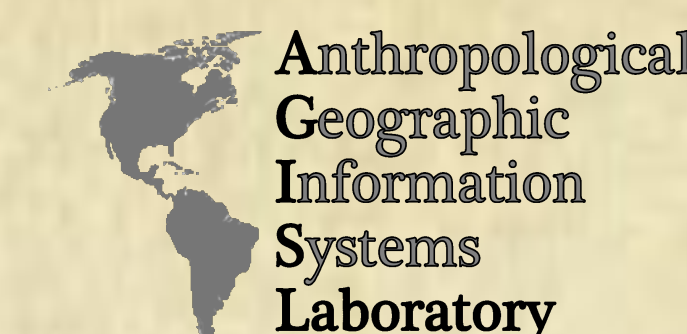


Occupational History of a Late Pre-Contact Site in the North Carolina Piedmont

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Introduction

This research is part of the Yadkin River Settlement Ecology (YRSE) Project, which is a multiscale analysis of human-landscape interactions in the late pre-contact (AD 1000-1600) western North Carolina Piedmont. The broader goals of this work are: 1) to provide a better description of and explanation for the settlement activities of non-hierarchically organized communities and societies and 2) to explore the role of human-landscape interactions in sociopolitical organization. The research presented here focuses on the first goal through analysis of findings from the first two seasons of excavations at the 31Yd173 site, located near Jonesville, NC (Figure 1).



Figure 1: map showing the location of 31Yd173 in the upper Yadkin River Valley and a picture from excavations during summer 2013.

Setting the Stage

Surveys during the 2011 and 2012 field seasons identified 31Yd173 as having high potential for containing intact settlement remains. Surface collections over 50% of the site yielded over 400 pottery sherds and 300 lithic artifacts. Follow-up shovel testing uncovered two thin (10-30cm), dark gray-brown strata, the first 35cm below the surface (interface with the plowzone) and the second 115cm below the surface (Figure 2). The upper stratum was estimated to cover an oval area approximately 30x10m. The lower stratum was found in only a single STP at 10m spacing. These were initially interpreted as middens because of the dense concentrations of artifacts and floral and faunal remains these layers produced.

Previous research (Jones et al. 2012) identified the factors that influenced large-scale settlement distribution: flat agricultural land, secluded locations, and distance from trails. The 31Yd173 site was chosen as primary location for exploring finer grained human ecology in this area through an analysis of human-landscape interaction on the community level and through intrasite patterning. The goal was to better understand how these large scale patterns played out at the community level. Analysis of sediments began in the fall of 2012 and excavations began in the summer of 2013.

