Unidentifiable		eroded ext., burnished int.
168	1.01	3	Stratum I			1	15.6	Unidentifiable		eroded surface treatment, burnished int.
168	1.01	3	Stratum I			1	0.5			prob turtle carapace
168	1.01	3	Stratum I				1			
168	1.01	3	Stratum I			5	8.4			sandstone concretions
168	1.01	3	Stratum I			3	19.4	stamped		burnished int.
168	1.01	3	Stratum I			1	2		Biface	
169	1.01	4	Stratum I/II			1	0.8			pebble
169	1.01	4	Stratum I/II			1	2.4	Unidentifiable		eroded, poss. Incised design
169	1.01	4	Stratum I/II			1	2	Plain	Irene	applied rim strip - 3.9 mm from rim - reed punctate on strip
169	1.01	4	Stratum I/II			2	15.4	Unidentifiable		eroded exterior, poss. Stamped - prob. Irene
169	1.01	4	Stratum I/II			1	10.5	incised	Irene	burnished interior, linear incised grooves 2.7 mm wide - *photo*

169	1.01	4	Stratum I/II		1	5	complicated stamped		prob. Filfot stamped - Irene, burnished interior
169	1.01	4	Stratum I/II		1	0.6			2 mend, sandstone concretion
169	1.01	4	Stratum I/II		1	2.8		non-decortication flake	large reduction flake, likely utilized
169	1.01	4	Stratum I/II		9	11		diminutive	
169	1.01	4	Stratum I/II		1	6.4	Plain		burnished int., *sooted sherd*
169	1.01	4	Stratum I/II			0.7			
170	1.02	3	Stratum I		1	0.1		non-decortication flake	
170	1.02	3	Stratum I		12	11.9		diminutive	
170	1.02	3	Stratum I		1	11.1		shatter	primary decortication
170	1.02	3	Stratum I		2	0.6			oyster shell fragments
170	1.02	3	Stratum I		1	4.9	complicated stamped	Irene	reed impressions along rim directly on vessel wall
170	1.02	3	Stratum I		3	10.5	Unidentifiable		prob. Irene filfot stamped
170	1.02	3	Stratum I		1	9.2	complicated stamped	Irene	filfot stamped all the way to rim
170	1.02	3	Stratum I			0.8			
170	1.02	3	Stratum I		1	7.4	complicated stamped		diamond design with herringbone - poss. Oemler? - *photo*
170	1.02	3	Stratum I		1	9.2	stamped		
170	1.02	3	Stratum I		10	4.1			sandstone concretions
171	1.02	4	Stratum I/II		2	19.9	Unidentifiable		eroded exterior
171	1.02	4	Stratum I/II		14	11		diminutive	
171	1.02	4	Stratum I/II		2	19.8	complicated stamped	Irene	burnished interiors
171	1.02	4	Stratum I/II		6	21.1			sandstone concretions
171	1.02	4	Stratum I/II		1	0.1		non-decortication flake	
171	1.02	4	Stratum I/II		1	4	incised	Irene	single incised groove - 2.4 mm wide
171	1.02	4	Stratum I/II		1	0.1		non-decortication flake	
171	1.02	4	Stratum I/II			0.1			very small fragment of bone
172	3.01	3	Stratum I		1	6.2	stamped	Irene	burnished int., segmented and reed punctate rim treatment
172	3.01	3	Stratum I		3	13.1	Plain		
172	3.01	3	Stratum I		4	33.8	stamped		burnished int., linear design in stamp, prob. Irene
172	3.01	3	Stratum I			33.8			turtle carapace, fish vert, large mammal - prob. Deer
172	3.01	3	Stratum I		33	36.8		diminutive	
172	3.01	3	Stratum I		3	156.1	complicated stamped	Irene	5 mend - *photo*
172	3.01	3	Stratum I			1.9			
172	3.01	3	Stratum I		1	0.7			periwinkle shell

