

REPORT

# Where Worlds Collide: Late Woodland Potting Practice and Social Interaction in Upstate South Carolina

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(Received 31 March 2023; revised 31 July 2023; accepted 8 October 2023)

## Abstract

Many anthropologists have now adopted a relational view of the culture concept. Much research has shown that, far from being bounded or self-replicating, cultures emerge through interactions between social Others. These findings are particularly important to research on borderlands and peripheries, where communities routinely encounter wide-ranging social and political diversity. We present ceramic frequencies alongside petrographic analysis from the Late Woodland component at Esseneca (38OC20) to illustrate two main points: (1) pottery types previously understood as culture historical isolates co-occur in parts of Upstate South Carolina, and (2) potters collected clays from two main geologic formations near the site. This research shows that communities in the region traveled freely, crossing cultural boundaries while acquiring potting clays. We suggest that this level of interaction between disparate social groups laid the foundation for some aspects of Mississippianization in the region.

## Resumen

Muchos antropólogos ahora han adoptado una visión relacional del concepto de cultura. Numerosas investigaciones han demostrado que, lejos de estar encerradas o replicarse a sí mismas, las culturas surgen a través de las interacciones entre “Otros” sociales. Estos hallazgos son particularmente importantes para la investigación en las zonas fronterizas y periféricas, donde las comunidades se encuentran comúnmente con una gran diversidad social y política. En esta línea, introducimos frecuencias de cerámicas junto con análisis petrográficos del componente Late Woodland en Esseneca (38OC20) para ilustrar dos puntos principales: (1) los tipos de cerámica previamente considerados como componentes histórico-culturales aislados coexisten en partes del norte del estado de Carolina del Sur, y (2) los alfareros recolectaron arcillas de dos formaciones geológicas principales cerca del sitio. Esta investigación muestra que las comunidades de la región viajaban libremente, cruzando fronteras culturales mientras adquirían arcilla para macetas. En última instancia, sugerimos que este nivel de interacción entre grupos sociales dispares sentó las bases para algunos aspectos de la Mississippianización en la región.

**Keywords:** pottery analysis; social archaeology; hunter-gatherer archaeology; petrographic analysis; Woodland period

**Palabras clave:** análisis de cerámica; arqueología social; arqueología cazador-recolector; análisis petrográfico; periodo del bosque

The idea that humans share “culture” is arguably foundational to anthropology, yet scholars consistently disagree on culture’s genesis, reproduction, and purpose. To some, culture is an adaptive mechanism, intervening where our biological capacities are outmatched by externally imposed circumstances, like climate change or foraging needs. To others, culture is normative and mentalist in corresponding to the symbolic structures (i.e., norms) of a given group of people (for a review, see Watson 1995). In both cases, culture is bounded, self-replicating, and thus, in theory, maps neatly

onto what anthropologists have described as “culture areas” (e.g., Graeber and Wengrow 2021:171). However, many have challenged this view by showing how cultures are relational entities formed through interactions between social Others (Wolf 1984).

Graeber and Wengrow (2021) revisited the issue, noting that neighboring cultures form in opposition, being fully aware of one another’s politics, social arrangements, and philosophical canon. They also argue that socially and materially diverse boundary zones emerge through these processes of identity formation. Echoing this claim, Sassaman and Gilmore (2021) demonstrate how frontiers can become hubs of innovation and thus affect the social and historical trajectories of entire regions. To this end, we report trends in pottery distribution alongside preliminary petrographic data of the Late Woodland component of Essenecca (38OC20), South Carolina, in the United States. Patterns in our data show two main trends: (1) pottery types common to the Georgia Piedmont and Carolina Coastal Plain co-occur in parts of the South Carolina Upstate, and (2) Late Woodland potters in the region collected a broad swath of clays during seasonal foraging cycles. We argue that Late Woodland foragers freely traveled about the region and thus encountered a range of social groups throughout the year, laying the foundation for some aspects of Mississippianization.

### Pottery Traditions and Considerations of Chronology

Americanist archaeologists largely consider the Savannah River an eastern boundary for the distribution of Swift Creek Complicated Stamped pottery (Smith and Stephenson 2018; Williams and Elliot 1998:6). In contrast, fabric-impressed and cord-marked wares are more common to the Yadkin, Mount Pleasant, and Cape Fear traditions of the Carolinas (Herbert 2002; Patch and Espenshade 2020). Showing roots in the Early Woodland (around 200 BC), Swift Creek pottery production and exchange expanded over the next few centuries to incorporate communities across southeastern North America (Wallis 2011). The ornate and innovative designs of Swift Creek paddles broke from the comparatively mundane canon of earlier check-stamped traditions that mostly served routine economic purposes (Anderson and Sassaman 2012:115–121; Smith and Knight 2017).