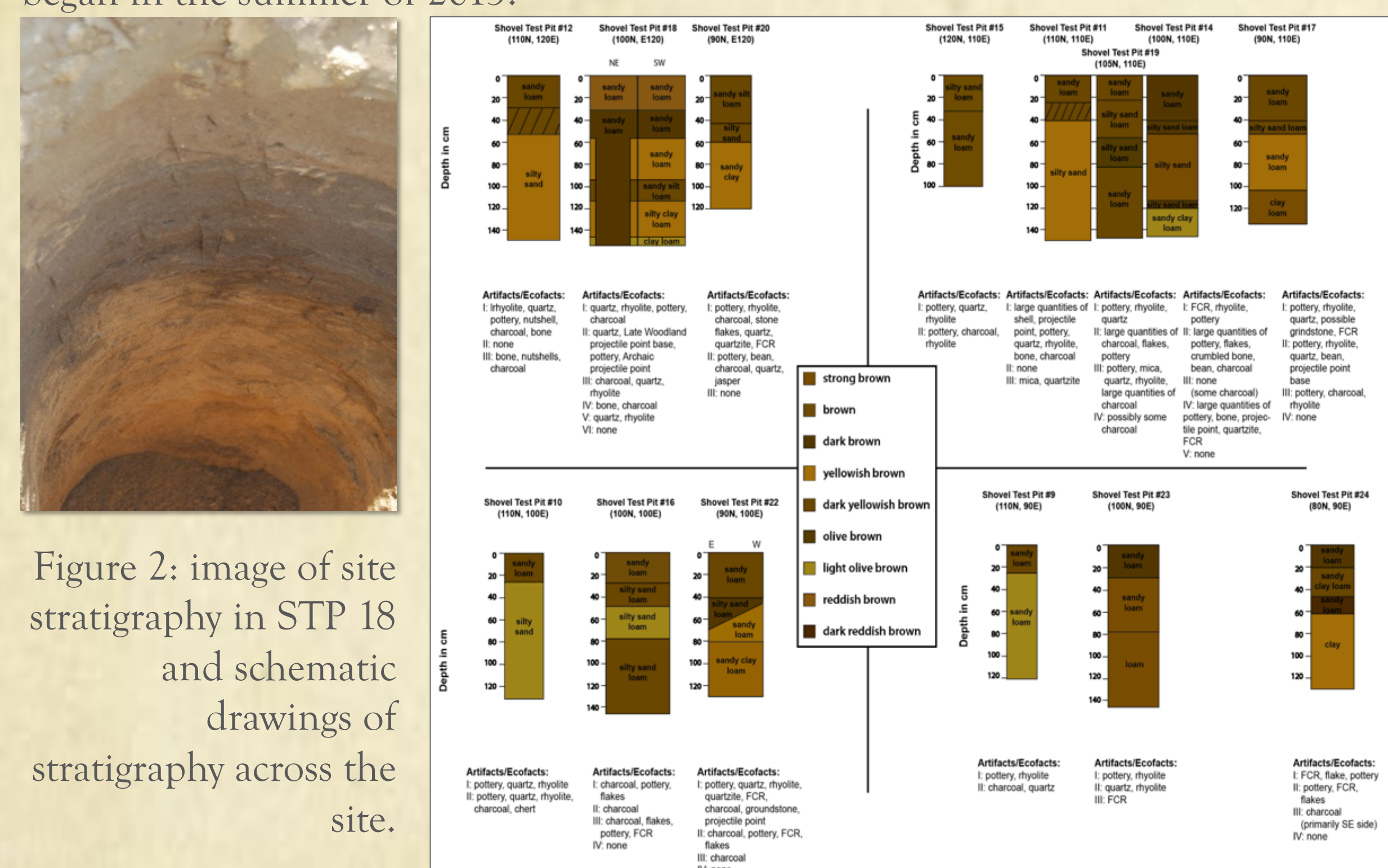


Figure 2: image of site stratigraphy in STP 18 and schematic drawings of stratigraphy across the site.

Methods

Sediment size analysis: fall 2012-spring 2013

Sediments were collected in 2012 during shovel testing. 23 samples from individual, discrete strata were run through sieves of >2mm, >1mm, >500 μm, >250 μm, >125 μm, >63 μm, and <63 μm sieves and mechanically shaken for 15 minutes. 5 samples were also subjected to Bouyous hydrometer analysis.