172	3.01	3	Stratum I		5	3.5			burned clay, some clearly fiber tempered, poss. Daub
172	3.01	3	Stratum I		3	26.2	stamped		
172	3.01	3	Stratum I		3	11	Unidentifiable		eroded exterior, burnished int.
172	3.01	3	Stratum I		4	5.4			burned oyster shell fragments
173.01	3.01	4	Stratum I/II		1	7.4	stamped		eroded, prob. Irene
173.01	3.01	4	Stratum I/II		1	10.3	incised	Irene	prob near rim, incised curvilinear and linear design - 2.1 mm wide
173.01	3.01	4	Stratum I/II			0.3			
173.01	3.01	4	Stratum I/II		1	6.6	incised	Irene	prob. Near rim, incised curvilinear design - 1.9 mm, burnished int.
173.01	3.01	4	Stratum I/II			0.6			
173.01	3.01	4	Stratum I/II		1	0.3			periwinkle
173.01	3.01	4	Stratum I/II		4	5.4		diminutive	
173.02	3.01	4	Stratum I		25	18		diminutive	
173.02	3.01	4	Stratum I		1	3.2	Plain		
173.02	3.01	4	Stratum I		7	41.9	Unidentifiable		prob. Stamped - prob. Irene
173.02	3.01	4	Stratum I		1	7.9	stamped		used as an abrader
173.02	3.01	4	Stratum I		1	13.5	Unidentifiable	Irene	applied rim strip approx 1 mm from rim, reed punctate within strip - *photo*
173.02	3.01	4	Stratum I		4	27.3	stamped		burnished interior - prob. Irene
173.02	3.01	4	Stratum I		1	9.4	incised	Irene	curvilinear incised design, prob. Near rim, groove approx. 2 mm wide
173.02	3.01	4	Stratum I		1	23.6	Plain		
173.02	3.01	4	Stratum I			9.6			largely turtle carapace
173.02	3.01	4	Stratum I			0.9			
174	3.02	3	Stratum I		5	31.6	Unidentifiable		eroded exteriors
174	3.02	3	Stratum I		3	23.4	complicated stamped	Irene	
174	3.02	3	Stratum I			0.7			1 periwinkle shell, 1 oyster shell fragment
174	3.02	3	Stratum I			1.8			
174	3.02	3	Stratum I		15	17.2		diminutive	
175	1.01	5	Stratum II		1	1.7		non-decortication flake	
175	1.01	5	Stratum II		1	7	Plain		burnished interior
176	1.02	5	Stratum II		5	4.9		diminutive	
176	1.02	5	Stratum II		2	0.4		non-decortication flake	
176	1.02	5	Stratum II		1	0.8		non-decortication flake	
176	1.02	5	Stratum II		1	4.8	Unidentifiable		eroded exterior
176	1.02	5	Stratum II		1	4.4	Plain		burnished interior

177	2.01			1			0.4			turtle carapace
177	2.01			1		2	10	complicated stamped	Irene	
177	2.01			1		8	5.9		diminutive	
177	2.01			1		2	8.1	Plain		burnished interior and exterior
177	2.01			1		3	14.1	Plain		4 mend, part of a container with a flaring rim or constricted neck
178	2.01	5	Stratum II			1	0.8		diminutive	
178	2.01	5	Stratum II			1	8.4	Unidentifiable		eroded, possibly incised, burnished interior - prob. Irene incised
178	2.01	5	Stratum II			4	10.8		diminutive	
178	2.01	5	Stratum II				1.7			
179	2.01			2		10	8.9			fiber tempered, fired clay/burned daub fragments
179	2.01			2		1	18	cord marked		grog and grit tempered, heavily overstamped fine cord marking, cord marked rim, looks like savannah but with grog temper, poss. Shell smoothed interior - *photo*
179	2.01			2		6	31.4	Unidentifiable		eroded surface treatments, burnished interiors
179	2.01			2		1	3.1	stamped		burnished int., prob. Filfot stamp
179	2.01			2			11.4			
179	2.01			2		4	20.6	Plain		burnished interior and exterior - prob. Irene
179	2.01			2		1	4.7	incised	Irene	two parallel incised grooves - 3 mm wide
179	2.01			2		2	23.5	complicated stamped	Irene	burnished interior
179	2.01			2			3.7			
179	2.01			2		22	22.6		diminutive	
180	2.01	6	Stratum II/III			1	5.5	Unidentifiable		heavily eroded exterior
181			50			3	13.4	Unidentifiable		eroded exteriors
181			50			1	6.7	Plain		burnished int. and ext.
181			50			6	51.9	complicated stamped	Irene	
181			50			11	15		diminutive	
181			50				3.6			
181			50			1	3.1			juvenile whelk shell, utilized
181			50			2	1.2			sandstone concretions
181			50				2.1			
181			50			1	2.5	Unidentifiable	Irene	reed punctate directly on vessel wall
182	2.02	6	Stratum II			1	163.6		Hammerstone	or possible grinder - *photo*
183	3.01	5				16	85.5	Unidentifiable		eroded exteriors