Swift Creek followed on the heels of Hopewell, an efflorescence of ceremonial activity that connected social groups across the Eastern Woodlands. Swift Creek communities eventually anchored Hopewell’s corresponding religiosity and social interaction at civic-ceremonial centers that swelled during seasonal ritual cycles and compressed as visitors returned to their natal villages (Pluckhahn 2010). Civic-ceremonial life was organized around crafting, mortuary ritual, and, most notably, mounding. However, aspects of civic ceremonialism waned during the Late Woodland transition as social groups became increasingly fragmented and, in the Georgia and Carolina Piedmont, organized fluidly to exploit uplands adjacent to floodplains (Herbert 2002; King and Stephenson 2016:36; Markin 2015).

Although some Woodland mortuary mounds are known in the Carolinas, most sites fall outside the sphere of civic ceremonialism. Communities in the region embraced what Anderson and Sassaman (2012:112) call “Woodland Regionalism,” characterized by increasing social and material differentiation across the Southeast and American Midwest. Currently, there is little evidence for substantial mixing of complicated stamped and fabric-impressed/cord-marked wares in the region.

### Site Background and Sampling Strategy

Essenecca is located on an upland ridge, roughly 45 km south of the Eastern Continental Divide on what is now Clemson University’s main campus (Figure 1). It lies within the Walhalla nappe of the Carolina Piedmont, an autochthonous metamorphic zone adjacent to the Blue Ridge Mountains (Griffin 1974). Pottery was encountered in all 18 of the 1 × 2 m units excavated over the course of two field seasons. Levels were excavated in 10 cm intervals, except where slope or modern disturbance necessitated a 20 cm interval for the first level. Artifact densities in each unit were comparatively low, suggesting that the site was a small seasonal encampment, such as those described by Markin (2015:3–4). It is worth noting that the site is adjacent to what was once the Seneca River, thus aligning with Cobb and Garrow’s (1996) observation that late Woodland communities settled around major rivers as opposed to tributaries (Markin 2015:3). Although the site is a possible location of the contact-era

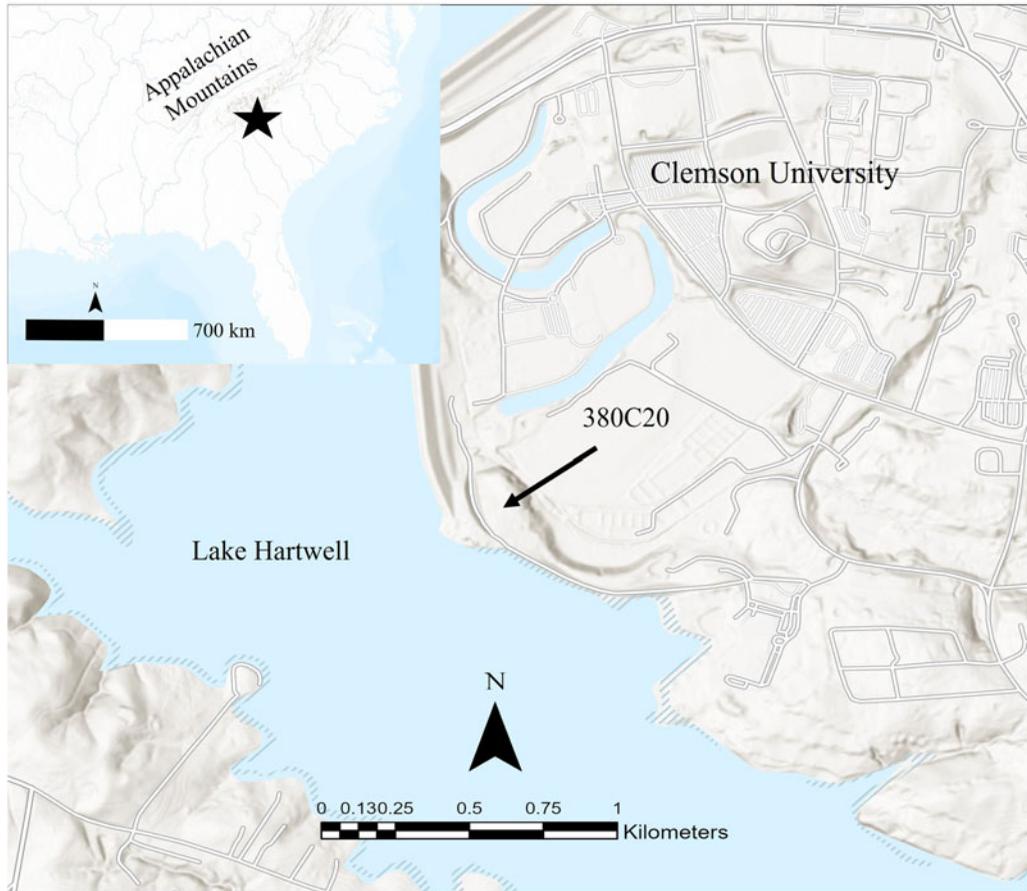


Figure 1. Map of Esseneca (380C20).

