

The Spatial Analysis of Ceramics in the Plow Zone at Town Creek Indian Mound State Historic Site

by

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Ceramics are used in archaeological research to determine the spatial and temporal distributions of people in the past. Ceramics were used for cooking and serving food for households. Ceramics changed over time and can be used to date different archeological occupations. This research examines the spatial distribution of several temporally significant types of ceramics at Town Creek, an archaeological site in North Carolina's Piedmont.

This research used the ceramic collection from the plow zone at Town Creek Indian Mound State Historic Site (31Mg3) to inform about site usage through time. Although the site was intermittently occupied for over 10,000 years. Ceramics first occur at the start of the Woodland period about 2000 years ago. Using existing artifact collections curated by the University of North Carolina at Chapel Hill, this research uses ceramics collected from the plow zone to conduct a spatial analysis across the site to address the temporal and spatial use of the site. In particular, this research will look at the distribution of the different ceramic groupings to determine the different time periods that the site was occupied during the last 2000 years and the areas of the site those people used. This will allow for a better understanding of site function and site usage over time.



The Spatial Analysis of Ceramic in the Plow Zone at Town Creek Indian Mound State Historic Site

A Thesis

Presented To the Faculty of the Department of Anthropology  
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Masters of Arts in Anthropology

by

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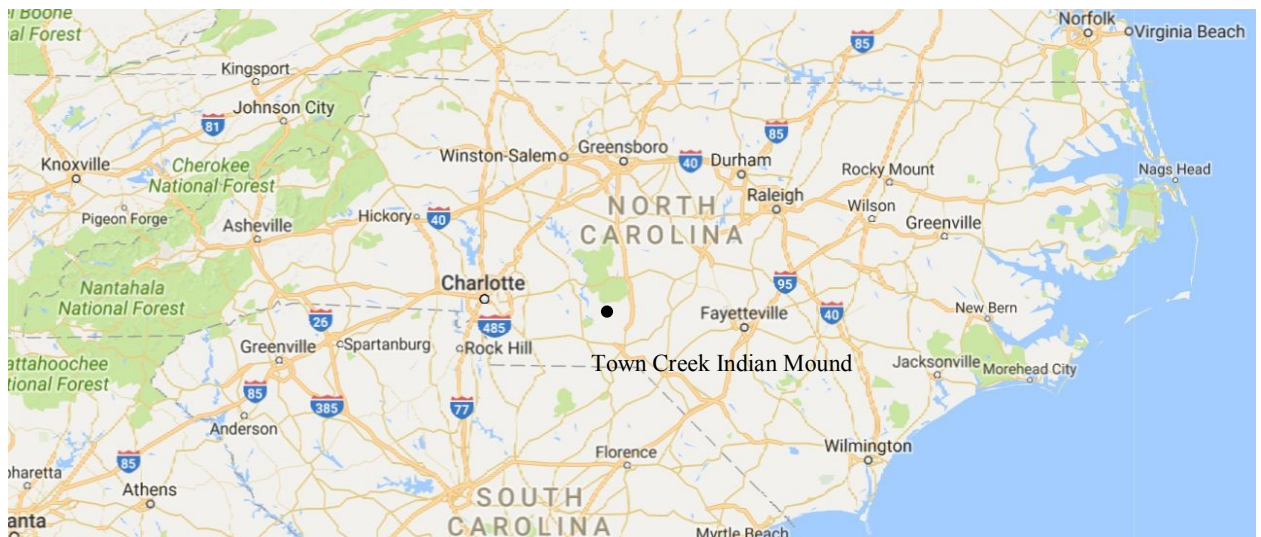
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## Chapter 1 Introduction

Ceramics can be used in archaeological research to determine the spatial and temporal distribution of people in the past. Ceramics were used for cooking, storing food and other goods, and serving food for households. Having changed over time, ceramics can be used to relatively date different occupations.

My research examines the spatial distribution of several types of temporally significant ceramics at Town Creek, an archaeological site in North Carolina's Piedmont (Figure 1.1). One goal of this research is to explore the usage of the site through time. This research will look at the distribution of the different ceramic types to determine the different time periods that the site was in use and the areas of the site those people used. This will allow for a better understanding of site function and site usage over time.



(Google 2017)

Figure 1.1 Location of Town Creek Indian Mound.

Town Creek (Figure 1.2) is a single-mound village among other smaller Mississippian village sites along the Little River (Davis and Ward 1999). Town Creek is unique in the region; the single mound is a feature that is not present in any other village site. The circular village has

houses on either side of the plaza with the mound standing opposite a rectangular ceremonial structure (Boudreaux 2013). The circular structures on either side of the plaza seemed to be used as houses, but when the village population declined, they became mortuaries (Boudreaux 2013). The cemeteries appeared to be that of specific corporate groups that were associated with the earlier houses (Boudreaux 2007). The Leak and Teal sites are other major Mississippian occupations that were excavated in the late 1980's and early 1990's and date to just before or concurrent to Town Creek (Oliver 1992).

Town Creek was a circular village during the Mississippian period. These people lived in a community and worked with each other. They were farmers that grew maize (Coe 1995). There are different sets of palisade walls including a few that seem to cut through the middle of the main occupation (Boudreaux 2005). There is a central plaza that has a center pole. The single mound faces the river and the central pole (Coe 1995). Houses ring the plaza (Boudreaux 2005). The plaza is an area with a low feature density at the center of the village (Coe 1995). There is also a square ceremonial building that has a wall or screen that blocks it from view (Boudreaux 2007). Other time periods are present at the site. There are historic burials that have been uncovered as well as a grouping of Yadkin features (Coe 1995).

The ceramics that are being used are from the plow zone, a layer of disturbed soil where artifacts are no longer in their original context. The artifacts were sorted into types that were defined by Dr. Joffre Coe, who started and oversaw the excavations at Town Creek (1995). The earliest work at Town Creek was devoted to the single mound at the site started in 1937 (Coe 1995). After mound investigations were completed, work then focused on the village component of the site and continued into the 1980's (Coe 1995). The village area was dug in 10-ft-X-10-ft squares, where the plow zone was removed and the features exposed (Coe 1995). Excavators

also screened the plow zone and collected the material (Coe 1995). Most of the site was uncovered and mapped in this fashion. Nevertheless, features were only excavated in half of the units that were uncovered. With only half of the features excavated, the plow zone can provide information about the remaining features and provide an overall picture of the site during different time periods.

Plow zone material has been used for spatial studies since the 1970's. Archaeologists have used plow zone materials to determine site size, period of occupations, and structure use (Binford et al 1970; Roper 1976; Ward 1980). The use of the plow zone material provides data that can be used to address similar issues at Town Creek.

Through using the spatial analysis of the ceramics the research will look at the changes to the site over time and what areas of the site were used during each time period. This research plans to define the plaza through the plow zone. The plaza should be fairly clear of artifacts and features. The plaza at Town Creek held a structure at one point, and this may skew the artifact patterns for the plaza during the time period that the building was in use. It also will look at the Mississippian and the Yadkin occupation. The Yadkin Period is not well understood in the Piedmont, any additional information gathered will be of use for targeting the Yadkin occupation in further excavations. This research will look at each of the Mississippian phases in order to understand site growth better. The other time periods that are present will also be examined, although the small number of sherds present will make this more limited. This would help to understand the site's development. The ceramic distribution within the plow zone will allow for the discussion on all of these topics and assist in planning future excavations at the site.

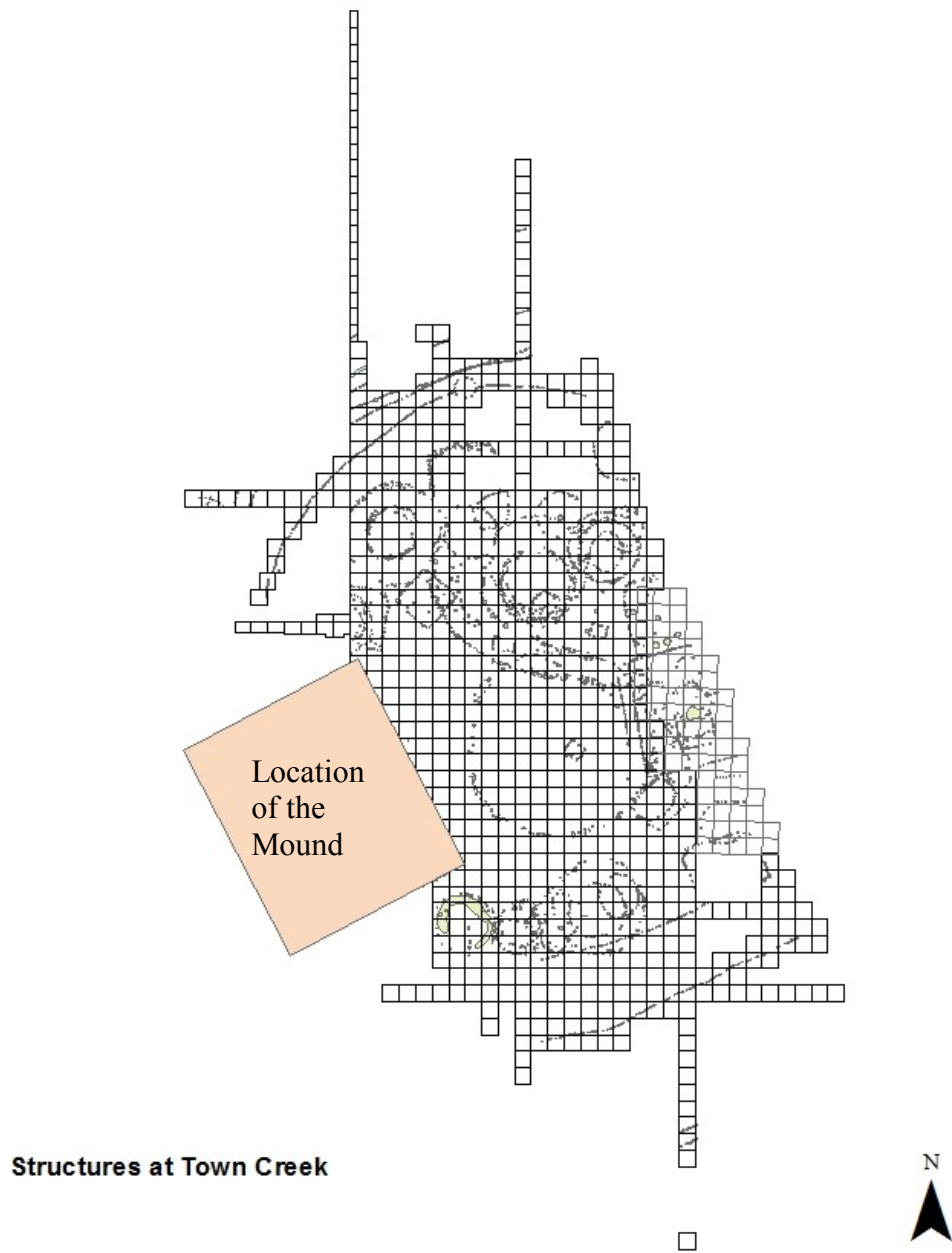


Figure 1.2 Map of structures recorded at Town Creek.