183	3.01	5				1	0.1		non-decortication flake	
183	3.01	5				2	8.1	Plain		reddish interiors
183	3.01	5				1	5	incised	Irene	burnished interior and exterior, incised groove 1.7 mm wide, two lines, curvilinear design
183	3.01	5				2	9.5	complicated stamped	Irene	Irene filfot stamped
183	3.01	5				3	108.1			worked whelk columella - *photo*
183	3.01	5				2	2.8			fired clay - daub?
183	3.01	5					4.9			
183	3.01	5				5	2.4			sandstone concretion
183	3.01	5				3	12.8	Plain		
183	3.01	5				1	3	Plain		
183	3.01	5				8	63	stamped		stamped design with linear elements, prob. Irene filfot
183	3.01	5				1	21.2	stamped		heavily used as a hone on both sides, burnished interior, prob. Irene - *photo*
183	3.01	5				5	5.1			shell fragments - 1 poss whelk frag.
183	3.01	5				70	60.8		diminutive	
184	3.01		62			1	32.3	complicated stamped	Irene	sooted sherd, reed punctate directly on vessel wall around rim - *photo*
185	3.01	5	Stratum II	6			0.1			
185	3.01	5	Stratum II	6		7	6		diminutive	
185	3.01	5	Stratum II	6		1	5.8	stamped		prob filfot stamped
186	3.01	6	Stratum II/III			2	1			one oyster fragment, one periwinkle fragment
186	3.01	6	Stratum II/III			100	42		diminutive	
186	3.01	6	Stratum II/III			1	3.2	Unidentifiable		burnished int.
186	3.01	6	Stratum II/III				1			
186	3.01	6	Stratum II/III				1.7			prob turtle carapace
186	3.01	6	Stratum II/III			1	12.8	stamped		burnished interior - prob. Irene
186	3.01	6	Stratum II/III			2	0.5			pebbles
186	3.01	6	Stratum II/III			19	10.6			sandstone concretions
186	3.01	6	Stratum II/III			4	0.5		non-decortication flake	
186	3.01	6	Stratum II/III			1	0.8			fish otolith
186	3.01	6	Stratum II/III			97	167.5			fired clay - burned daub
187	3.01	3?	Stratum I				0.3			
187	3.01	3?	Stratum I				1.9			
187	3.01	3?	Stratum I			2	4.3		diminutive	
187	3.01	3?	Stratum I			3	0.8		diminutive	could also be fired daub