Cherokee village of Esseneca, most diagnostic lithics and pottery belong to Woodland Yadkin and Swift Creek phases, respectively.

Vessels served as the unit of analysis for the petrographic component of this study. Where possible, they were first differentiated by rim form and shape. However, because rims are comparatively scant in the assemblage, vessel lots were mostly established through surface treatment and temper. All vessels ( $N = 62$ ) from the 2021 excavations that could be differentiated based on the aforementioned criteria were selected for petrographic sampling. Sampling was restricted to the 2021 excavations because the 2022 assemblage was unanalyzed when thin sectioning occurred. Pottery from all the excavations has since been analyzed and is reported in the following section.

Petrographic work centered on the qualitative analysis of fabric and textural groups. Petrofabric groups were based on mineral content and abundance following Rice (2015:269; Table 1), and temper type and abundance formed the basis of textural categories (e.g., Cordell 2021:161). Particles were typically measured using the 10 $\times$  objective, although 25 $\times$  was sometimes used to identify small particles and micas, and 5 $\times$  was used where appropriate to measure granule or larger particles. Crosshair intervals for each objective were calibrated using a stage micrometer following the Wentworth (1922) system of measurement.

Provenance was assessed by comparing the mineralogy of petrofabric groups to that of primary rock formations of the Walhalla nappe (Griffin 1974). We adopted a modified version of the Miksa and Heidke's (2001) petrofacies approach to assessing vessel provenance and clay procurement (e.g., Eckert et al. 2015). Although mineralogy in the Carolina Piedmont cannot be associated with

**Table 1.** Mineralogical Composition of Petrofabric Groups Identified in This Study.

Fabric Group	Mineralogy	Abundant	Common	Frequent	Occasional	Rare
A	Felsic (quartz and feldspar)	Quartz		Feldspar		Mica
B	Mica, feldspar, epidote	Quartz		Mica, feldspar	Epidote	
C	Mica, feldspar, kyanite	Quartz	Kyanite	Mica, feldspar	Epidote	
D	Feldspar, amphibole, epidote	Quartz	Amphibole	Feldspar, epidote		Mica
E	Mica, feldspar, amphibole, epidote	Quartz	Amphibole	Mica, feldspar, epidote		

Note: Analytical protocols for determining particle abundance followed Rice (2015:269).

distinctive river valleys, there is sufficient variation among formations of the Walhalla nappe to assign petrofabrics to general procurement zones. To remove bias from the analysis, petrofabrics were assigned to vessels before the analyst knew the form and design of the sherd (e.g., Hegmon et al. 2000).

## Patterns and Trends

### *Chronology and Type Distribution*

A radiocarbon assay extracted from soot that adhered to the rim surface of a complicated stamped vessel yielded a two-sigma probability range (95.4%) of AD 677–873 (OxCal v4.4.4). The complicated stamped motifs on much of our assemblage are conspicuously thin and bear resemblance to the late Swift Creek Napier series (e.g., Markin 2015), providing further evidence for the Late Woodland occupation at the site. Although some documentary sources place the Cherokee town of Esseneca on Clemson University's campus, most of the site resided in the Seneca River floodplain, now under Lake Hartwell. Further, this assemblage yields no evidence of the filleted, pinched rims common to Cherokee/Lamar pottery. On the contrary, rims are mostly folded and resemble the Napier series. Of the 1,120 sherds identified in the assemblage, roughly 30% were decorated, and 7% ( $n = 151$ ) exhibited clear surface treatments that were assigned to formal types.

Complicated stamped pottery constitutes nearly half of the decorated component of the assemblage (Figure 2). The relatively even split between curvilinear and rectilinear variants of complicated stamped sherds carries interesting temporal connotations. Julie Markin (2015) noted a clear tapering of curvilinear motifs during the emergent Mississippian phase in north Georgia. Conventional wisdom holds that rectilinear diamond motifs gained traction during the late Swift Creek phase, increasing to nearly replace curvilinear designs by AD 900. The relatively even representation of both variants likely places the assemblage at the incipient stages of Napier and Woodstock, when curvilinear designs were popular but were also being influenced by people familiar with diamond and line-block motifs. Fabric-impressed pottery also occurs in high proportions, constituting roughly 30% of the decorated assemblage. Check stamped is the next most common type, at 15%, and cord-marked, brushed, simple stamped, and incised wares occur in minor proportions at less than 5% each.