## **Chapter 2 Literature Review**

In this chapter, I discuss the history of excavations and analysis that have occurred at Town Creek. The excavations at the site have occurred over a long period of time, and this does affect the way the information can be presented and understood. Changes in field directors at Town Creek may have allowed for different methods to have been used. The spatial organization of the site will be examined to determine the areas of use over time. I then, provide some background on the use of plow zone materials at a number of sites to provide some background for the analysis in my study.

### **Culture History**

Davis and Ward (1999) wrote about the prehistory of North Carolina in their book *Time before History*. The book also features the prehistory of the region and the different cultures that were present in the Piedmont. There are four major time periods that are present in the region. The Archaic period (8000 – 1000 B.C.) featured hunters and gatherers. While these people left behind lithic materials, they did not leave any ceramic materials in the Piedmont. The next period is the Woodland. This time period encompassed the Yadkin and Badin phases. The Late Woodland and the Early Mississippian period includes the Uwharrie, Teal, Town Creek, and Leak Phases. The Late Mississippian and Contact period is where the Caraway culture phase shows up in the archaeological record.

Table 2.1 Table of time periods with ceramics at Town Creek.

| Ceramic Series | Cultural Stage | Time Period     |
|----------------|----------------|-----------------|
| Badin          | Woodland       | 100-300 BC      |
| Yadkin         | Woodland       | 300-800 BC      |
| Uwharrie       | Woodland       | 800 BC- AD 1200 |
| Pee Dee        | Mississippian  | AD 1000-1500    |
| Caraway        | Protohistoric  | AD 1500-1700    |

The Woodland period has early, middle, and late divisions. The early division for the Piedmont region is the Badin phase. This phase dates from 100-300 BC (Davis and Ward 1999). There is evidence for plant domestication and semi-sedentary villages during this phase. There are few Badin phase sites that have been identified in North Carolina.

The Middle Woodland Yadkin dates from 300 B.C.- A.D. 800 and continues a subsistence pattern of hunting and gathering with some plant domestication (Davis and Ward 1999). This phase has some features associated with it at Town Creek, including a circle of overlapping pit features. The Yadkin phase is largely unknown as there have not been many sites that have an identified Yadkin component.

The terminal portion of the Late Woodland is represented by the Uwharrie phase and is geographically focused to the north of Town Creek. While this phase is most associated with the central Piedmont region of the state, there is a slight presence of the material at Town Creek. These people would have been hunter gatherers with some domesticated plants. This phase transitions into the following Early Mississippian period.

Joffre Coe (1995) summarizes decades of excavations at Town Creek. His book, *Town Creek Indian Mound: A Native American Legacy* focuses on the development of the site as a historical site and museum, as well as the archaeology that has been done. There are chapters on ceramics, lithics, and other data sets from the site (Coe 1995), but these are mostly descriptive in nature leaving the opportunity to conduct additional analyses.

For example, more recent work includes a spatial analysis of the site that includes a GIS map of the site (Boudreaux 2013). Features at the site consists of a large number of post holes, pits, and burials. By looking closely for patterns in the spatial distributions of features, Boudreaux (2007) was able to find different structures and patterns. Boudreaux (2007) described the various phases that Town Creek went through and the structures that can be associated with the Late Woodland and Mississippian occupations. The artifacts from the plow zone were analyzed, but never written about as they have been at other sites. Even though a lot of the site has been exposed and mapped, only about half of the site has been excavated (Coe 1995). There is still a lot of research to be done with the data that Coe collected including looking at the spatial distribution of the ceramics across the site.

### **The Ceramics**

Coe (1995) lists the different ceramic groups based mostly on temper as being Pee Dee, Yadkin, Caraway, Badin, Bruton, and Uwharrie (Coe 1995; 153). The different ceramic groups were then classified by surface treatment (Coe 1995; 153). Surface treatments and different decorative elements are diagnostic of different time periods, and these have been especially helpful in dating features from the site (Boudreaux 2007).

The ceramic typology for the region was first done by Coe (1964) and the seriation for Town Creek was done by Boudreaux (2007). The ceramics present at Town Creek are mainly

from the Mississippian Period. These types include Smoothed, Filfot, Concentric Circle, Burnished, Textile-impressed, Arc-angle, Herringbone, Quarter Circle, Split Diamond, Check-stamped, Simple Stamped and Cob Makred (Coe 1995; 153). The Yadkin Phase had the next highest number of sherds and the surface treatments that are present at Town Creek are: Smoothed, Cordmarked, Simple Stamped, Fabric-marked, and Check-Stamped. The surface treatments associated with Badin are Cordmarked and Fabric-marked. Uwharrie pottery also had two surface treatments: Stamped and Cordmarked.

### **History of Excavations**

Town Creek is the largest Mississippian settlement in the Piedmont region of North Carolina and the sole mound center (Coe 1995). The site has a single mound, and is located along the Little River in Montgomery County (Coe 1995). The site was excavated, nearly continuously, for 50 years under the direction of Joffre Coe (1995). Even though a lot of the site has been exposed and mapped, only about half of the site has been fully excavated (Coe 1995). There is still a lot of research to be done with the data that Coe collected. The amount that has been published on the site does not equal the amount of data that has been collected from the site, leaving many questions still unanswered.

The field work at Town Creek started in 1937 with the investigations of the mound that had been damaged by plowing and looting (Coe 1995). The site had various site directors, and it was excavated almost continually through the 1980's with a break for World War II. After the initial work that had been done on the mound, investigations then focused on the village site. Coe (1995) and Boudreaux (2007) focused their interpretations on features, middens, and the mound. The plow zone, aside from a few small mentions, remained overlooked.

## Spatial Organization

The circular organization of the village is found in many places. The spatial layout of such villages can be seen in ethnographic records that can be tied back to the archaeological record. By seeing the connection between cultural material and their location in the archaeological record, interpretations can be tested against the ethnographic record. When the two sources of information match, it provides a good base for further interpretations.

In his book *Circular Villages of the Monongahela Tradition*, Bernard Means discusses the spatial layout for 12 villages. The villages date from AD 750-1450, had very similar site structures, and were located in Pennsylvania (Means 2007). The villages had circular houses, a central plaza, and circular palisades (Means 2007). Means (2007) discusses how various cultures have structured their circular villages and the archaeological record that they leave behind. He interpreted different artifact scatters to reflect activity zones and then used ethnohistoric data to analyze the social structure of the villages. Based on the artifact distributions and the architectural data, Means (2007) was able to use the data from the WPA-era archaeology projects to understand the Monongahela social structure.

Circular villages require planning, and they can change shape over time, but they generally grow and shrink in a circle. The shape of the village was important enough to rebuild part or all of the town depending on population. Means (2007) used visual inspection and cluster analysis to discuss the artifact distribution data for the sites. He proved that the size of the plaza was not dependent on the size of the population, but rather an independent variable. He tried to find a common pattern, concentric or localized, for the artifact distributions. Means (2007) wanted to see if he could determine if there were certain activities done in the home versus

common areas. The way that he identified the different types of artifact zones and social structure is a method in which to frame the analysis of circular villages such as Town Creek.

### **The Plow Zone**

The plow zone is the layer of soil that has been disturbed by plowing. Town Creek was farmed from colonial times until it became a state property in 1937 (Coe 1995). This caused a great deal of disturbance for the site. Plowing at Town Creek extends to a depth of about 20 CM, and it has disturbed the tops of all the features at the site except for deep post holes, burials, and pits. House floors and other shallow features have been destroyed, so it is difficult to associate deposits with structures.

There were several studies about the use of plow zone data done in the 1980's (Ammerman 1985; Cowan & Odell 1987; Diaz and Navazo 2008; Redman and Watson 1970; Robbins and Rowlett 1982). Since then, there has been a gap in the literature dealing with the plow zone, although work on surface survey has continued. During the height of the popularity of using plow zone data, there were several articles written about using plow zone collections as a way to interpret different sites. As new and different techniques for non-invasive archaeology became available and theory shifted, the use of these studies on the post-depositional processes within the plow zone diminished. These studies were used to discuss the usage of surface finds and lithic scatters in plowed fields. The articles were written after Binford et al (1970) published an article on surface surveys.

There have been other studies of the usefulness of the artifacts that are from the plow zone. Binford et al (1970) in a study on the Hatchery West site use surface survey to target areas for further excavation. Using controlled collecting, they collected a variety of materials that pointed to different occupation zones at the site. Artifact clusters occurred in distinct areas of the

site, and after excavations, he found that the cluster corresponded to features below (Binford et al 1970).

Most of the studies that focus on the plow zone discuss the effect of plowing on surface collecting, but these studies say little or nothing on the correlation with features below surface (Ammerman 1985; Cowan & Odell 1987; Diaz and Navazo 2008; Redman and Watson 1970; Robbins and Rowlett 1982). Around the same time that these studies were being conducted, additional studies were conducted on the post-depositional movement of material within feature fill as a result of plowing (Dunnell and Simek 1995; Roper 1976). Roper's (1976) study showed that material within the plow zone moved very little. His work and the work of Dunnell and Simek (1995) took place over several years and plowing events and in different countries and in different soil types (Dunnell and Simek 1995; Roper 1976). The results were very similar. One study was able to refit several projectile points that had been damaged by plowing. The pieces that could be refitted were quite close to each other (Robbins and Rowlett 1982). The post-depositional movements were recorded as well, but those tended to be vertical and occur in disturbed and undisturbed contexts (Robbins and Rowlett 1982). There are many post-depositional forces at work, like plowing and vertical movement, both within and around the plow zone.

Ward (1980) used plow zone artifacts to try and determine if they can be used for spatial analysis. Using two Woodland sites in North Carolina, Ward (1980) was able to use the plow zone artifacts to determine secondary depositional events, if the objects had been moved to a specific spot to be discarded, discussed further below. Before describing the artifacts in the plow zone, he discussed the history of plows that created the plow zone. Based on his research, the plows that would have been used at Town Creek would have moved the material in the plow

zone slightly, with the pattern of the driver having made a slight impact as to the direction of the movement. The sites that Ward used had structures and pit features that had not been completely destroyed by plowing. He used ten foot square units for his analysis on sites that were currently being excavated and compared the amount of material from the features and from the plow zone. He looked more at the number of artifacts and where the different concentrations were located (Ward 1980). He plotted the ceramics, lithics, projectile points, and faunal materials on maps and compared the different concentrations. The data showed that some artifacts did not seem to be associated with the structures as much as they seemed to be concentrated around the site's palisade (Ward 1980). This was thought to be due to a secondary deposit; the people might have used the area along the palisade as a garbage area. The sites that Ward (1980) used had storage pits and features that were relatively undisturbed by plows and some of the structures still had floors. Ward (1980) chose to do this study due to the increase in cultural resource management and the amount of plow zone material that their investigations were excavating. He felt that there had to be something that could be gleaned from this material. He was able to pull information from the plow zone that was not found elsewhere. For his analysis, Ward (1980) correlated the artifact density in the plow zone to the artifact density below.