Excavation: summer 2013

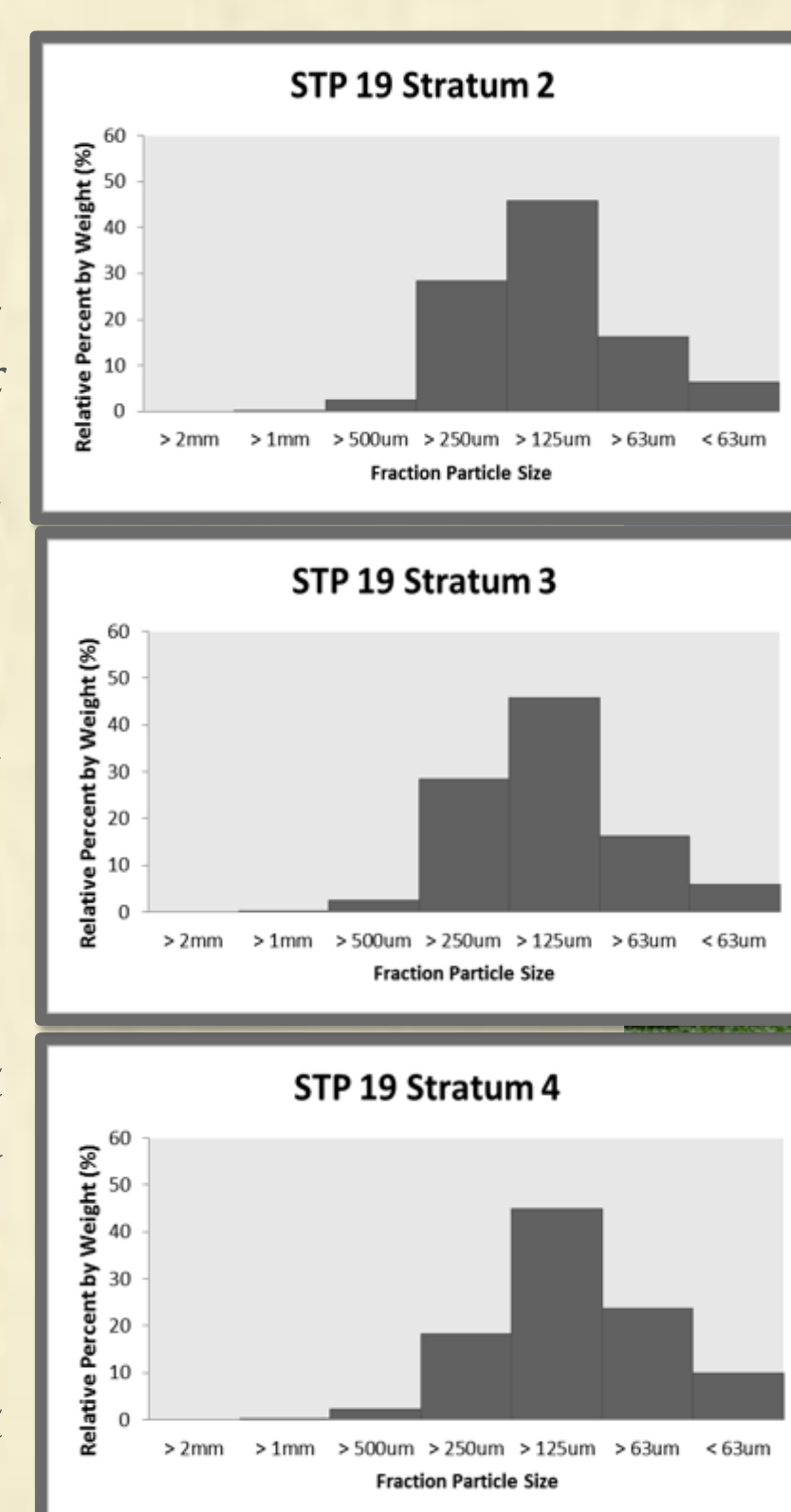
The goal was to remove the plowzone and uncover a significant portion of the first intact stratum to explore horizontal patterns in features and artifacts. We took this strategy to maximize the likelihood of identifying intrasite settlement and activity patterns. The plowzone was removed as two levels in the same stratum by shovel skimming and troweling; sediments were processed through a 1/4-inch screen. 25 units were excavated to the intact stratum below the plowzone, and one unit (unit 1) was excavated to 150cm with a core of an additional 100cm taken in the floor. Features and suspected postmolds were mapped on an iPad using iDraw software. Artifacts recovered during excavation of the plowzone were categorized, counted, and weighed.

The following sections describe results from the early stages of analyses of several lines of evidence. Early interpretations are also offered.

Sediments and Microlandscape

In front of the levee: Slightly higher proportion of medium sediments is typical for this location

Interpretation: the levee was almost certainly present at the time of the earliest occupation.