Of course, site-level analyses potentially gloss meaningful temporal variation. It is possible that the complicated stamped and fabric-impressed wares are from different components and thus should, in theory, be separated spatially, stratigraphically, or both. Our data reveal this not to be the case, however. Area 1, consisting of test units one through six, occupies a relatively low-lying section of the upland ridge and sits beneath Area 2, which rests atop a terraformed platform. It then stands to reason that earlier deposits, if present, should occur in Area 1. We find no such distinction in our units: patterns in pottery distribution are strikingly similar across the site. Complicated stamped types represent 42% and 49% of the decorated components of Areas 1 and 2, respectively, and fabric-impressed wares constitute around 30% of each area. It is worth noting that although agricultural activities during the

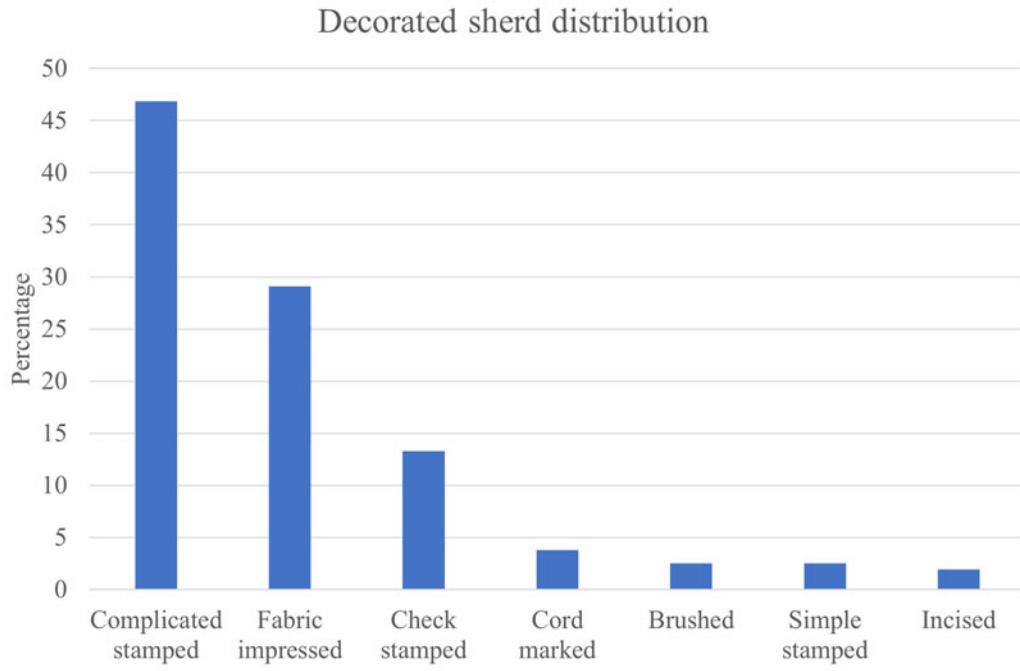


Figure 2. Site-level pottery distribution by surface decoration.

early to mid-twentieth century may have disturbed and comingled the uppermost strata at the site, the majority of the assemblage is conspicuously Late Woodland.