Janet Rafferty (2001) took the survey techniques a step farther. She collected artifacts from the plow zone in a controlled matter. She found different occupation zones that dated to different time periods at the site. The areas that had a higher concentration of artifacts that were diagnostic of a certain time period were then related to the features that she found underneath the plow zone (Rafferty 2001). Rafferty (2001) argues by using surface survey data, one could discuss larger settlement patterns.

## **Plow Zone Analysis Methods**

The use of plow zone materials is not new to archaeology. The use of the plow zone and the methods that are used in the analysis of the plow zone need to be understood in order for this study to have valid results. Binford (1970) used plow zone materials to locate and target different occupations as a part of his work at the Hatchery West Site. This was the start of a series of studies on the usefulness of the plow zone. Ammerman (1985) devised a series of tests to determine the movement and the amount of destruction that plowing had on cultural materials. With the use of painted cobbles, he was able to see the rate material moved and how it broke up in the plow zone. His results showed that there was a minimum size that material would break up into and that while material moved, it did not move very far.

At the Hatchery West Site and many other sites, the use of shovel test pits proved to be of a great help in locating and dating sites (Binford et al 1970). This survey technique often involves using the presence and absence of diagnostic artifacts to determine where a specific occupation was on a multicomponent site. At Town Creek, instead of a sample of shovel test pits extrapolated to make interpretations about the site, it has been divided into units. While these units are much larger than a shovel test pit, the methods of analysis remain the same.

Janet Rafferty's (2001) work at the Josey Farm Site in Mississippi used surface and plow zone collections to help understand site size and period of occupation. The surface collection showed that there was a proto-historic/historic occupation present at the site. She then placed a few excavation units in the areas with the highest densities of artifacts. The surface collection showed evidence of two different occupations. She was able to date the materials that came from the excavation units and the features that were found. This along, with dating some of the materials, showed that there were two separate occupations, temporally and spatially. She

suggests that the reuse of the land and the different occupations are part of a larger pattern of reuse in the region.

Lewarch and O'Brien (1981) discussed the uses of surface assemblage, but they also discussed the issues associated with them. Cultural resource management (CRM) has long used surface materials to locate and type sites. This is done to save costs and time. While the use of surface finds is accepted, it is not without its issues.

### **Summary**

The plow zone is full of information that could be used, but it is regularly over-looked by archaeologists. Plow zone material loses some context, but does not migrate far due to the plowing. This method of analysis could lead to more targeted excavations as well as ways to understand site layouts and changes in site size over time. This underutilized resource should be investigated to have a better understanding of the site and what could be lost within the plow zone.

This thesis will look at the plow zone information at Town Creek. The information should prove useful to examine different areas of the site and determine where the different occupations occur. Using spatial patterns, this thesis will look at past work to help guide future work at Town Creek.

### **Chapter 3: Methods**

This chapter will discuss the methods of analysis used in this research. The chapter also will discuss the pottery recovered from the plow zone at Town Creek and its relationship to the different cultures that created it.

#### **Excavation Methods**

The excavations at Town Creek started in 1937. The earliest excavations focused on the mound. The village site was excavated after the mound excavations were complete. The village was a planned excavation. The site was state-owned, and it was not in danger of development or looters after the mound excavations.

Each unit had the plow zone removed and screened through a half-inch screen (Coe 1995). Each of the squares in the grid had the plow zone removed and the features below excavated. About half of the features that were mapped were fully excavated. The village excavations lasted from the 1940's to the 1980's. There have been a few field schools and field days since then.

#### **Spatial Analysis Methods**

Over 700 excavation units were examined for this analysis. The different units were excavated under different supervisors and analyzed by various graduate students over the years. The analysis was recorded on index cards that are now housed at the North Carolina State Archives in Raleigh.

The collection from Town Creek should have all the material that was present in each unit, although this may not be the case. The stringency of the collection process depended on the field director, while it would appear that most of the field directors were very diligent with their

collection strategy, there were a few that do not appear to have been as rigorous about collecting from the plow zone as the rest. Since all of the units have been subject to the same weather and plowing conditions, there is little concern about the post-depositional processes disturbing the site differentially. While it should be noted that the sherds used for this study are not *in situ*, they still provide a wealth of spatial information. The use of plow zone sherds can help define the site boundaries, determine site function, and determine the effects of post-depositional processes on the site.

The methods for my analysis were similar to those used for interpreting artifact distributions based on shovel-test pits and surface surveys (Binford et al 1970). The presence or absence of the different ceramic types in different areas of the site suggests the different uses of the site over time. Since excavations at Town Creek went on for so long and under the supervision of many different field directors, I evaluated the ceramic counts from different areas to see if counts represent poor recovery methods rather than past human activities.

One of the first test was to determine if the different field directors had an impact on collection bias. The data for each field director were recorded based on the information of the unit plan maps. Some of the maps did not have a field director name or date associated with it, but a majority did. This allowed for it to be determined that a few of the patterns were due to collection bias.

Wright was the first field director after Coe, and he started the excavations in the village portion of the site (Coe 1995). Before Wright started, all of the work had been dedicated to the mound (Coe 1995). Figure 3.1 is a map of where the field directors were in charge of excavations. The first column of units that were excavated were L90, the blacked out center column. Not only were these units the first to be excavated, it can be assumed that they were also

some of the first analyzed. This could account for the wide variety of sherds present. If they were still figuring out the analysis methods, they could have made mistakes and did not go back and correct them. The second biased area was where South was the field director in the northern half of the site. This is an area of very low sherd density. While this area does border the plaza, the sherd counts are lower in the areas that are associated with structures. While this area was kept in the study, it was viewed as though they only took a sample of the ceramics. The third anomalous area came from the rim data. This was the Accession 71 area. The easternmost portion of the site. While the surface treatments in the area were not surprising, the number of small rim sherds were surprising, as only small ones were recorded. This area was kept in the study of the sherds and rims but the rim data were viewed skeptically.

There is a category called Filfot-Specific (Figure 3.2). The card with the single-most sherds of this type and the cards around it have notations in the margins stating the sherds came from one pot. This is important as it allows the post-depositional spreading pattern of the sherds to be seen. The majority of the sherds are found within one unit, however there are sherds in the surrounding units. The units that are in the circle in Figure 3.2 are the ones that have the notation about being from one pot. This provided my analysis with some validity as the sherds are still in a tight grouping. While we can see the movement in the plow zone, the sherds were not scattered across the site.

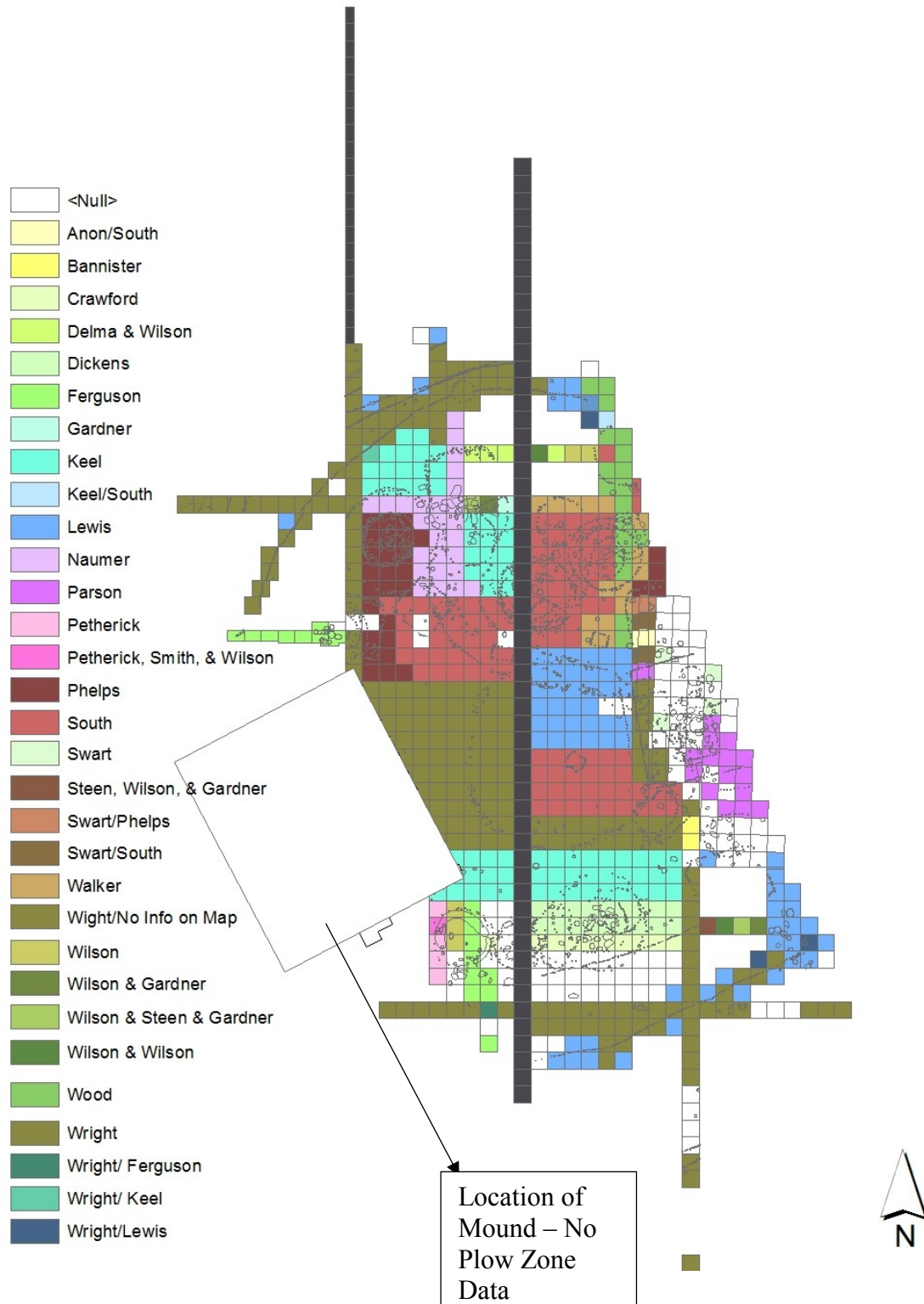
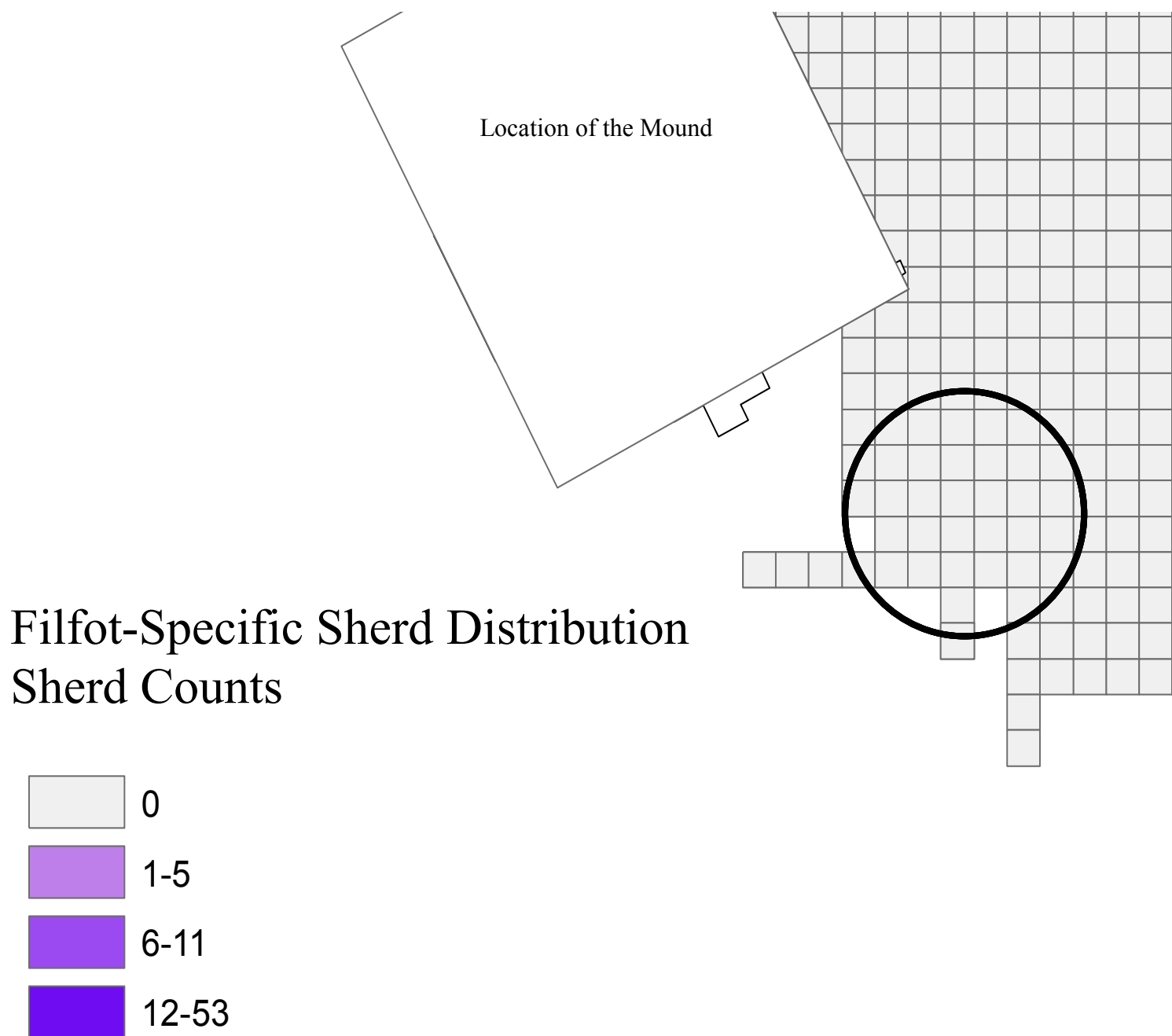