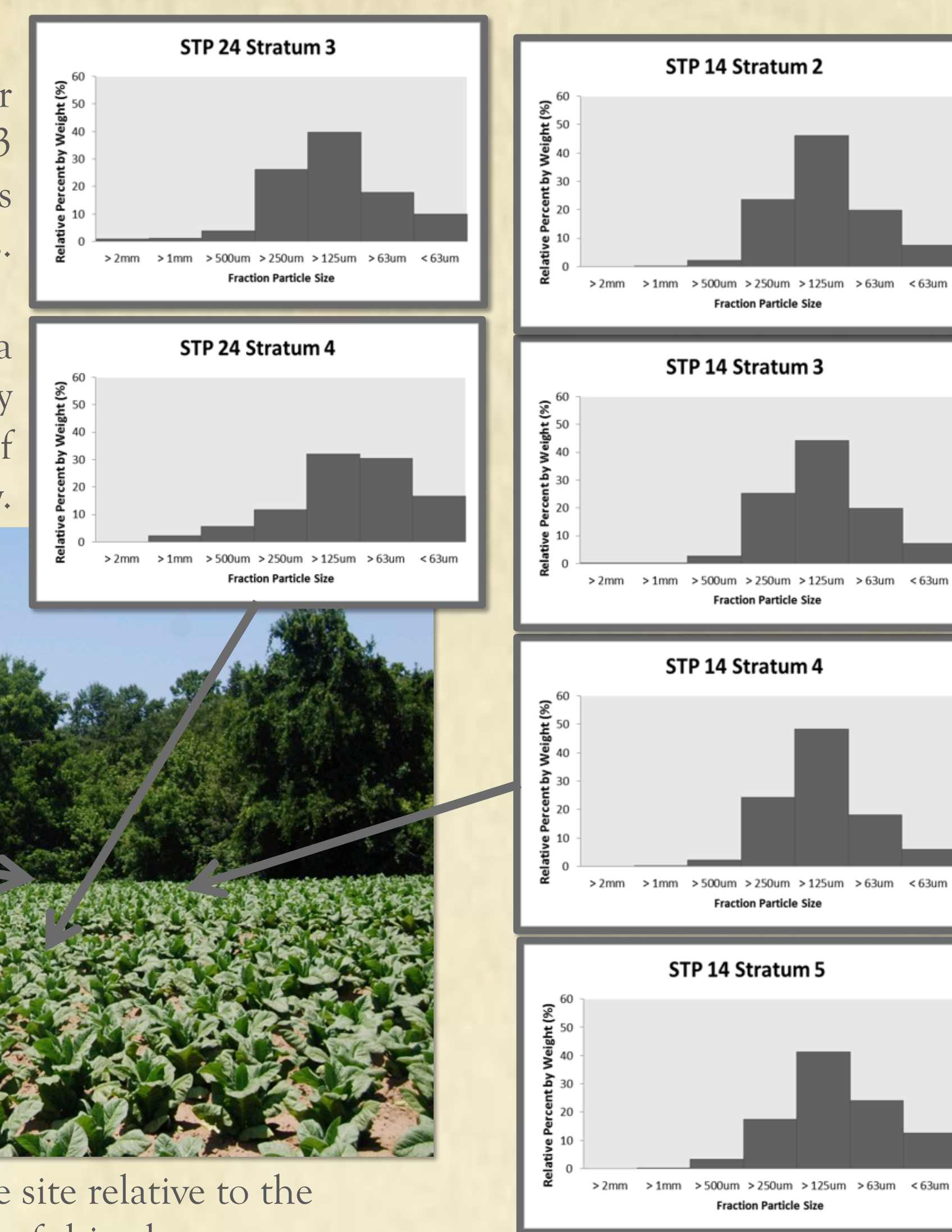


Behind the levee: stratum 4 has a higher proportion of fine sediments. Stratum 3 contains more angular, medium sized sediments and charcoal fragments.

Interpretation: there may have been a backswamp behind the levee that was eventually filled in by colluvial deposition from burning of upland forests, either naturally or intentionally.



Sedimentology results and their location at the site relative to the natural levee, seen as the rise on the right side of this photo.