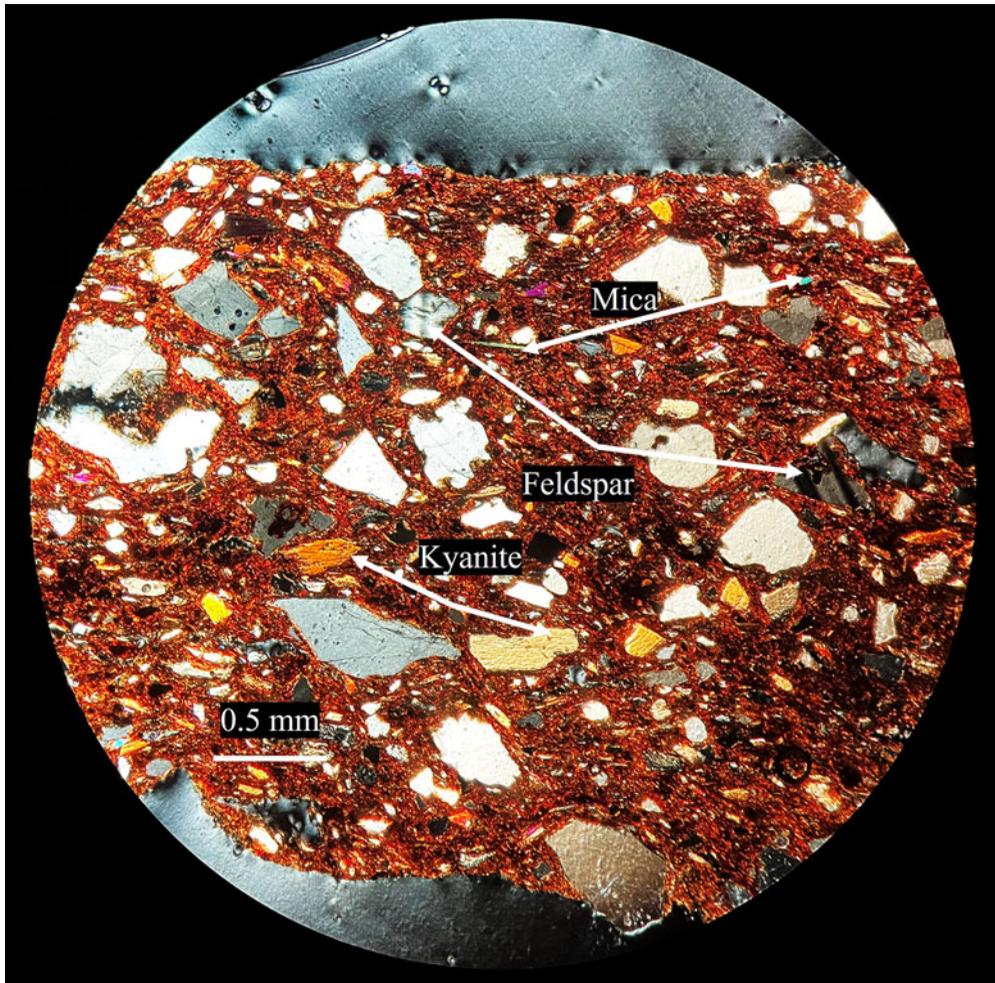
### Petrography

Five primary petrofabric groups were identified in this analysis (Table 1), and all map well onto local geology. Groups A, B, and C contain the weathered clasts of micaceous feldspathic quartzite, which is pocketed in the Walhalla nappe. Group A is the most weathered variant, containing mostly quartz and feldspar, whereas Group C is relatively rich in mica and kyanite (Figure 3). Groups D and E are composed of amphibole, feldspar, and epidote and are differentiated by the presence/absence of mica (Figure 4). These groups are most clearly associated with amphibolites and amphibole gneisses documented within the “Clemson Window” section of the Walhalla nappe and are most proximate to the site (Griffin 1974:1126–1128). Samples are split relatively evenly among the two main rock groups: 61.2% were assigned to feldspathic groups A through C, and nearly 40% were assigned to amphibole-rich groups D and E. Complicated stamped pottery is well represented in both feldspathic- and amphibole-rich groups, at 53.6% and 46.6%, respectively. Check-stamped pottery is also relatively evenly distributed among petrofabrics, whereas 90% of fabric-impressed samples are members of amphibole-rich groups.

The petrographic samples are invariably grit tempered and were assigned to either sand/grit or grit textural groups. Although a range of fine to granule-sized particles are present in all samples, coarse to granular particles are more abundant in the grit group. The copresence of smaller, rounded grains (subject to weathering) and of larger grains with angular borders in most samples suggests that potters intentionally crushed sands and rock fragments and added them as temper (Figure 5).

### Discussion

Several trends are apparent in these data. First, Late Woodland potters in the region produced a range of pottery types characteristic of two distinctive culture historical traditions: (1) complicated stamped to the west and (2) fabric impressed to the north and east. Although it is possible that vessels made



**Figure 3.** Thin-section photo highlighting micaceous, kyanite-rich petrofabric Group C (taken at 5× magnification under cross-polarized light). (Color online)

their way to the site through exchange, the lack of variation in tempering suggests that most potters were members of the same community of practice. We interpret these patterns as evidence that potters moved freely about the landscape, incorporating traditions of different social groups into their daily potting routine, possibly at different points during the year.

Further supporting this argument are trends in the petrofabric data that identify two main clay procurement zones within the Walhalla nappe formation of the South Carolina Upstate. Amphibolites and amphibole gneisses are abundant in the immediate vicinity of the site, yet micaceous feldspathic quartzites appear in outcrops less than 5 km away (Griffin 1974). Clays near both formations would have clearly been accessible for Late Woodland potters. Inasmuch as we can extrapolate from the comparison of the mineralogy of the pottery with local geology, potting practice at the site was almost exclusively local.

That local villagers provisioned their own needs during seasonal foraging rounds is not surprising. Although we have no direct evidence for inferring seasonality, these data do show that potters were highly mobile and were thus unaffected by the territoriality known to the Mississippian, for example. Buchanan (2017) and Fowles and colleagues (2007) have extensively documented how warfare and political competition circumscribe potters' movements. In extreme cases, potters may be forbidden from accessing clays outside the immediate vicinity of their village (e.g., Fowles et al. 2007). The data we present in this study suggest much the opposite.

