Bibliography on Woodland and Caddo Instrumental Neutron Activation Analysis and Petrographic Analysis Studies in East Texas, Northwest Louisiana, eastern Oklahoma, and Southwest Arkansas

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Repository Citation

ISSN: 2475-9333  
Available at: [https://scholarworks.sfasu.edu/ita/vol2013/iss1/16](https://scholarworks.sfasu.edu/ita/vol2013/iss1/16)

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BIBLIOGRAPHY ON WOODLAND AND CADDRO INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS AND PETROGRAPHIC ANALYSIS STUDIES IN EAST TEXAS, NORTHWEST LOUISIANA, EASTERN OKLAHOMA, AND SOUTHWEST ARKANSAS

Timothy K. Perttula and Robert Z. Selden, Jr.

Characterizing the chemical and mineralogical composition of ceramic vessels and sherds from Woodland and Caddo sites by means of instrumental neutron activation analysis (INAA) and petrographic analysis provides a unique opportunity to gather and investigate empirical evidence from ceramic vessels (and perhaps their contents?) on their trade and exchange at varying scales conducted by ancestral Caddo people with their neighbors, both near and far (i.e., other ancestral Caddo groups as well as non-Caddo communities) (see Perttula 2002a). This evidence in turn can be used to explore changes in the nature of social and economic relationships between particular Caddo groups and other prehistoric populations. Identified compositional and paste differences that have been identified between the different wares made by Caddo groups (i.e., plain wares, utility wares, and fine wares) have also been employed to explore functional and technological differences in vessel function and form (see Perttula 2000i:138).

According to Ferguson et al. (2012a:224), the database of INAA samples of ceramic sherds from Woodland and Caddo sites that have been analyzed at the University of Missouri Research Reactor Center at the University of Missouri-Columbia, “consist[s] of more than 1000 ceramic samples...[and] is one of the largest samples from any region in the world. It is also one of the most complicated. Over the past decade the compositional group structure has undergone numerous modifications, as well as a complete reanalysis [Ferguson et. al 2010]. The most recent interpretation of the East Texas Caddo database divides the region into 11 sub-regions.” Each of these sub-regions (Figure 1) has then been treated as an individual dataset, and for most sub-regions, a core group has been defined and identified. This INAA sample has been gathered from more than 200 Woodland and Caddo sites/ceramic assemblages in the Caddo area, and the petrographic sample is almost equally as robust.

A considerable amount of work has been completed in Caddo area ceramic studies over the last 15 years—although the first contributions to this manner of analysis occurred more than 40 years ago (see Bareis and Porter 1965; Porter 1971)—that have focused on issues of technological organization and ceramic provenance and whether particular vessels and sherds from vessels from Woodland and Caddo sites were manufactured locally or were the product of trade and exchange from non-local production sources. However, most of this work has been conducted in contexts—especially cultural resource management projects—where the results of these studies are to be found only within in very limited distribution reports and publications. Thus, many archeologists that currently work in the Caddo area may not be aware of the scope and breadth of the research that has been accomplished to date, nor are they aware of the primary published (and unpublished) literature on the subject. Consequently, we have assembled a bibliography of all known (current through October 2012) reports and publications that address with INAA and petrographic analyses of ceramic vessels and ceramic vessel sherds in the Caddo area.
Figure 1. Current Chemical Groups defined in INAA analyses of sherds, mainly in sites in East Texas.
As evidenced by the bibliography shows, the vast majority of the INAA and petrographic analysis studies completed to date on Woodland and Caddo sites in the Caddo area have been conducted on ceramics from sites in East Texas. We think it is important that comparable studies be completed on Woodland and Caddo vessels and vessel sherds from assemblages in adjoining states, and this article is a plea to Caddo archeologists working in all parts of the Caddo area that they strongly consider undertaking their own INAA and petrographic research. Such research can (1) help to better clarify the compositional nature of these ceramic wares across the entire Caddo temporal and geographic landscape, not being limited to just one part of the Caddo world; (2) help pinpoint other ceramic manufacturing locales and chemical/mineralogical compositional groups, but also to assess their apparent technological complexity; and (3) lead to better evaluations of the regional character of prehistoric and historic Woodland and Caddo trade and interaction networks (which crossed our modern political boundaries) that existed, and more definitively establish whether there were changes through time in the direction and intensity of local and long distance trade and interaction. The disparate pieces of information contained within the sherds and vessel fragments of Woodland and Caddo ceramics found on many prehistoric and early historic sites throughout a broad region have the potential to address these questions and research issues, and can contribute unique information concerning those relationships that existed in the distant (and not-so-distant) past between Woodland groups and Caddo farmers and other aboriginal groups in the Southeast, Midwest, and Southern Plains.

Acknowledgments

We thank Ann Early, Linda Ellis, Ross Fields, Jeff Girard, and Mary Beth Trubitt for their helpful suggestions regarding instrumental neutron activation analysis and petrographic work completed in and very near the Caddo area.

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