188	3.02	4	Stratum I/II		6	46.8	complicated stamped		prob. Filfot stamped
188	3.02	4	Stratum I/II		1	4.9	Unidentifiable		burnished interior, eroded exterior, poss. Used as an abrader
188	3.02	4	Stratum I/II		1	2.7	Unidentifiable		eroded surface treatment, poss. Used as an abrader
188	3.02	4	Stratum I/II			1			prob. Oyster shell fragments
188	3.02	4	Stratum I/II		3	11.5	Plain		
188	3.02	4	Stratum I/II		2	18.1	Unidentifiable	Irene	2 mend, stab and drag punctation on applied rim strip even with the top of vessel - *photo*
188	3.02	4	Stratum I/II			2.7			
188	3.02	4	Stratum I/II		2	4.8			fired clay/burned daub
188	3.02	4	Stratum I/II		38	43.7		diminutive	
188	3.02	4	Stratum I/II		11	48.8	Unidentifiable		eroded exterior surface treatments
189	3.02	5	Stratum II		18	105.1	Unidentifiable		eroded surfaces
189	3.02	5	Stratum II		8	54.3	stamped		prob. Filfot stamped - prob. Irene
189	3.02	5	Stratum II		1	2.7	cord marked	Savannah	fine cord marked, very fine grit
189	3.02	5	Stratum II		2	11.2	Plain		prob. Same vessel, heavy grit, burnished interior and exterior - prob. Irene
189	3.02	5	Stratum II		1	0.9			periwinkle shell
189	3.02	5	Stratum II			3.5			
189	3.02	5	Stratum II			1			
189	3.02	5	Stratum II		5	6.8			sandstone concretions
189	3.02	5	Stratum II		1	3.8	Unidentifiable		eroded, poss. Stamped - prob. Irene
189	3.02	5	Stratum II		1	7.4	Plain	Irene	reed impressions directly on the vessel
189	3.02	5	Stratum II		1	3.3	Unidentifiable	St. Simons	
189	3.02	5	Stratum II		75			diminutive	
189	3.02	5	Stratum II		3	30.6	complicated stamped	Irene	1 with hone marks
189	3.02	5	Stratum II		1	6.8	Plain		eroded, prob. Applied strip - almost looks folded
189	3.02	5	Stratum II		2	4.1	Unidentifiable	Irene	reed punctate directly on vessel wall
189	3.02	5	Stratum II		1	4.5	Plain		burnished interior
189	3.02	5	Stratum II		1	5.5	Unidentifiable		poss. Cazuela bowl
189	3.02	5	Stratum II		8	20.4			fired clay - prob. Burned daub frags
190	3.02	6	Stratum II/III		1	29.2			quahog clam shell, complete
190	3.02	6	Stratum II/III		1	2.7	shell scraped		burnished interior
190	3.02	6	Stratum II/III		5	96.1	complicated stamped	Irene	2 mend
190	3.02	6	Stratum II/III		1	1.5	Unidentifiable	Irene	reed punctations directly to vessel along rim

190	3.02	6	Stratum II/III		1	4	incised	Irene	one curvilinear line 1.7 mm wide, burnished interior
190	3.02	6	Stratum II/III		2	9.7	Plain		burnished interior and exterior
190	3.02	6	Stratum II/III			0.8			
190	3.02	6	Stratum II/III		27	25.9		diminutive	
190	3.02	6	Stratum II/III		2	9.6	Unidentifiable		prob. Stamped, prob. Irene
190	3.02	6	Stratum II/III		4	18.4	stamped		linear elements of a stamped design - prob. Irene filfot
190	3.02	6	Stratum II/III			6.8			largely consists of fragments of turtle carapace
191			55		2	23.8	complicated stamped	Irene	burnished interior
191			55		2	3.2		diminutive	
192	2.01	6	Stratum II/III		9	7.2			sandstone concretions
192	2.01	6	Stratum II/III		1	7.4	stamped	Irene	burnished interior, applied rim strip with cane punctations approx. 3.9 mm from lip, prob a restricted neck vessel - *photo*
192	2.01	6	Stratum II/III			3.8			at least one charred nut shell fragment
192	2.01	6	Stratum II/III		3	15.4	stamped		burnished interiors, prob filfot stamped
192	2.01	6	Stratum II/III			0.3			
192	2.01	6	Stratum II/III		22	18.6		diminutive	
192	2.01	6	Stratum II/III		1	4	Unidentifiable		burnished interior, eroded exterior
192	2.01	6	Stratum II/III		1	2.2	Plain	Irene	burnished interior and exterior, reed punctate directly to vessel wall beneath lip
193	2.02	6	Stratum II/III		1	16.5	complicated stamped	Irene	burnished interior, filfot stamped - *photo*
193	2.02	6	Stratum II/III		3	12.4	Unidentifiable		eroded exterior, burnished interior
193	2.02	6	Stratum II/III		1	2.7	Unidentifiable	Irene	segmented rim, burnished interior
193	2.02	6	Stratum II/III			1.2			
193	2.02	6	Stratum II/III		2	13.3	stamped		eroded exterior, stamped - prob fiflot, burnished interior
193	2.02	6	Stratum II/III		11	4.6		diminutive	
193	2.02	6	Stratum II/III			0.3			
193	2.02	6	Stratum II/III			0.3			oyster shell fragment
193	2.02	6	Stratum II/III		18	30			sandstone concretions
193	2.02	6	Stratum II/III		2	9.9	Plain		burnished interior and exterior
194	3.01	7	Stratum III		1	0.1			fish scale
194	3.01	7	Stratum III		2	4.3			whelk shell fragments, one inner whorl
194	3.01	7	Stratum III		67	103.3			fired clay/burned daub fragments
194	3.01	7	Stratum III		3	7.5			sandstone concretions
194	3.01	7	Stratum III		10	4.4		diminutive	