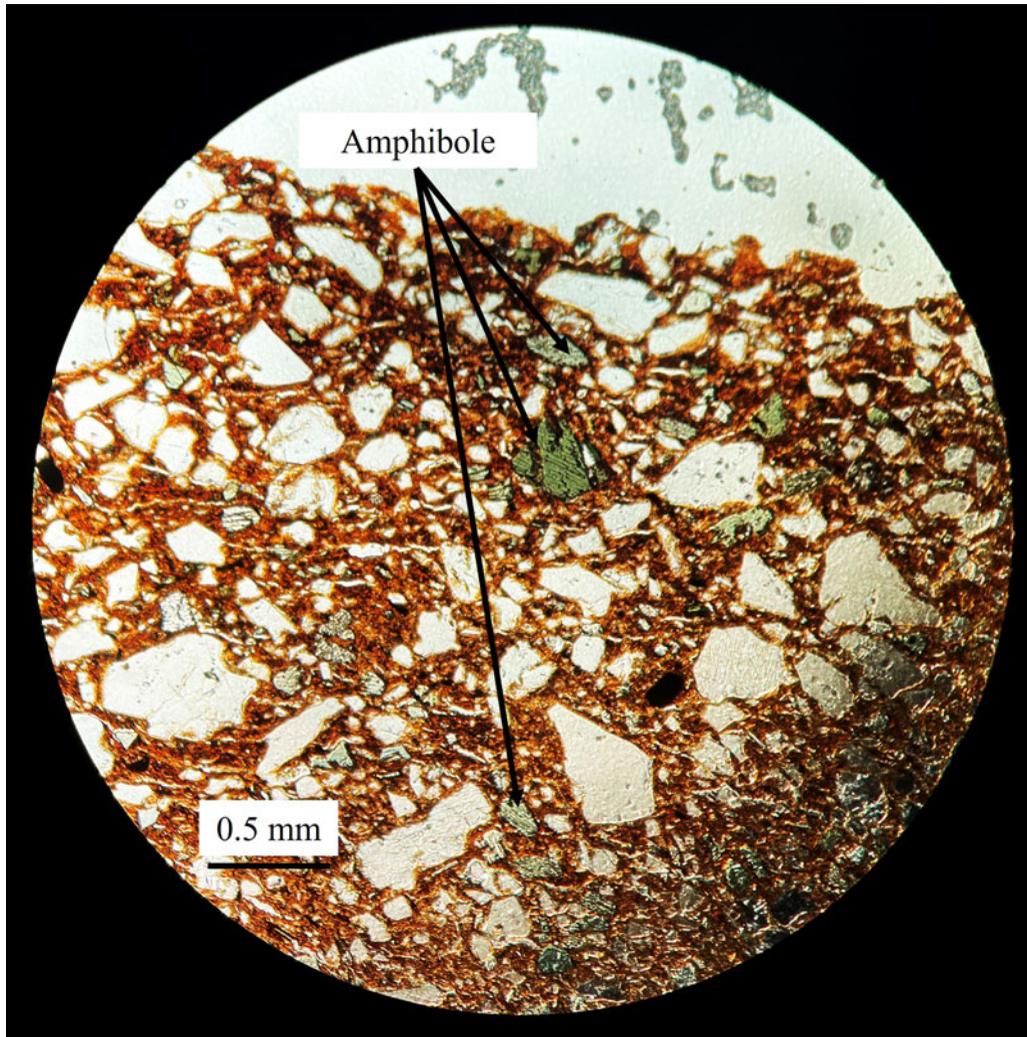
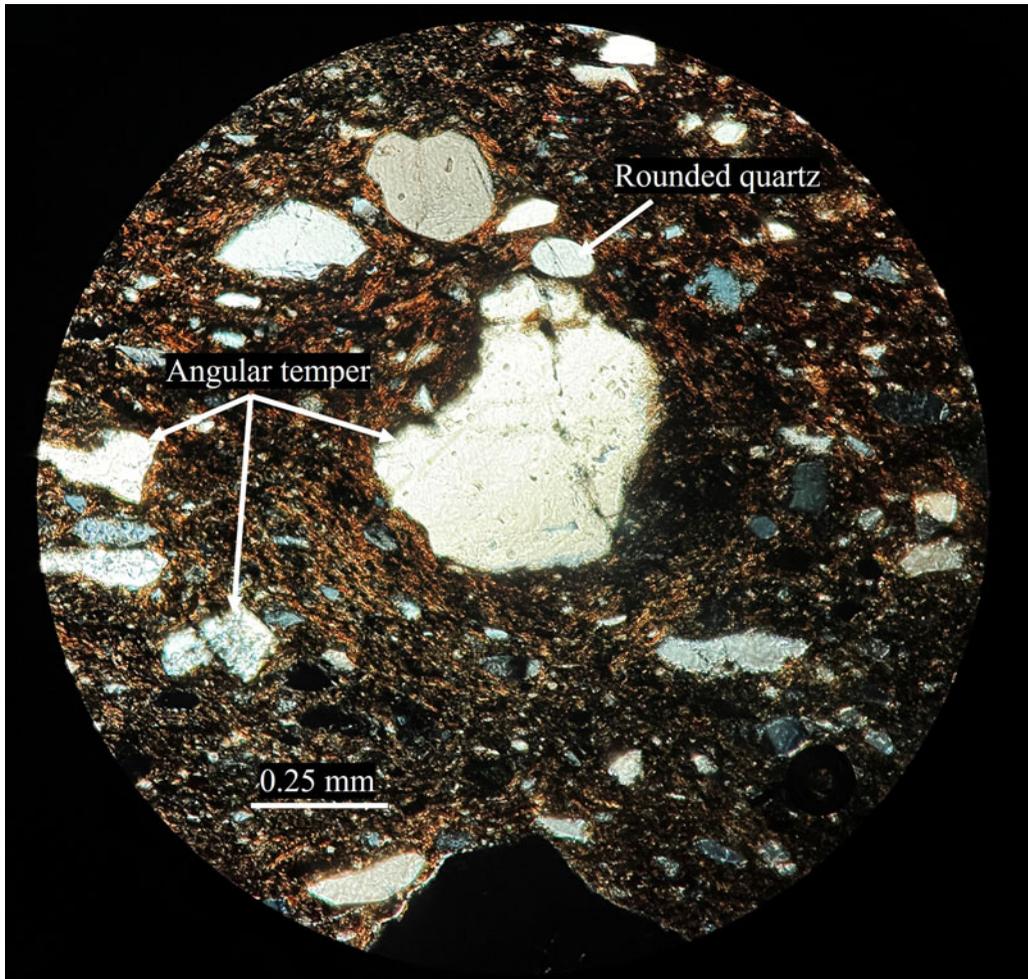