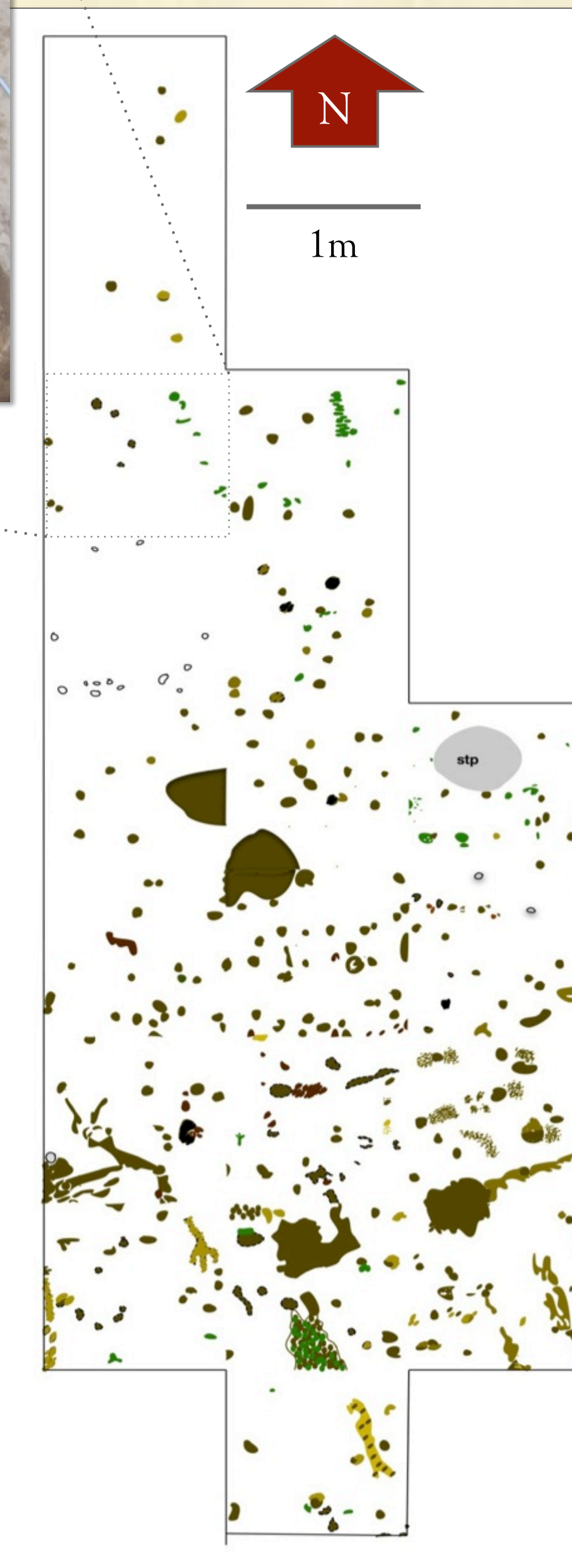
On top of the levee: sediments from STP 14 are well sorted and composed mainly of fine sands and silts. They also show decreasing proportions of fine sediments (silts and clays) in more recent strata.

Interpretation: the levee was almost certainly present at the time of the earliest occupation and the velocity of floodwaters increased over time.