Figure 3.1 A map of field directors.



*Figure 3.2 Cluster of units that contain sherds from the same vessel.*

## **Ceramics by Cultural Period**

A total of 451,086 sherds were classified from the plowzone in the 786 units I analyzed for this research. Of these, 415,786 (92%) were too small to assign to a type. The remaining 35,300 sherds were classified by Coe and his students as types, from the Badin, Yadkin, Uwharrie, Pee Dee, Caraway, or Bruton series. The total sherd counts for each time period give a sense of the density and length of the occupations. The Badin and Uwharrie periods had the lowest number of sherds. The Pee Dee occupation, unsurprisingly, had the highest number of sherds, with the Yadkin occupation having the second-highest number of sherds.

The next steps were to map the sherds by period and provenience. This would allow for a large-scale analysis to be done. Different phases appeared in different areas and had different and distinct boundaries. The Yadkin and the Caraway phases, while not as large as the Pee Dee, had a clear presence and showed some time depth.

## **Baden Series**

The Badin series is the oldest ceramic type found at Town Creek. Badin ceramics date to the Early Woodland period, 100-300 BC (Ward and Davis 1999). Coe (1964: 28-29) describes four types of Badin ceramics, but only two types were found in the plow zone at Town Creek. Badin Fabric Impressed and Badin Cord Marked were found in small numbers at Town Creek, with Coe (1995: 153) stating that there were 108 uncovered in his analysis and 40 more were found in the plow zone (Coe 1995: 153). The difference between the two Badin ceramic types found at Town Creek is the surface treatment. The Cord Marked had cord wrapped around a paddle then the pot was hit while leather hard and the cord design was then impressed on the pot (Coe 1964: 28). Fabric Impressed Badin types are made in a similar way except fabric was

wound around the paddle or impressed upon the pot (Coe 1964; 29). Coe (1964) states that Badin was very rare at Town Creek.

Table 3.1 Badin Series Sherd Counts.

|                     |    |
|---------------------|----|
| Badin Cord Marked   | 36 |
| Badin Fabric Marked | 4  |
| Total               | 40 |

### **Yadkin Series**

The next ceramic series at Town Creek is Yadkin. It dates to the Middle Woodland, 300 BC-AD 800 (Coe 1964; Ward and Davis 1999). The temper and the quality of the cord markings as well as the introduction of stamp patterns sets Yadkin aside from other ceramic series (Ward and Davis 1999). The Yadkin phase pottery is from the Late Woodland period. At Town Creek, he describes the Yadkin Hearth Circle (Coe 1995). This grouping of overlapping, rock-lined hearths is located about 50 feet from the southwest corner of the base of the mound (Coe 1995). These features contained a concentration of Yadkin ceramics that were found *in situ*. Coe (1995) thought this circle was important, and he felt that the later building of the mound near that location was significant. He also mentioned a Yadkin midden, he counted around 6500 Yadkin sherds recovered from the site (Coe 1995).

Table 3.2 Yadkin Series Sherd Counts.

|                        |      |
|------------------------|------|
| Yadkin Cord Marked     | 2113 |
| Yadkin Simple Stamped  | 824  |
| Yadkin Smoothed Plain  | 3343 |
| Yadkin Fabric Marked   | 150  |
| Yadkin Brushed Stamped | 55   |
| Total                  | 6485 |

### **Uwharrie Series**

Town Creek also has some Uwharrie sherds. Davis and Ward (1999) place the Uwharrie sherds between Yadkin and Pee Dee (Davis and Ward 1999). The Uwharrie people are from the central Piedmont, not the southern Piedmont where Town Creek is located (Davis and Ward 1999). The Uwharrie series is from the Late Woodland period AD 800-1200. Few Uwharrie sherds were found at Town Creek.

Table 3.3 Uwharrie Series Sherd Counts.

|                      |    |
|----------------------|----|
| Uwharrie Cord Marked | 7  |
| Uwharrie Stamped     | 10 |
| Total                | 17 |

### **Pee Dee Series**

The next ceramic series was Pee Dee. They date to the Mississippian period and are from the main occupation at the site (Coe 1995). Pee Dee is the most abundant ceramic ware in quantity

and number of types at Town Creek. The most abundant type of Pee Dee pottery is plain, followed by filfot (1995: 152). The Mississippian phase has three sub phases, the Teal, Town Creek, and Leak phases. Boudreaux (2007) found that by using different rim decorations and surface treatments, he was able to determine different decorations were popular at different times. The Teal Phase, AD 1000- 1150, is the earliest Pee Dee Phase and the surface treatments that were prevalent are Cord Marked, Cob Impressed, and the stamping patterns Arc Angle, Concentric Circles, Filfot, Herringbone, and Split Diamond (Boudreaux 2007: 27-28). The next phase dates to AD 1150-1300, and it is the Town Creek Phase; the surface treatments are Quarter Circle Stamped and Line Block Stamped (Boudreaux 2007: 28). The Last Pee Dee Phase is the Leak Phase, AD 1300-1500, and it is associated with the following surface treatments: Plain, Brushed, Net Impressed and Check Stamped (Boudreaux 2007: 33). The Teal and Town Creek Phases were analyzed together as they are the two earlier phases, when the site was starting to be occupied and at its peak occupation (Boudreaux 2007).

Table 3.4 Pee Dee Series Sherd Counts.

|                    |      |
|--------------------|------|
| Filfot -4 bar      | 64   |
| Filfot - 5 bar     | 40   |
| Filfot - 9 bar     | 27   |
| Filfot - specify   | 134  |
| Filfot - small     | 55   |
| Filfot- Misc.      | 4278 |
| Concentric Circles | 2051 |
| Quartered Circles  | 252  |

|                |      |
|----------------|------|
| Split diamond  | 130  |
| Arc-Angle      | 444  |
| Herringbone    | 273  |
| Other- Specify | 288  |
| Other- Specify | 62   |
| Cob            | 61   |
| Total          | 8159 |

Table 3.5 Pee Dee Rim Counts.

|                    |      |
|--------------------|------|
| Plain Rims         | 2253 |
| Rims with Nodes    | 20   |
| Rims with Rosettes | 166  |
| Notched Rims       | 23   |
| Punctated Rims     | 84   |
| Rims with Fillets  | 256  |
| Total              | 2802 |

### **Caraway Series**

The Caraway series is the most recent phase at Town Creek. The phase dates from AD 1500-1700 (Davis and Ward: 134). The Caraway ceramic types present are Cord Marked, Net Impressed, Stamped, Brushed, and Plain. There are around 600 Caraway sherds found in the plow zone.

Table 3.6 Caraway Sherd Counts.

|                       |     |
|-----------------------|-----|
| Caraway Cord Marked   | 246 |
| Caraway Net Impressed | 125 |
| Caraway Stamped       | 132 |
| Caraway Brushed       | 15  |
| Caraway Plain         | 48  |
| Total                 | 566 |

### **Summary**

To summarize, the plow zone is an underutilized resource that can provide a wealth of information. While the sherds are not in their original context, they have not moved enough to render them irrelevant. After determining which units were able to be used in this analysis the sherds were mapped to determine the different patterns that were present.

## **Chapter 4: Analysis**

In this chapter, different ceramics are mapped and their distributions discussed. The different distributions across the site will reveal where people were on the landscape. The people who lived in each time period interacted with the site in a different way and in different areas. This thesis will provide maps of the areas for future researchers to use in their investigations.

