This study aims to investigate Late Woodland (650–1000 AD) ceramic manufacturing in the Upper Tombigbee River Drainage through petrographic analyses. The analyses of pottery from three sites, Chowder Springs A/B (22LO554/22LO555), Kellogg Village (22CL527), and Tibbee Creek (22LO600), have revealed the gentle shifts in ceramic practices within the Woodland period and into the Mississippian period (1000–1550 AD). These shifts are marked in thin-section by the coexistence of tempers, such as sand, grog, bone, and/or shell. I use these data to understand ceramic craft production during the Late Woodland period, as well as to analyze any craft traditions that hint at the early incorporation of Mississippian practices.

### Methodology

Research Objectives
- Characterize regional Late Woodland (Miller III sequence) ceramics.
- Identify shifts within ceramic practices from the Middle to Late Woodland Period and from the Late Woodland to Early Mississippian periods.

Ceramic analysis of 40 sherds* from 3 archaeological sites:
- Petrographic analysis was used to understand fabric and gross temper groups.

### Results

Despite all the vessels in this assemblage dating to the same period, they include a variety of inclusions that are indicative of traditions that pre- and post-date the Late Woodland period. This assemblage shows a shift from the Middle Woodland tradition of sand temper to that of grog temper, sometimes also including sand or bone temper. It also suggests the possible early transition to the subsequent Mississippian period tradition of shell-tempering.

**A. Middle to Late Woodland shift from Sand → Grog temper/ Grog & Bone temper**

- **SAND TEMPER** (22CL527, XP, 4x)
- **SEVERAL TYPES OF GROG** (22LO555–8, XP, 4x)
- **MULTIGENERATIONAL GROG TEMPER** (22CL527–28, PPL, 4x)
- **GROG WITH SPONGE SPOCULES** (22CL527–35, PPL, 10x)
- **BONE TEMPER** (22LO600–37, PPL, 10x)
- **GROG & BONE TEMPER** (22LO600–37, PPL, 10x)

**B. Possible Late Woodland to Mississippian shift from Grog → Grog & Shell temper**

- **POSSIBLE SHELL VOIDS FROM DISSOLVED SHELL TEMPER** (22CL527–34, PPL, 4x)
- **POSSIBLE SHELL VOIDS FROM DISSOLVED SHELL TEMPER & GROG** (22CL527–30, XP, 4x)
- **POSSIBLE SHELL-TEMPERED GROG** (22LO555–1, XP, 10x)

### Discussion & Conclusions

- **This study exemplifies the known Woodland Period shift from sand to grog temper. Multi-generational grog particles are indicative of this long-standing craft tradition.**
- **Some grog particles from the Late Woodland period ceramics are indicative of growing connections between the Upper Tombigbee River drainage and other parts of the Southeast.**
- **Two sherds from Tibbee Creek were created with intentional bone inclusions in addition to grog.**
- **This ceramic type, Turkey Paw Plain, may have resulted due to the influence of other groups that practice bone-tempering, such as the Caddo to the West (Perttula et al. 2011).**
- **This assemblage may also support the idea that the tradition of Mississippian shell tempering began earlier than originally suggested in the region.**
- **Over 20% of this assemblage have voids that resembled that of shell temper particles in otherwise grog-tempered sherds.**
- **Jenkins and Krause (1986, 2009) have pointed to the co-occurrence of grog and shell temper in very late Woodland period ceramics to suggest that the regional Mississippianization was the result of a fusion of Mississippian and Woodland peoples.**

### Future Work

Moving forward, I intend to study early and late Mississippian period ceramic assemblages from the region to further analyze ceramic trends. I am also in the process of conducting chemical analyses on these ceramics. This will help to understand provenance of the assemblages and understand the possible movement of pots and people both within and outside of the Upper Tombigbee region. This research may also lend insight into any production and resource procurement differences between sites and between Woodland and Mississippian contexts.

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* No mortuary vessels were used in this analysis.