Figure 4. Thin-section photo highlighting amphibole-rich petrofabric Group E (taken at 5× magnification under plane-polarized light). (Color online)

We now return to our opening discussion of culture and social boundaries. Although it may be tempting to view social groups that borrow potting traditions from cultural “heartlands” as unimaginative, we may reach a different conclusion when expanding the discussion beyond surface treatment. Clearly, Late Woodland potters traversed a variety of cultural boundaries while collecting clays. It is also likely that the community inhabiting the site retained close ties with other communities through *some* forms of exchange. Because our data suggest that most pottery was made locally, implements, such as wooden paddles used to impress designs, may have been brought in through postmarital residence patterns. Viewed this way, Esseneca potters were cosmopolitans, almost certainly women, who encountered a broad spectrum of social and political arrangements and thus acted as political mediators between communities.

What impact could these people (or people like them) have had on the decision to settle as floodplain agriculturalists several centuries later? In the South Carolina Upstate, small, scattered villages of the Late Woodland eventually transformed into sedentary mound centers during the Mississippian (Anderson 1994). Many local Mississippian settlements, like Chauga Mound, have Late Woodland roots (Rodning 2015). Although archaeologists typically consider the relatively



**Figure 5.** Thin-section photo contrasting rounded, weathered particles with angular temper (taken at 10× magnification under cross-polarized light). (Color online)

egalitarian foragers of the Late Woodland as antithetical to Mississippians, there may be some ways in which mobile lifestyles anticipated aspects of later sedentism. For instance, Graeber and Wengrow's (2021) recent review of ethnographic research highlights the plasticity of human social organization, noting that seasonally mobile groups often constructed rigid, top-down hierarchies, only to raze them a season later when families and individuals regained their autonomy. This type of flexibility in social organization can be particularly common in frontier communities where labor shortages promote task sharing between settlements and discourage craft specialization (Herr 2001:92).

At this point, we cannot say whether the inhabitants of Esseneca experimented with such polar extremes. It is reasonable to suggest, however, that mobile foragers moving about the landscape would have experienced enough variety socially to predict what life might be like in sedentary villages, under the control of relatively few people, as was the case during the Mississippian. Given that so many Mississippian villages in the region have Late Woodland roots, it is clear that mobile communities eventually agreed that the social diversity they encountered seasonally could (and should) be organized into a more permanent arrangement.

**Acknowledgments.** We owe our sincere thanks and gratitude to the following individuals and institutions for supporting this project: the Eastern Band of Cherokee Indians; Stephen Yerka; the Department of Sociology, Anthropology, and Criminal Justice

and the Department of History and Geography at Clemson University. We also thank each reviewer for their insightful and measured critiques.

**Funding Statement.** This project was funded by National Park Service Grant no P21AP11636-00 and by the Faculty Development Research Program administered by the College of Architecture, Arts, and Humanities at Clemson University.

**Data Availability Statement.** All pottery and thin sections analyzed in this study are curated at the Department of Sociology, Anthropology, and Criminal Justice at Clemson University.