After examining the different distributions of surface treatments, types were then examined for analysis. There were two types that stood out due to their ambiguous nature; miscellaneous filfot and miscellaneous stamped. These were the two biggest categories after the uncategorized sherds ( $n= 4,278$  and  $n= 12,689$  respectively). These two categories could encompass multiple surface treatments and may represent multiple time periods. With this uncertainty, it was determined that it would be best to exclude these categories from further analysis.

Ceramics from different periods were then mapped, and the surface treatments from some periods were combined. This allowed for the entire period to be evaluated at once. The Pee Dee, Yadkin, and Caraway phases had spatially distinct occupational boundaries. The limited number of Uwharrie and Badin sherds made the patterns of their distributions harder to distinguish.

### **Badin Sherd Distribution**

Chronologically, Badin ceramics are the first to appear at Town Creek. Badin ceramics occur in the Early Woodland period, 1000-300 BC. There were a total of 40 sherds (Figure 4.1) recovered from plow zone contexts. The sherds, with the exception of a few outliers, are all located close to the river. The Woodland period is marked by mobile hunter-gatherer groups and the location and limited number of sherds appear to be consistent with this model. This would not have been a long-term settlement, and the location by the river suggests that the waterway

was an important resource. During the Badin phase, the site was visited but had no long-term settlement. Any Badin features at Town Creek should be ephemeral and they should be located by the river.

### **Yadkin Sherd Distribution**

The Yadkin phase occurred between AD 300-800, and it is a Middle Woodland phase. While Coe (1995: 90) discussed some elements of Town Creek's Yadkin phase occupation, he did not discuss this occupation in great detail. He identified a series of overlapping features just south of the mound as the Yadkin Hearth Circle based on concentrations of Yadkin ceramics in some of these features, but this cluster of features has never been satisfactorily interpreted. Coe (1995) also mentions the presence of a Yadkin-phase midden in the southern portion of the site, but he did not give its specific location or its relative size. While it was clear from Coe's (1995) interpretations that a sizeable Yadkin-phase component was present at Town Creek, his focus on the site's Mississippian occupation and the mound left many unresolved questions about the size and duration of this earlier occupation.

About 6,000 Yadkin sherds (Figure 4.3) that were sorted into five types that were used in this study. This number should be higher as a few of the cards state that the small and uncategorized sherds for units were mostly Yadkin. The Yadkin ceramics include Cord Marked, Simple Stamped, Smoothed Plain, Fabric Marked, and Brushed and Stamped. These all occur in a relatively small area, although there is a low density scattering over a lot of the site. The majority of the Yadkin sherds occur in the southern portion of the site. The dense cluster of Yadkin sherds suggests an occupation with some time depth. This would not be a small transient population, but rather a more substantial occupation that could have more features associated with it.

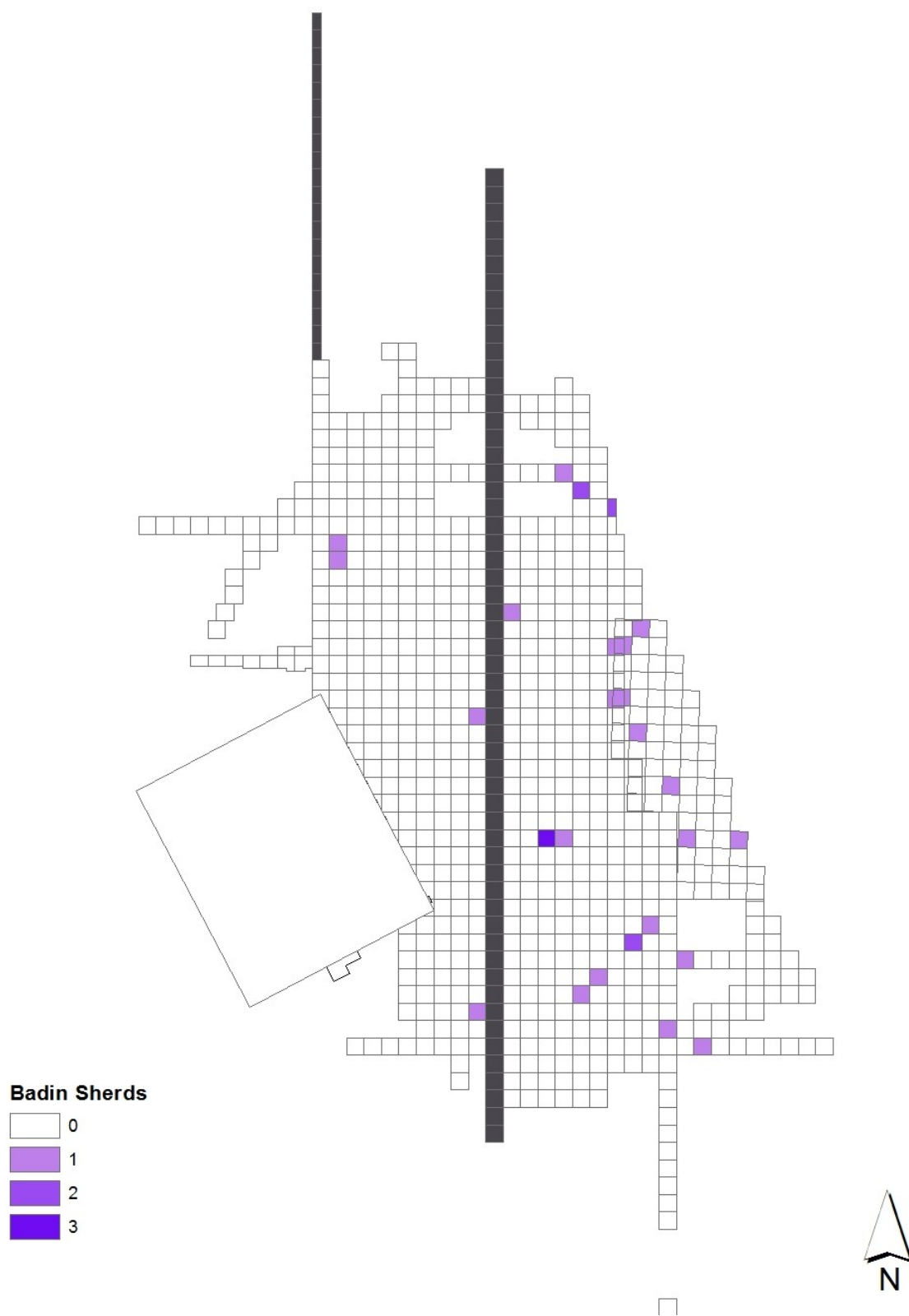


Figure 4.1 The distribution of Badin series pottery (N=40) in the plow zone at Town Creek.

The cluster of features referred to as the Yadkin Hearth Circle is represented in the plow zone, but it does not have a high density. Instead, it is just outside of the highest density area. It is located to the west of the high-density area and is the furthest Yadkin signature from the river. Coe (1995) felt that the location of the later mound and the Yadkin Hearth Circle could have meaning, but he did not discuss what that meaning could be. This could mean that the Hearth Circle was set aside for a specific purpose or that people kept returning to the site for a ceremonial purpose.

Within the Yadkin occupation area, there are two smaller clusters that might represent households. Only one of the clusters has been excavated, and the prevailing thought was that it was Mississippian rather than Yadkin (Coe 1995). The other high-density area is partially in a portion of the site that has not been excavated. Within these two clusters would be an ideal location to look for Yadkin structures and features.

### **Uwharrie Sherd Distribution**

The Uwharrie phase is next and the sherd count is low and the analysis is very limited. There were 17 Uwharrie sherds recovered, 10 of those were stamped and the remaining were cord marked. The sherds were located in two main clusters (Figure 4.2) in the northwest and the southeast parts of the site. The limited number of sherds and the dispersed pattern makes it nearly impossible to determine the extent of the Uwharrie occupation at the site without more investigation. The Uwharrie phase overlaps the Yadkin and the Pee Dee phases where the site had larger occupations.

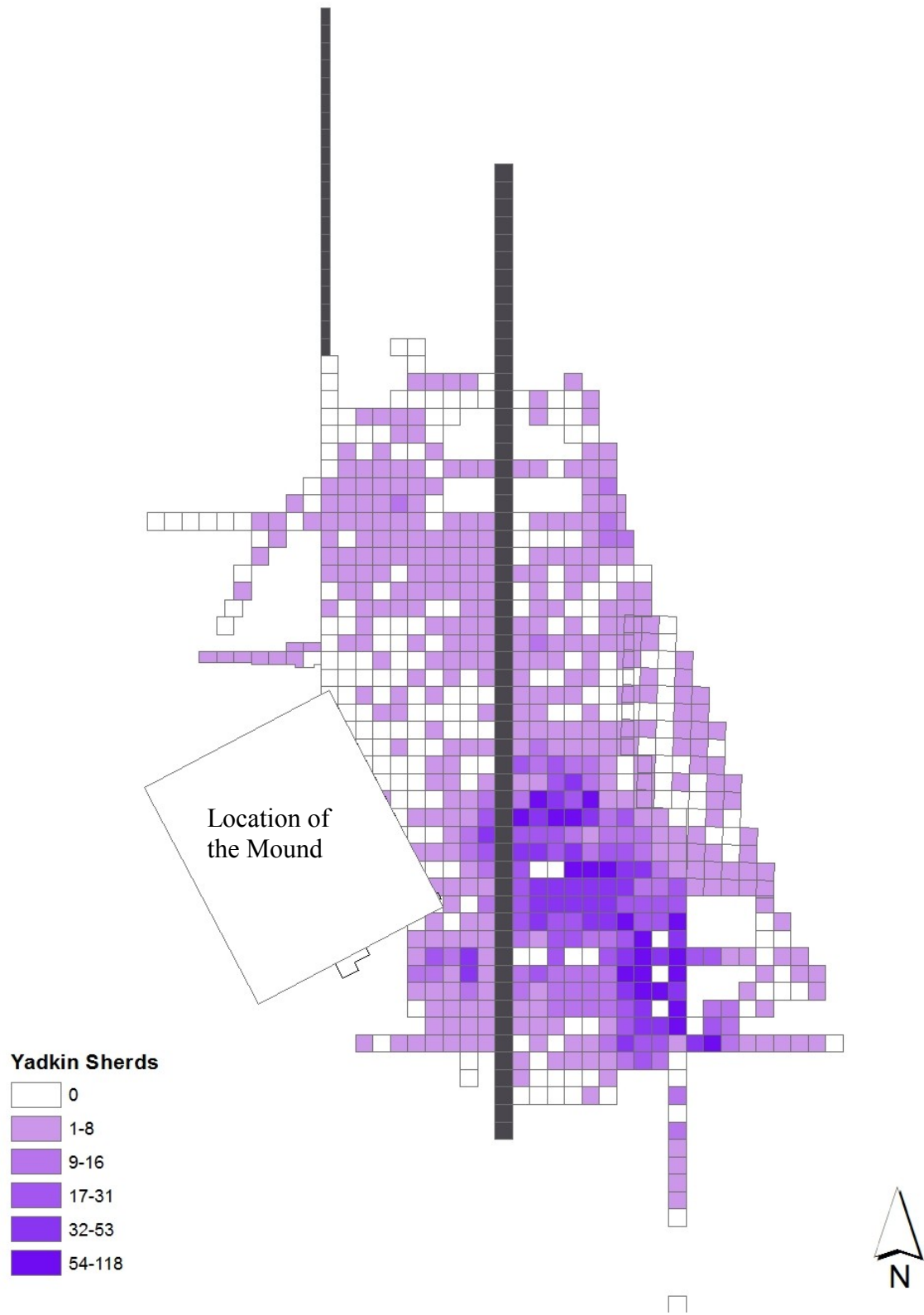


Figure 4.3. The distribution of Yadkin series pottery (N=6485) in the plow zone at Town Creek.