194	3.01	7	Stratum III	1	0.2	non-decortication flake		
195	3.01	8	Stratum III		0.8			
195	3.01	8	Stratum III	2	0.2	non-decortication flake		<2cm
195	3.01	8	Stratum III	24	24.3			sandstone concrections
195	3.01	8	Stratum III	91	89.4			fired clay/burned daub frags
196	3.01	9	Stratum III/IV	5	7.6			fired clay/burned daub frags
196	3.01	9	Stratum III/IV	4	5.5			sandstone concretions
197	3.02	7	Stratum III	2	15.1			sandstone concretions
197	3.02	7	Stratum III	64	56.5			fired clay/burned daub
197	3.02	7	Stratum III	3	0.5	non-decortication flake		
197	3.02	7	Stratum III		0.6			
197	3.02	7	Stratum III					pebble
198	3.02	8	Stratum II		1.2			
198	3.02	8	Stratum II	1	0.5	pebble		
198	3.02	8	Stratum II	4	0.3	non-decortication flake		
198	3.02	8	Stratum II	44	75.5			fired clay/burned daub frags
199	3.02	9	Stratum III/IV	1	0.2	non-decortication flake		
199	3.02	9	Stratum III/IV	6	5.4			fired clay/burned daub frags
199	3.02	9	Stratum III/IV	1	0.2	diminutive		
199	3.02	9	Stratum III/IV	3	1.6			sandstone concretions
200		7	83	1	0.6	diminutive		
200		7	83	4	4.7			fired clay/burned daub
200		7	83	1	0.1	non-decortication flake		<1cm
201	3.01		7		4.4			1 oyster shell fragment
201	3.01		7	1	1.4			fired clay/burned daub
201	3.01		7	1	2	diminutive		
202	3.01		7		0.05			tiny piece of calcined bone
202	3.01		7	1	0.3	diminutive		
203	3.01		8		0.1			
203	3.01		8	1	0.1	shatter		tiny piece of quartz shatter?
204	3.01		8		0.1			
204	3.01		8	2	0.3			fired clay/burned daub frags
205	3.01		9	1	0.1	non-decortication flake		
205	3.01		9	8	4.9			fired clay/burned daub
205	3.01		9		0.8			
206	3.01		10	2	1			sandstone concretions
206	3.01		10	2	0.9			fired clay/burned daub

207	3.01		11			1	15.9	complicated stamped	Irene	burnished interior
208	3.01		11			4	1.1			fired clay/burned daub
208	3.01		11			1	0.6			sandstone concretion
208	3.01		11				2.2			oyster shell fragments
208	3.01		11				0.2			
209	3.01					7	3.4			fired clay/burned daub
209	3.01					1	0.2		non-decortication flake	<2cm
209	3.01					1	0.3			sandstone concretion
210		62					0.6			
210		62				1	2.5	stamped		burnished interior, linear design visible in stamp - prob. Filfot
210		62					0.5			one burned bone fragment
210		62				5	12.9			sandstone concretions
211		20-40	5120	4550		1	7.9	complicated stamped	Irene	filfot stamped, applied rim strip, segmented with reed punctate - 10.5 mm wide, 12 mm from lip - *photo*
212		0-40	5120	4580		3	18.4	Unidentifiable		burnished interior, eroded exterior
212		0-40	5120	4580		6	10.4		diminutive	
212		0-40	5120	4580		2	10.4	stamped		burnished interior, prob. Filfot
212		0-40	5120	4580		2	11.6	complicated stamped	Irene	burnished interior
212		0-40	5120	4580		2	13.8	stamped		eroded surface, prob. Filfot stamped, prob same vessel
213		0-60	5120	4640		1	4.4	Plain		burnished interior and exterior, poss. Part of a flaring rim or restricted neck vessel
213		0-60	5120	4640			3.4			
213		0-60	5120	4640		2	44.2	stamped		prog filfot, eroded exterior
213		0-60	5120	4640		7	10.9		diminutive	
213		0-60	5120	4640			0.5			1 oyster shell fragment
213		0-60	5120	4640		1	8.4	incised	Irene	burnished interior and exterior, incised - 1 mm groove
214		0-30	5120	4670		1	2.2	Unidentifiable	diminutive	burnished interior, eroded exterior - stamping?
215		20-40	5120	4700		1	2.6	Unidentifiable		eroded ext., used as an abrader
216		0-40	5120	4730		2	2.7		diminutive	
217		0-30	5120	4760		2	1.9			fired clay/burned daub fragments
218		0-40	5120	4610		1	9.2			sandstone concretion, poss. Nutting stone? - *photo?*
218		0-40	5120	4610		3	18.3	complicated stamped	Irene	burnished interior
218		0-40	5120	4610		2	12.1	Unidentifiable		burnished interior, eroded exterior