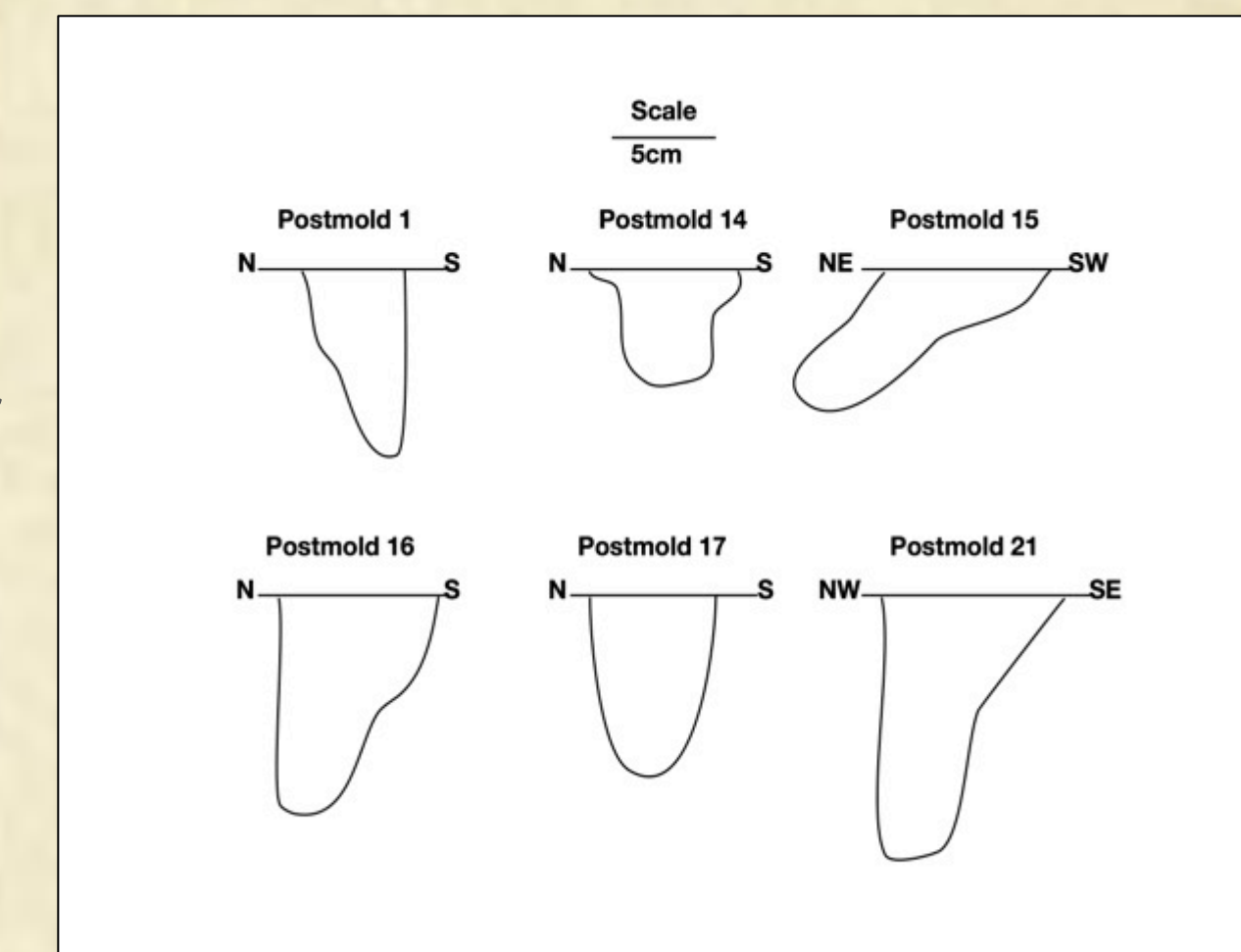
Feature Patterning, Artifact Distribution, and Activity Patterns



Feature 15, located in stratum 3, is believed to be a cooking pit or hearth. The southern half contained large quantities of charcoal, small burned bone fragments, and fired clay. Large fragments of unburned bone were found just above this feature.