Figure 4.2. The distribution of Uwharrie series pottery (N=17) in the plow zone at Town Creek

## **Pee Dee Sherd Distribution**

The Mississippian ceramics are able to be analyzed beyond the existence of the occupation and the occupation boundaries. The diagnostic types and the rim decorations allow for the discussion of how the site changed over time. The Pee Dee occupation ranges from AD 1000-1500. Within this time range are three phases: the Teal, Town Creek, and Leak phases.

The plow zone patterns appear to be consistent with the interpretation of the site as a village. The village included the mound, a circular plaza, and a ring of dwellings. After the village was abandoned, several of the houses were turned into family cemeteries during the Leak Phase. The changes of the use of the site shows up in the archaeological record; the types of surface decorations and the location of the sherds differs as well as the number of sherds.

The sherds that are from the time period where the village was inhabited show a denser ring around the plaza (Figure 4.4). The southern part of the site has a higher concentration of sherds, and is consistent with the current site plan. That ring is where the houses were located and where most of the cooking and food storage were conducted and likely result in the discard of broken pottery. The increase in the sherds in the southern part of the site is a general trend of the site appearing to have higher densities of sherds throughout the whole period. The mostly clear plaza shows there was an effort to keep that area clear of refuse. The whole of the Mississippian period shows a defined plaza. The domestic areas show as a ring around the plaza with sherd concentrations around the base of the mound and the enclosure. The large amount of sherds could be making the different activity zones unclear. This could be due to collection bias as South was responsible for a lot of the collection in the northern part of the site and did not do the best job. While the plaza appears and the later Mississippian ceramics tend to be in a smaller area than the early Mississippian ceramics.

The later Pee Dee Sherds are from the Leak Phase (Figure 4.5). The sherds are concentrated in two areas. These areas are consistent with the plaza still being preserved as an open space and the sherds are located where structures were. Overall, fewer shreds are present, than during the Town Creek Phase

### **Mississippian Rim Distributions**

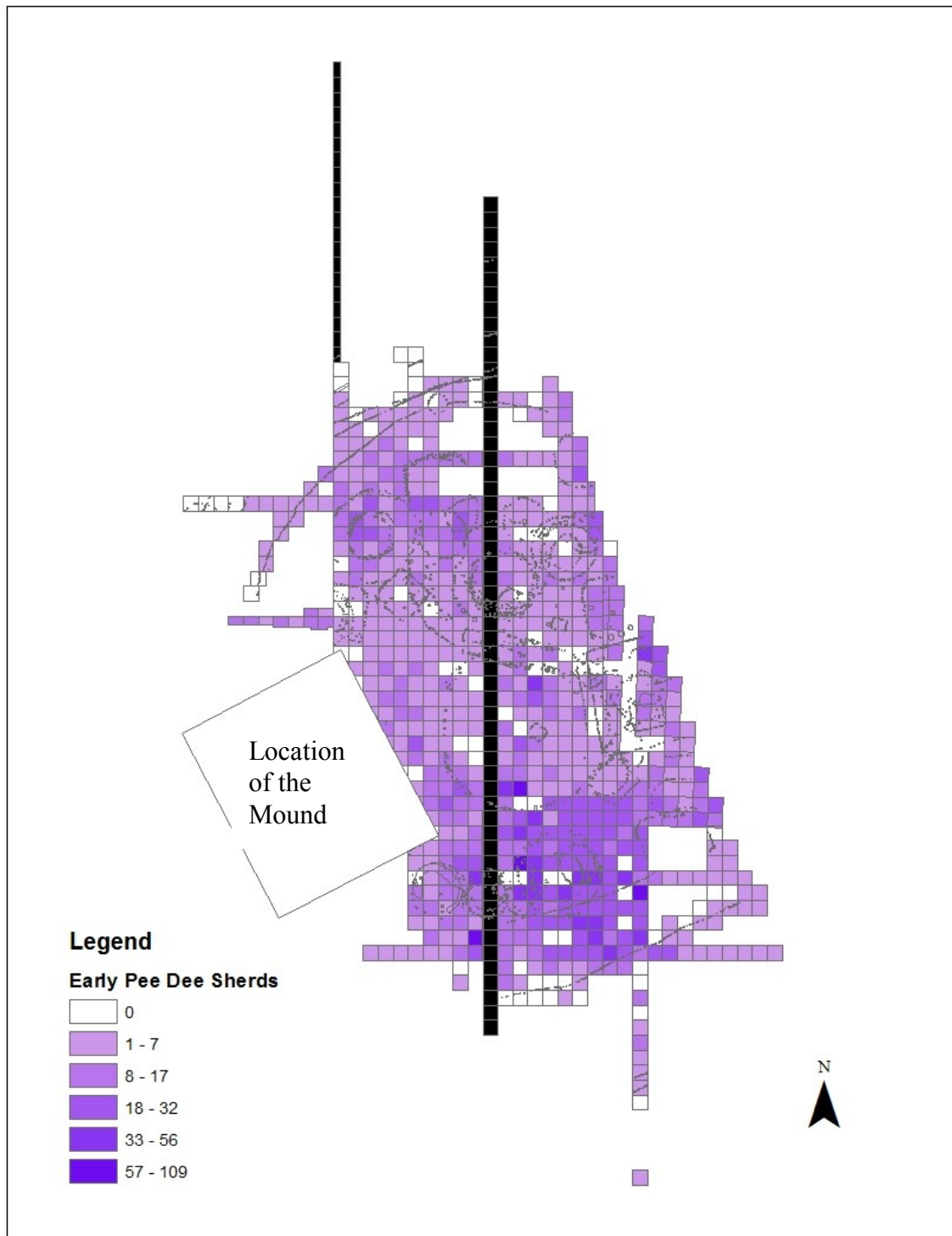
The rim decorations in the Mississippian period allow for a more detailed analysis of the changes in the site over time as the seriation of the rim decorations is well defined. The plain rims occurs throughout the Mississippian Period, but are most associated with the Teal phase (N=2,216) (Figure 4.6). Plain sherds are located in the southern and along the western portions of the site. Plain rim sherds form a ring around the plaza and appear to be associated with the domestic areas of the site.

### **Pee Dee Rims with Rosettes**

The distributions of rims with rosettes are concentrated to the south and form a ring around the plaza (N=166) (Figure 4.7). The central plaza is highly visible. Rosettes are associated with the Town Creek Phase. The northern portion of the site is lightly populated and the rims appear to be associated with the innermost ring of structures. The rims also are found in the area at the base of the mound. 166 rims with rosettes were recovered from the plow zone.

### **Pee Dee Rims with Notches**

Notched rims are fairly dispersed across the site but there is a small concentration in the southern portion of the site (N=23) (Figure 4.8). This small cluster appears to be associated with a structure in the domestic area. These rims date to the Leak period following the population peak at Town Creek, when it is believed to have been a ceremonial center.



*Figure 4.4. The distribution of Teal and Town Creek Phase Pottery (N=7679) in the plow zone at Town Creek.*

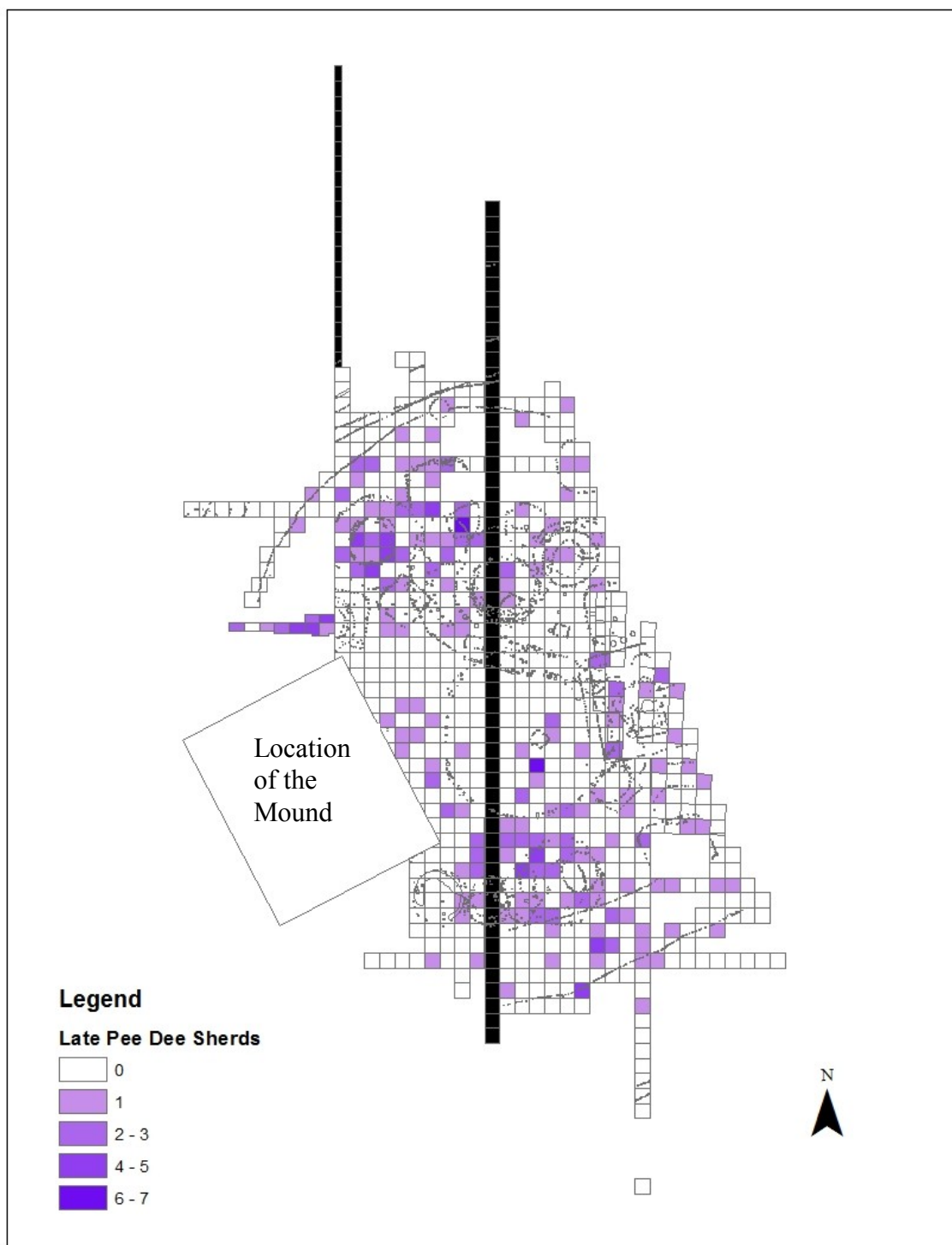


Figure 4.5 The distribution of Leak Phase Pottery (N=252) in the plow zone at Town Creek.