218	0-40	5120	4610	5	8.3		diminutive	
219	40-60	5210	4670	1	5.2	stamped		burnished interior, linear elements in stamped design - prob. Filfot
220	0-30	5210	4820	1	40.4			whelk shell, columella utilized, body whorl partially removed, apex removed - *photo*
220	0-30	5210	4820	2	4.6		diminutive	
220	0-30	5210	4820		0.1			
221	20-60	5210	4850	4	6.8		diminutive	
221	20-60	5210	4850	2	18.3	Plain		
222	20-50	5210	4880	2	7.2			fired clay/burned daub
222	20-50	5210	4880	2	1.7			sandstone concretions
222	20-50	5210	4880	2	14.7	stamped		linear designs in stamp, prob Irene filfot stamped
223	30-40	5240	4730	2	7.2	Unidentifiable		prob. Same vessel, eroded exterior
224	0-40	4820	4490	1	7.8	Unidentifiable	St. Simons	
224	0-40	4820	4490	1	0.7		diminutive	2 mend
225	20-40	4820	4520	1	1.9	Plain	diminutive	
226	10-30	4820	4550	2	3.8		diminutive	
227	10-30	4850	4490	2	1.7		diminutive	
228	20-40	4850	4520	1	14	Unidentifiable	Wilmington	eroded exterior, grit in temper as well
228	20-40	4850	4520	1	2.3		diminutive	
229	10-30	4850	4550	2	3.9		diminutive	
229	10-30	4850	4550	1	0.7		diminutive	dimunitive st. simons sherd fragment or possible burned daub
230	20-60	4850	4580	7	47.7	cord marked	Wilmington	2 mend, prob all same vessel, heavy grog - *photo*
231	0-30	4880	4580	1	4.2	Unidentifiable	Irene	eroded exterior, prob segmented rim strip beneath lip
231	0-30	4880	4580	2	4		diminutive	
231	0-30	4880	4580	1	3.8	complicated stamped	Irene	burnished interior
232	10-40	4880	4640	4	7.5		diminutive	
232	10-40	4880	4640	1	4.1	stamped		linear design in stamp, prob filfot
232	10-40	4880	4640	1	0.1			scallop shell fragment - mother of pearl irradescent on one side
233	15-30	4880	4670	1	0.9		diminutive	
233	15-30	4880	4670	1	0.8		diminutive	diminutive fiber temp. or poss burned daub frag
234	10-30	4880	4700	1	3.7	stamped		prob. Filfot stamped
235	20-40	4940	4940	1	2.3	stamped		prob filfot stamped, burnished interior