**Competing Interests.** The authors declare none.

## References Cited

- Anderson, David G. 1994. *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. University of Alabama Press, Tuscaloosa.
- Anderson, David G., and Kenneth E. Sassaman. 2012. *Recent Developments in Southeastern Archaeology: From Colonization to Complexity*. Society for American Archaeology, Washington, DC.
- Buchanan, Meghan E. 2017. Tempering Practices in a Mississippian Warescape: Ceramics and Technological Production at the Common Field Site. In *War and Peace: Conflict and Resolution in Archaeology: Proceedings of the 45th Annual Chacmool Archaeology Conference*, edited by Adam K. Benfer, pp. 102–115. Chacmool Archaeology Association, University of Calgary, Calgary.
- Cobb, Charles R., and Patrick H. Garrow. 1996. Woodstock Culture and the Question of Mississippian Emergence. *American Antiquity* 61:21–37.
- Cordell, Ann S. 2021. Revisiting the McKeithen Site and Weeden Island Pottery Manufacturing Origins. In *Methods, Mounds, and Missions: New Contributions to Florida Archaeology*, edited by Ann S. Cordell and Jeffrey M. Mitchem, pp. 147–192. University Press of Florida, Gainesville.
- Eckert, Suzanne, Kari L. Schleher, and William D. James. 2015. Communities of Identity, Communities of Practice: Understanding Santa Fe Black-on-White Pottery in the Española Basin of New Mexico. *Journal of Archaeological Science* 63:1–12.
- Fowles, Severin, Leah Minc, Samuel Duwe, and David V. Hill. 2007. Clay, Conflict, and Village Aggregation: Compositional Analysis of Pre-Classical Pottery from Taos, New Mexico. *American Antiquity* 72:125–152.
- Graeber, David, and David Wengrow. 2021. *The Dawn of Everything: A New History of Humanity*. Farrar, Straus and Giroux, New York.
- Griffin, Villard S. 1974. Analysis of the Piedmont in Northwest South Carolina. *Geology Society of America Bulletin* 85:1123–1138.
- Hegmon, Michelle, Margaret C. Nelson, and Mark J. Ennes. 2000. Corrugated Pottery, Technological Style, and Population Movement in the Mimbres Region of the American Southwest. *Journal of Anthropological Research* 56:217–240.
- Herbert, Joseph M. 2002. A Woodland Period Prehistory of Coastal North Carolina. In *The Woodland Southeast*, edited by David G. Anderson and Robert C. Mainfort Jr., pp. 292–317. University of Alabama Press, Tuscaloosa.
- Herr, Sarah A. 2001. *Beyond Chaco: Great Kiva Communities on the Mogollon Rim Frontier*. University of Arizona Press, Tucson.
- King, Adam, and Keith Stephenson. 2016. Foragers, Farmers, and Chiefs: The Woodland and Mississippian Periods in the Middle Savannah River Valley. In *Archaeology in South Carolina: Exploring the Hidden Heritage of the Palmetto State*, edited by Adam King, pp. 34–44. University of South Carolina Press, Columbia.
- Markin, Julie G. 2015. The Changing Social Landscape of the Late Woodland to Mississippian Transition in Northern Georgia. In *Archaeological Perspectives on the Southern Appalachians: A Multiscalar Approach*, edited by Ramie A. Gougeon and Maureen Meyers, pp. 1–32. University of Tennessee Press, Knoxville.
- Miksa, Elizabeth J., and James M. Heidke. 2001. It All Comes out in the Wash: Actualistic Petrofacies Modeling of Temper Provenance, Tonto Basin, Arizona, USA. *Geoarchaeology* 16:177–222.
- Patch, Shawn M., and Christopher T. Espenshade. 2020. A Late Woodland Camp in the North Carolina Sandhills. *North Carolina Archaeology* 69:30–55.
- Pluckhahn, Thomas J. 2010. The Sacred and the Secular Revisited: The Essential Tensions of Early Village Society in the Southeastern United States. In *Becoming Villagers: Comparing Early Village Societies*, edited by Matthew S. Bandy and Jake R. Fox, pp. 100–118. University of Arizona Press, Tucson.
- Rice, Prudence M. 2015. *Pottery Analysis: A Sourcebook*. 2nd ed. University of Chicago Press, Chicago.
- Rodning, Christopher B. 2015. Mortuary Patterns and Community History at the Chauga Mound and Village Site, Oconee County, South Carolina. *Southeastern Archaeology* 34:169–195.
- Sassaman, Kenneth E., and Zackary I. Gilmore. 2021. When Edges Become Centered: The Ceramic Social Geography of Early Pottery Communities of the American Southeast. *Journal of Anthropological Archaeology* 61:1–16.
- Smith, Karen Y., and Vernon J. Knight Jr. 2017. Swift Creek Paddle Designs and the Imperative to Be Unique. *Southeastern Archaeology* 36:122–130.
- Smith, Karen Y., and Keith Stephenson. 2018. The Spatial Dimension of the Woodland Period. *Southeastern Archaeology* 37:112–128.
- Wallis, Neill J. 2011. *The Swift Creek Gift: Vessel Exchange on the Atlantic Coast*. University of Alabama Press, Tuscaloosa.

- Watson, Patty Jo. 1995. Archaeology, Anthropology, and the Culture Concept. *American Anthropologist* 97:683–694.
- Wentworth, Chester K. 1922. A Scale of Grade and Class Terms for Clastic Sediments. *Journal of Geology* 30:377–392.
- Williams, Mark, and Daniel T. Elliott. 1998. Swift Creek Research: History and Observations. In *A World Engraved: Archaeology of the Swift Creek Culture*, edited by Mark Williams and Daniel T. Elliott, pp. 1–11. University of Alabama Press, Tuscaloosa.
- Wolf, Eric R. 1984. Culture: Panacea or Problem? *American Antiquity* 49: 393–400.