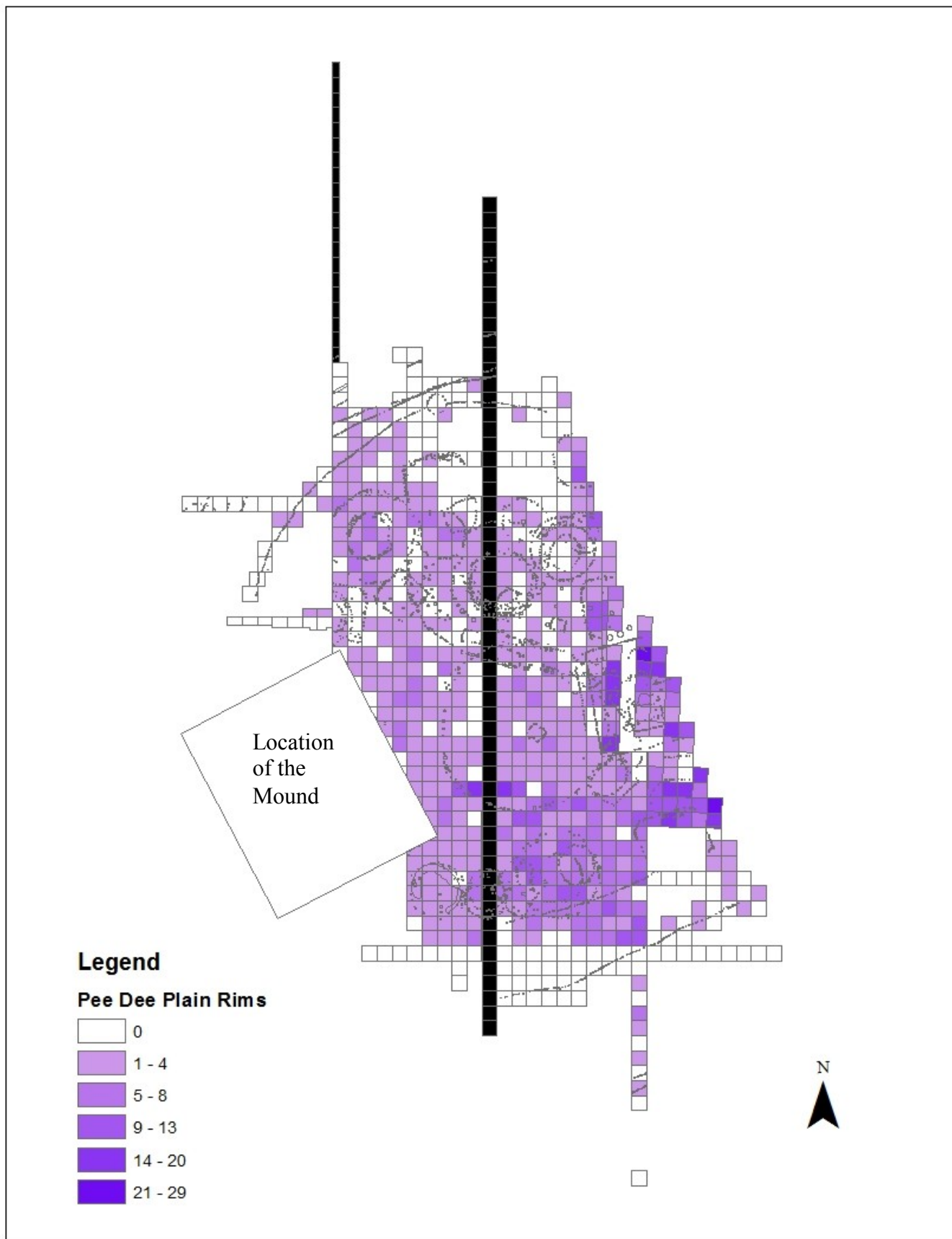


Figure 4.6 The distribution of Pee Dee Plain Rims (N=2261) in the plow zone at Town Creek.

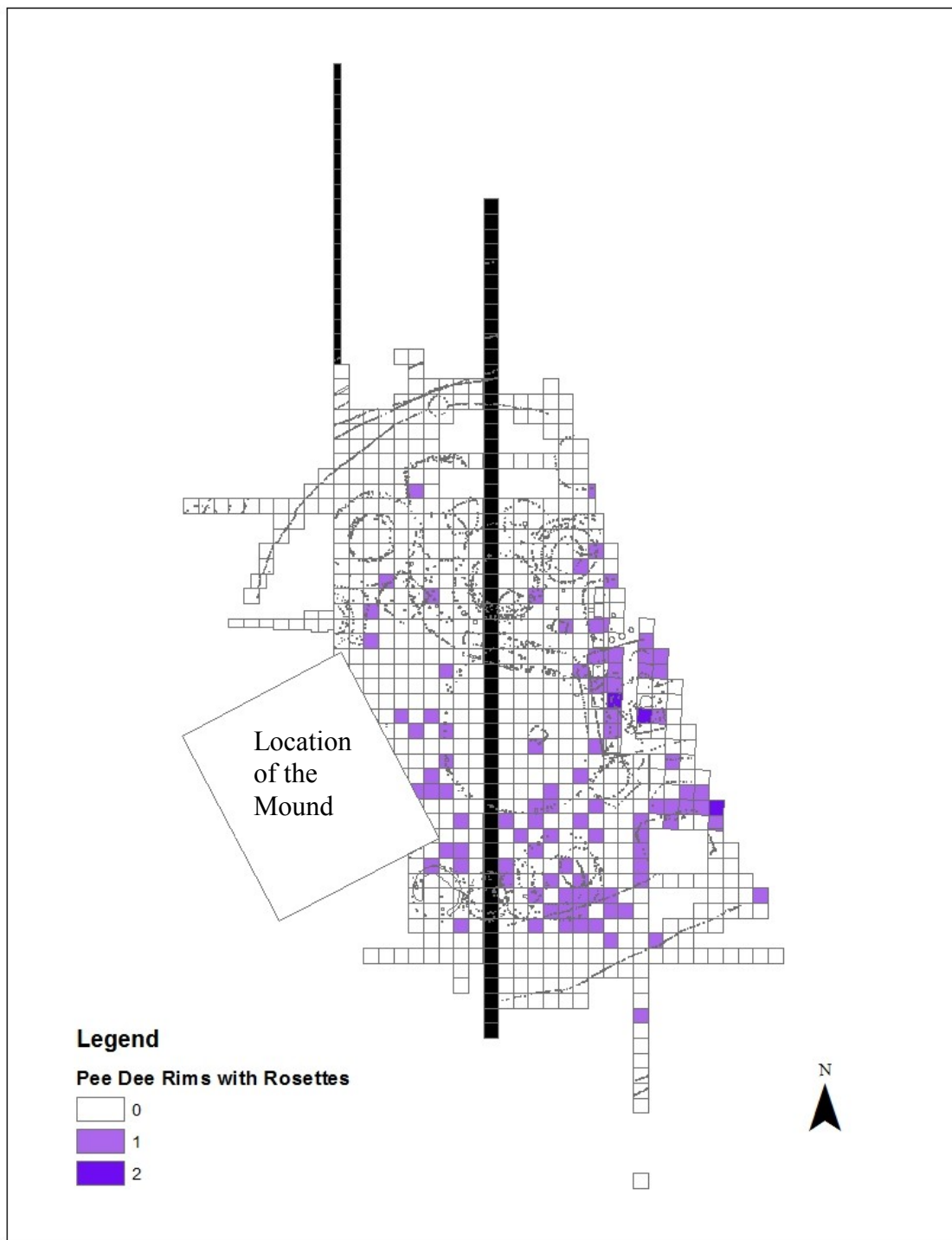


Figure 4.7 The distribution of Pee Dee Rims with Rosettes ( $N=166$ ) in the plow zone at Town Creek.

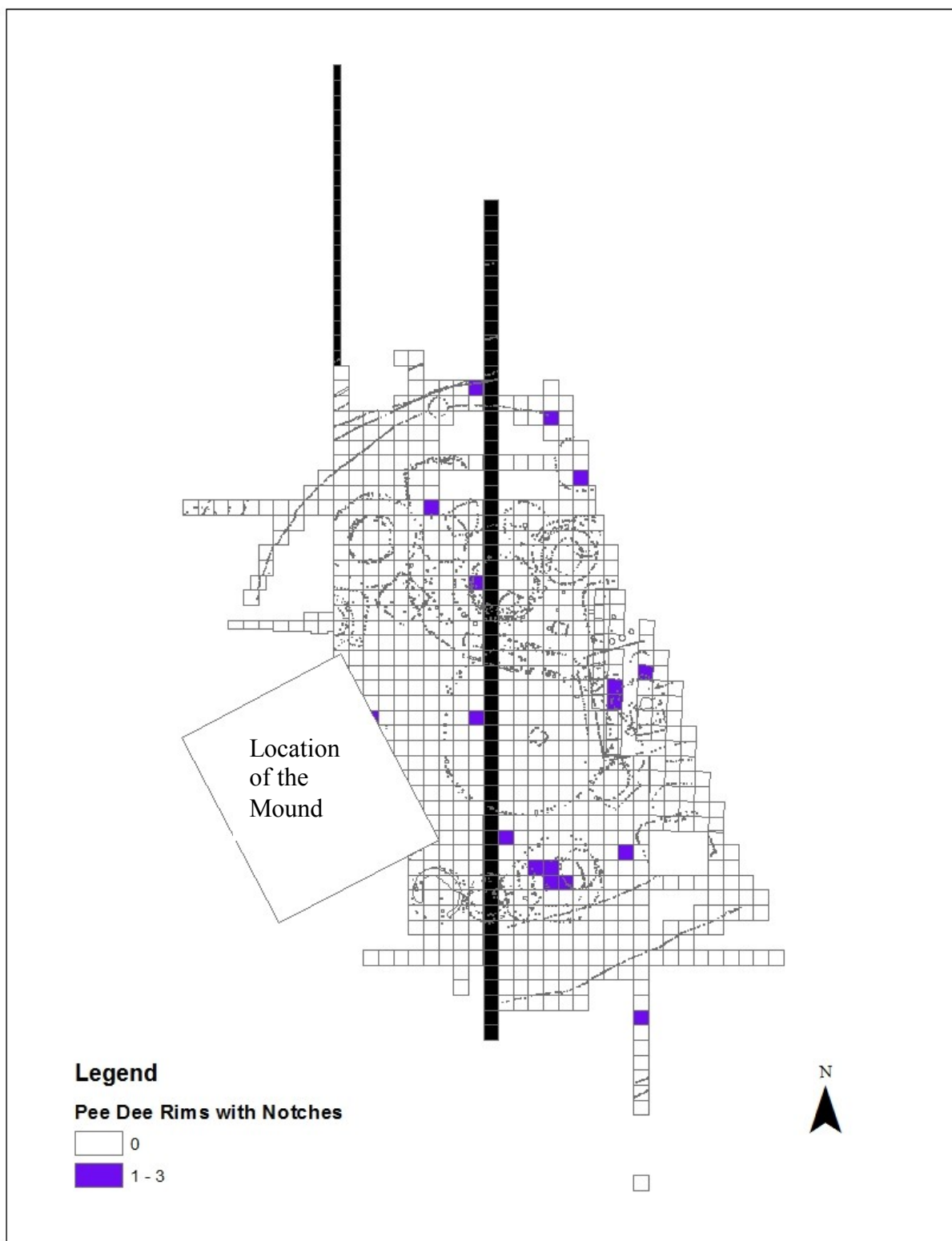


Figure 4.8. The distribution of Pee Dee Rims with Notches (N=23) in the plow zone at Town Creek.