235	20-40	4940	4940	2	2.9		diminutive	
235	20-40	4940	4940	2	6.4	Plain		burnished interior and exterior
236	0-40	4940	4460	1	3.1	Plain	Wilmington	
236	0-40	4940	4460	1	4.6	Unidentifiable	Irene	reed punctation beneath lip on vessel wall, burnished interior, eroded exterior
236	0-40	4940	4460	1	3.6	stamped		overstamped design, prob filfot,
236	0-40	4940	4460	1	9.3	Plain	St. Simons	
236	0-40	4940	4460	1	3.4	cord marked	Wilmington	
237	20-50	4940	4700	1	0.5		non-decortication flake	<2cm
237	20-50	4940	4700	2	3.3		diminutive	
238	30-50	4970	4430	1	1.5		diminutive	fiber tempered diminutive or fired clay/burned daub fragment
239	0-40	4970	4490	1	1.9	stamped	diminutive	
240	20-40	4970	4550	1	1.9	Unidentifiable	St. Simons	eroded exterior, poss. Incising
241	20-60	5000	4520	3	0.6		non-decortication flake	
241	20-60	5000	4520	3	3.2		diminutive	2 mend
241	20-60	5000	4520		0.2			marsh clay
241	20-60	5000	4520	1	2.1		non-decortication flake	large reduction flake
241	20-60	5000	4520	1	0.2		non-decortication flake	
241	20-60	5000	4520	1	2.2			sandstone concretion
241	20-60	5000	4520	2	3.7	Unidentifiable		heavily eroded, st. simons pottery or burned daub?
241	20-60	5000	4520	1	0.1		non-decortication flake	
242	0-30	5000	4430	1	1.7		diminutive	
243	10-20	5000	4490	1	0.6		diminutive	
244	0-10	5030	4430	1	0.3			
245	30-40	5030	4490	1	1.9	Unidentifiable		
246	0-40	5030	4550	3	4.9		diminutive	
247	10-30	5030	4970	1	1.5	complicated stamped	Irene	burnished interior
247	10-30	5030	4970	1	1		diminutive	heavily eroded
248	10-20	5030	5030	2	2.3		diminutive	
249	0-40	5060	4550	1	4.1			fired clay/burned daub?
249	0-40	5060	4550	1	2	complicated stamped	diminutive	burnished interior
250		5090	4580	5	17.7	stamped		poss filfot stamped
250		5090	4580	2	7	Unidentifiable		eroded exteriors
250		5090	4580	8	35.1	complicated stamped	Irene	prob. Same vessel, burnished interior, one piece used as abrader
250		5090	4580	1	6	Unidentifiable	St. Simons	sandy and fibrous, eroded

250		5090	4580	1	2.1	incised	Irene	burnished interior, 2 parallel incised grooves - 1.9 mm wide
250		5090	4580		0.2			one bone fragment
251		5090	4610	3	3		diminutive	
251		5090	4610	4	14.4	Unidentifiable		eroded exteriors, burnished interiors
252	0-80	5090	4670		1.9			one burned bone fragment
252	0-80	5090	4670		1.5			2 oyster shell fragments
252	0-80	5090	4670	7	12.2		diminutive	
252	0-80	5090	4670	1	13	Plain		2 mend, exterior and interior reddish color
252	0-80	5090	4670	2	11.6	Plain		burnished interior and exterior
252	0-80	5090	4670	4	21.3	stamped		burnished interior, stamped design likely filfot
252	0-80	5090	4670	2	14.3	complicated stamped	Irene	burnished interior, one used as abrader
253		5150	4670	1	1.7		diminutive	
253		5150	4670	1	4.3	incised	Irene	two parallel incised grooves, form the beginning of a downward scroll, grooves 1.2 mm wide
254		5150	4820	1	17.7		Biface	
254		5150	4820	8	7.4		diminutive	
254		5150	4820	2	4.9	stamped		burnished interior
254		5150	4820		9.4			2 oyster shell fragments
254		5150	4820	1	9	Unidentifiable		burnished interior, eroded exterior
254		5150	4820		0.2			
255		5150	4790	1	3.4	Unidentifiable		eroded exterior
255		5150	4790	2	7.4	stamped		burnished interiors, prob filfot stamped
255		5150	4790	5	6.7		diminutive	
256		5150	4760	2	2.6		diminutive	
257		5150	4730	4	2.6		diminutive	
258		5150	4640	1	12.2	Unidentifiable		eroded surface, poss. Plain, poss used as abrader
259		5150	4610	1	6.4	complicated stamped	Irene	burnished interior
259		5150	4610	11	12.6		diminutive	
259		5150	4610		0.2			
259		5150	4610	5	15.4	Unidentifiable		eroded exterior
259		5150	4610	2	0.8			sandstone concretions - 1 almost completely round
260		5150	4580		0.3			poss. Small mammal jaw fragment
260		5150	4580	9	126.1	Unidentifiable		burnished interior, eroded exterior, poss. Same vessel