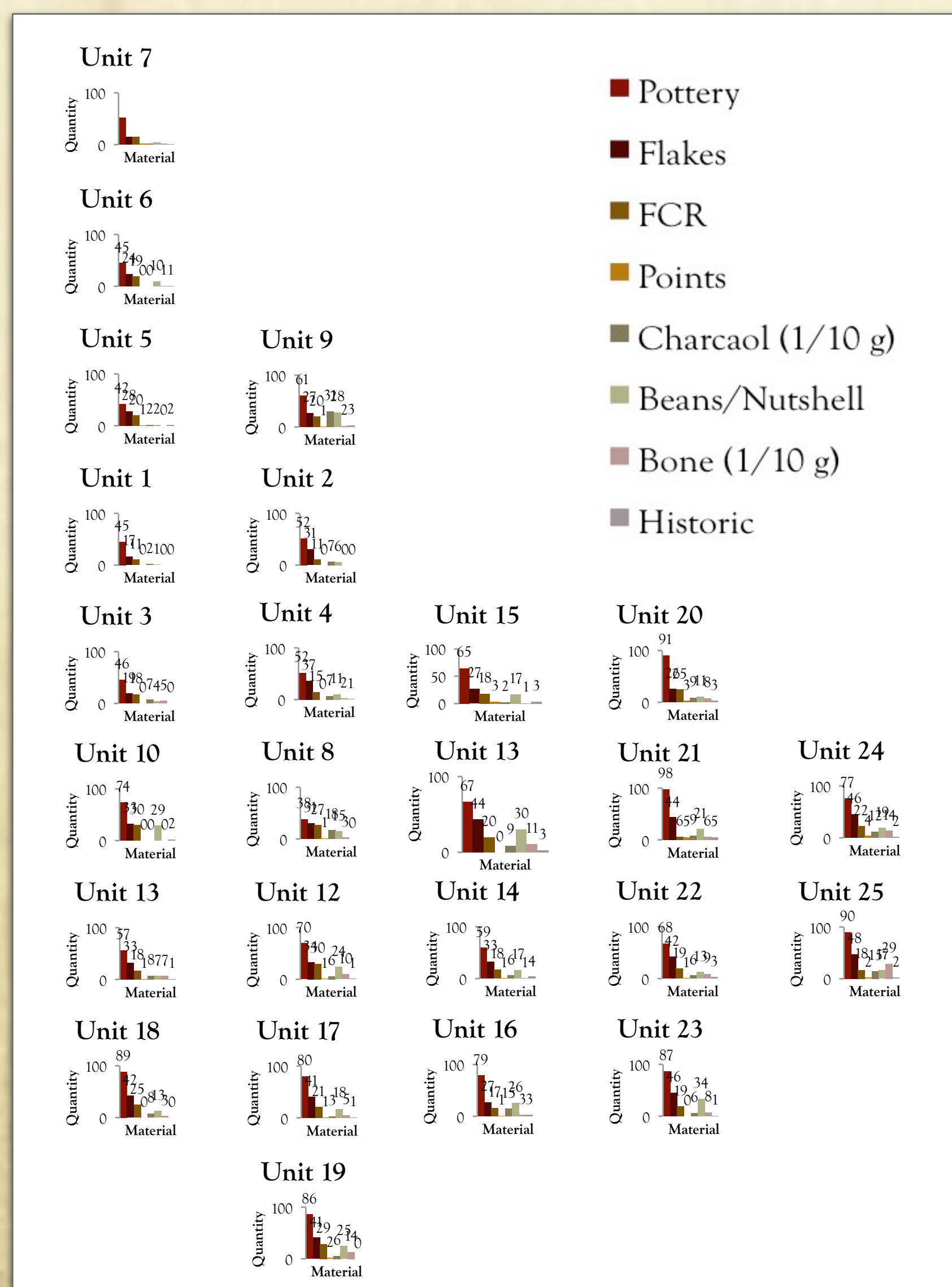


Picture of best defined line of postmolds in the excavated area (left). Profiles of 6 postmolds showing the ranges of shapes found (right). Average width is 5.5cm. The wedge shape in particular was used to distinguish root stains and animal burrows from postmolds.



Circular stains (possible postmolds) and reddened sediments in units 24 and 25. The stains decrease in density in these units.

The reddened sediments contained high concentrations of charcoal and small burned bone fragments.



Concentrations of various artifact classes found in the plowzone across the excavated area. Overall artifact numbers are higher on the crest of the levee and decrease in the units on the front-slope. There is also an inverse relationship between pottery and lithic concentrations and circular stain concentrations. Finally, there are higher numbers of botanical remains overlaying the densest concentrations of circular stains.

Conclusions

The sedimentology results are the most complete and indicate that people likely chose this location within the floodplain because of the sizeable levee and the flood protection it offered. Combined with the early interpretations of feature and artifact patterns (and earlier survey results), we can start to piece together a picture in which people clustered activities in a small area (30x30m) of the floodplain. Given the presence of features and postmolds, albeit small in diameter, in multiple strata, people likely used the area for an extended period of time, either continuously or repeatedly. Future work will focus on the intact strata 2 and 3 to determine a possible function for the site and dates of use. Early results from artifact analysis suggest this site was used between AD 1400-1700. 31Yd173 has the potential to provide a great deal of information about late pre-contact life in this area. If this site is a settlement, as suspected, that potential will increase greatly given the relatively good preservation of postmolds and features.

Acknowledgements

First and foremost, I must thank several Wake Forest undergraduates who have helped in this work. Peter Ellis assisted with the exploratory excavations and constructed the artifact count figure. Samantha Yausy performed the sediment analysis and produced the associated graphs. Pierce Wright categorized the surface ceramic assemblage. This work was greatly enhanced by insights from Paul Thacker, Ned Woodall, Rhea Rogers, Logan Kistler, and Sharon DeWitte.

Works Cited

Jones, Eric E., Madison Gattis, Andrew Wardner, Thomas C. Morrison, and Sara Frantz (2012) Exploring Prehistoric Tribal Settlement Ecology in the Southeast: A Case Study from the North Carolina Piedmont. *North American Archaeologist* 33(2):157-190.