### **Pee Dee Rims with Fillets**

There is a dramatic change in spatial patterns found with rims with fillets (N=256) (Figure 4.9). Rims with fillets are found in the plaza. Other rim types and other sherds are mostly absent from the plaza during the Mississippian period. The rims with fillets are also absent from the northeastern portion of the site. It is unclear what phase they belong to as they do not fit any of the spatial patterns found in the Mississippian Period.

### **Pee Dee Rims with Nodes**

Noded rims are sparsely distributed (Figure 4.10). The rims are located around the plaza and have a fairly even distribution across the site. Noded rims are associated with the Leak phase. Only 20 rims with nodes that were uncovered in the plow zone.

### **Pee Dee Rims with Punctates**

The punctated rims are located around the plaza (Figure 4.11). There were 84 rims that were uncovered from the plow zone. While the sherds are scattered across the plow zone, they do appear to be clustered in small groups.

### **Caraway Sherd Distribution**

The sherds that are from the Caraway period are also of interest. Caraway sherds (n=623) were recovered from the plow zone. Caraway sherds are mostly located along the eastern portion of the site concentrated around two structures. The plaza has more sherds in it compared to previous time periods. This would suggest that the plaza is not important, unlike the Mississippian Period.



Figure 4.9 The distribution of Pee Dee Rims with Fillets (N=166) in the plow zone at Town Creek.

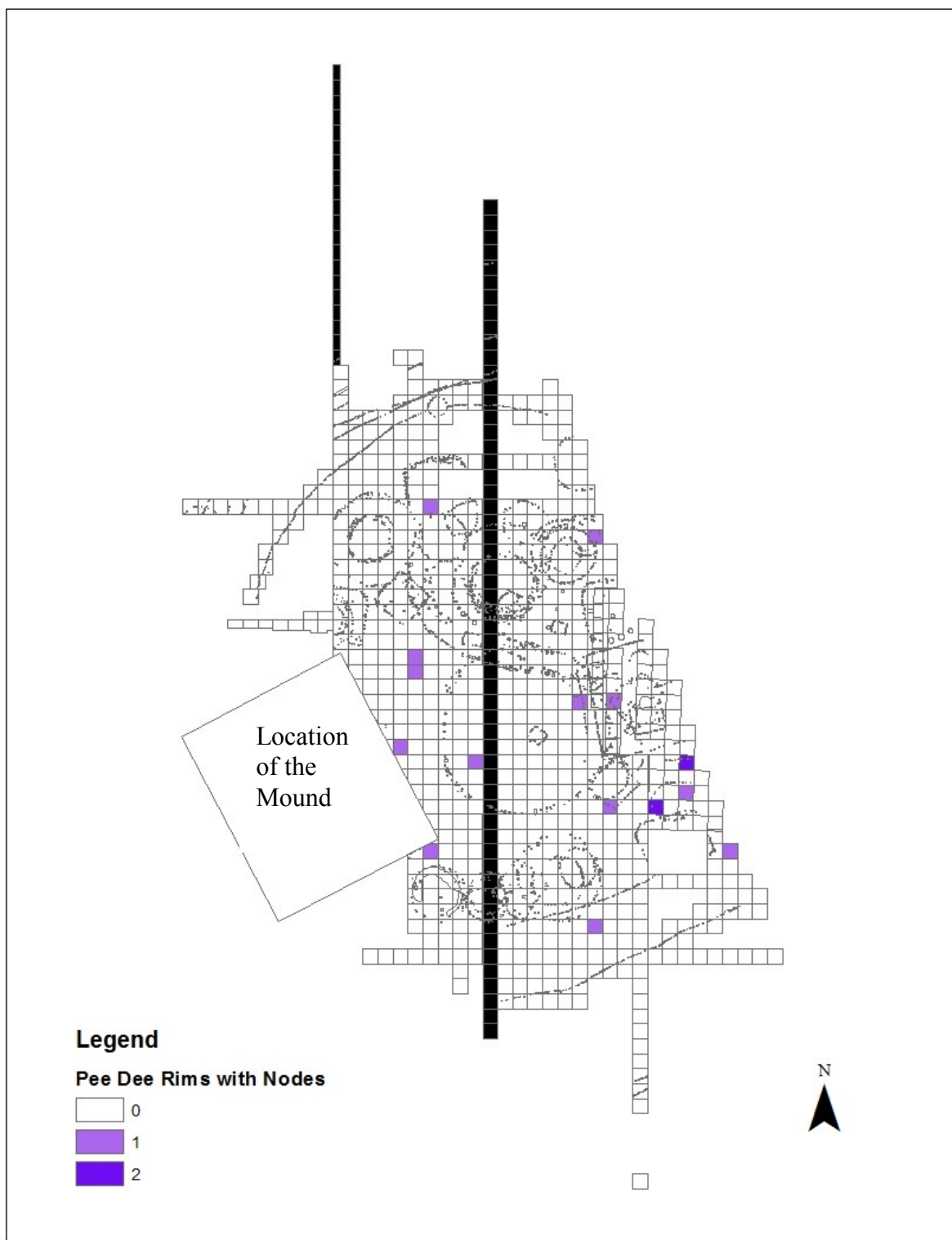


Figure 12. The distribution of Pee Dee Rims with Nodes (N=20) in the plow zone at Town Creek.



Figure 4.11 The distribution of Pee Dee Rims with Punctates (N=84) in the plow zone at Town Creek.



Figure 4.12. The distribution of Caraway series pottery (N=623) in the plow zone at Town Creek.

## **Summary**

Plow zone spatial distributions prove to be useful when looking at the site use over time. By locating where the people were living and what areas of the site were set aside, like the plaza, you can then determine what held importance to them. The limited Badin and Uwharrie presence at the site makes it difficult to determine what the Early and Late Woodland peoples were doing. The Yadkin people, on the other hand, had a large presence at Town Creek, and their Middle Woodland occupation potentially can be parsed out from later occupations. The Mississippian occupation encompassed the whole site and was, predictably the largest occupation. Town Creek changed spatially over time, and those changes are able to be seen in the plow zone.

## **Chapter 5 Conclusion**

In this chapter, I will discuss the how the data can be used to further interpret the site. I will also discuss the ways that this thesis can be used to help plan future excavations at the site.

### **Occupations**

The Badin occupation was small and ephemeral. The small number of sherds made a detailed analysis impossible; although, general patterns can be noted. The sherds are close to the river, suggesting that the site was used as a stopping point during seasonal use of the area. Badin peoples were hunter and gatherers and did not have permanent settlements. The small number of sites that contain Badin series sherds in the region have led to the conclusion that the Piedmont was largely empty of people (Davis and Ward 1999; 83). The pattern seen at Town Creek is consistent with that interpretation.

The Uwharrie occupation is even smaller than the Badin occupation. The Uwharrie peoples, when they visited the site had a short and limited occupation. Uwharrie occupations consisted of small villages throughout central North Carolina (Davis and Ward 1999). With the small number of sherds encountered, it would appear that Town Creek was not an Uwharrie village site, but rather a small camp site.

The Yadkin occupation was large and located in the southern portion of the site. There is very little that is known about the Yadkin way of life. The Yadkin peoples stopped at Town Creek, and the two dense artifact clusters suggest that there were two different structures present at the site. The absence of overlap between the high-density clusters suggests that the structures may have been contemporaneous. The amount of sherds and the density of the sherds means that the settlement was long in duration or very intense. The Yadkin Hearth Circle was an area apart the dense sherd clusters, and it may have been kept clear or used rarely. While the Yadkin Hearth

Circle can be seen in the plow zone, it appears to have been kept separate for a purpose.

Alternately, it could be from a shorter-term settlement during a different part of the Yakin phase.

The Pee Dee series had the majority of the sherds that were recovered from the plow zone. The three Mississippian phases can be seen in the plow zone. The Teal phase shows a clear plaza. While more people were living in the southern portion of the site, people also were starting to live in the northern portion. The Town Creek phase also had a distinct plaza and has more people living in the northern portion of the site. This phase also does not reach the full extent of the site. It appears to be smaller than the Teal Phase. The latest Leak phase shows the transition to the Caraway organization of the site. This shows the transition of the peoples at the site from the Pee Dee culture to the Caraway culture.

The Caraway Phase of the site is hindered in the spatial analysis by poor collecting or sorting methods. During the Caraway phase, the site was not used as much as during the earlier Yadkin and Pee Dee phases. The settlement stretched southeast to northwest and is concentrated by the river. The sherds are located in the plaza, and that shows a shift in the priorities of the people that used the site.

This research shows the extent and the density of the different occupations at Town Creek. While the site was visited early on in its history, the site was not intensely occupied until the Yadkin phase. Without more research into the Yadkin phase, it is impossible to determine if there was more than one occupation during the phase. The Mississippian occupation has the expected plaza and other features that have been previously interpreted. The later rim types and the Caraway phase show a different site structure as the people left their Mississippian lifeways.

The need for more research at the site is clear. Instead of the narrow focus of the Mississippian settlement, different occupations could be targeted for analysis. The different

occupations of the site have not yet been explored and could provide details to understand the Piedmont better. For example, there needs to be work done on the Yadkin occupation and parse it out from the Pee Dee occupation. This could provide much needed information concerning Yadkin lifeways and settlement patterns that are currently lacking. The Caraway Phase should also be targeted for excavation. There were still people living at the site after the decline of the Pee Dee occupation. This call for more research and the occupational patterns could help to fill in some of the blanks that are currently in North Carolina's prehistory.

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