260		5150	4580		0.3			
260		5150	4580	9	12.2		diminutive	
260		5150	4580	2	6.2	complicated stamped	Irene	burnished interior
260		5150	4580	1	31.9	complicated stamped	Irene	2 mend, applied rim strip with reed punctate 1 mm beneath lip - *photo*
261	0-40	5240	4880	1	4.6	Unidentifiable		eroded exterior
261	0-40	5240	4880	1	6.4	stamped		prob filfot stamped
262	Surface			1	298.2			whelk shell, apex removed, portion of body whorl removed, portion of columella removed, use wear were columella was removed - *photo*
262	Surface				0.4			1 oyster shell fragment
262	Surface			1	2.4	Plain	Irene	burnished interior and exterior, prob same vessel as cat 1
262	Surface			1	18.7	incised	Irene	burnished interior and exterior, one portion of an incised groove - 1.8 mm wide

APPPENDIX B

OSTEOLOGY REPORT: ANALYSIS OF SKELETAL AND DENTAL REMAINS FROM THE LINCOLN TRAIL SITE, 9BN17

OSTEOLOGY REPORT

Analysis of Skeletal and Dental Remains from the Lincoln Trail Site, 9BN17.

prepared by

Matthew A. Williamson, Ph.D.

Georgia Southern University
Department of Health and Kinesiology
Human Osteology Laboratory
P.O. Box 8076
Statesboro, Georgia 30460-8076

Georgia Southern University
Human Osteology Laboratory

Submitted to Ryan Sipe and Jared Wood, Ph.D. Department of Sociology and Anthropology, Georgia Southern University.

11 February 2013

Analysis of Skeletal and Dental Remains from the Lincoln Trail (9BN17) site.

Matthew A. Williamson, Ph.D.

1. BACKGROUND

On November 9, 2012, I met with Mr. Ryan Sipe and Dr. Jared Wood in the Human Osteology Lab to examine a few bone fragments and teeth recovered during field school the previous summer. No processing was needed aside from the removal of a small amount of dirt using a light, dry brush.

2. ANALYSIS RESULTS: Human, Age: 15+ years, Sex: indeterminate, Predominant ancestry: Native American (due to provenience).

A total of two bone fragments and three tooth crowns were present. Both bone fragments were cranial; one from the cranial vault most likely an unsided parietal bone fragment, the other was a petrous portion from the right temporal bone. The thickness of the parietal fragment, particularly the outer and inner tables, suggests that the individual was probably at least in his or her early teens. No features were present on the cranial fragments that would indicate the sex of the individual.

All tooth crowns were from permanent teeth. A right, first or second, maxillary molar; a right, first, mandibular molar and an unidentified third molar were present. The roots were missing from all crowns and it appeared that the roots from the third molar were not present because they had not yet fully formed. No part of the root was remaining in the crown of the unidentified third molar. The other two teeth had noticeable root fragments still present in their crowns. A small amount of calculus was present on both the maxillary and mandibular first molars but none on the third molar. A small area of wear was observed on the maxillary molar. The other crowns did not exhibit any wear. No carious lesions were observed. The occlusal surfaces of the teeth were not examined under magnification. The presence of the third molar crown indicates the individual was at least over 15 years of age. It appears that the third molar has not yet developed roots and that it may not have erupted yet. Combining this with the minimal wear on the first/second maxillary molar would suggest an individual possibly between 15 and 25 years of age.

Mesial-distal and bucco-lingual measurements for the three tooth crowns are presented in the following table along with comparative 95% confidence intervals for late prehistoric males and females from the Georgia coast as reported in Larsen (1982).

Tooth	Mesio-distal (mm)	Bucco-lingual (mm)
Right Maxillary 1st/2nd Molar	9.0	9.5
Right Mandibular 1st Molar	10.0	9.9
Unsided Third Molar	10.1	10.0
Coastal Males (95% CI)		
Max 1st molar	9.3-11.9	10.22-13.98
2nd molar	8.68-11.52	10.48-13.52
3rd molar	7.38-11.22	9.56-13.04
Man 1st molar	10.07-12.93	10.13-12.47
2nd molar	9.6-12.6	9.69-11.91
3rd molar	9.1-12.7	8.95-14.15
Coastal females (95% CI)		
Max 1st molar	9.02-11.78	10.73-12.87
2nd molar	8.68-11.12	10.18-13.02
3rd molar	7.29-10.71	9.17-12.23
Man 1st molar	9.98-12.42	10-11.91
2nd molar	9.28-12.52	9.39-11.61
3rd molar	9.01-12.59	8.91-11.44