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Toward a Regional Radiocarbon Model for the East Texas Woodland Period

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ABSTRACT

The East Texas Radiocarbon Database contributes to an analysis of tempo and place for Woodland-era (ca. 500 B.C. – A.D. 800) archaeological sites within the region. The temporal and spatial distributions of calibrated radiocarbon (14C) ages (n=127) with a standard deviation (SD) of 61 from archaeological sites with Woodland temporal zones (n=55) are useful in exploring the development and geographic contrast of the peoples in East Texas, and lead to a refinement of our current chronometric understanding of the period. While the analysis of the dates produces less than significant findings due to sample size, they are used here to illustrate the method of data combination prior to the production of site and period-specific summed probability distributions. Through the incorporation of this method, the number of 14C dates is reduced to 85 with a SD of 54. The resultant data set is then subjected to additional analysis which conclude with the separation of the East Texas Woodland period into the Early Woodland (ca. 500 B.C. – A.D. 8), Middle Woodland (ca. A.D. 8-400), and Late Woodland (ca. A.D. 400-800) periods.

RESULTS

Although the number of sites is small, they highlight a possible temporal hiatus of nearly 400 years in the Red River basin, and another of nearly 200 years in the Cypress Creek basin, both of which appear here on the basis of data from one site in each river basin. The remaining peaks correlate with populations from the kernel density plot, and they illustrate a small peak in the Red River basin around 800 B.C. followed by slight increases in the dates from the Sulphur, Cypress, and Sabine basins around 200 B.C. This is prior to a 200-year peak in dates from the Sulphur and Sabine River basins for A.D. 50-220, after which a marked increase occurs in the number of dated Woodland sites for the Sulphur, Cypress, Sabine, and Neches River basins from A.D. 600-800.

CONCLUSIONS

We are quickly approaching an era where typological assignments can be associated with radiocarbon samples in this same manner, but significant advances in correlating these data with specific aspects of archaeological assemblages still need to be made as we progress in our understanding of Woodland period sites is contrast against the much more robust representation of radiocarbon dates from the Caddo period. The fact that only 127 of the 1248 sampled dates from the East Texas Radiocarbon Database are representative of this period speaks to the need for further research.

BROADWAY SITE EXAMPLE

Due to depositional and contextual issues and the wide variety of mitigation strategies and research designs employed throughout the region, the western boundary of the Eastern Woodlands is something of an uncertain delineation and explored periods in the greater Southeast. This can be seen plainly when the number of components from Woodland period sites is contrast against the much more robust representation of radiocarbon dates from the Caddo period. The fact that only 127 of the 1248 sampled dates from the East Texas Radiocarbon Database are representative of this period speaks to the need for further research.

REFERENCES

*Available as open access reprint.

The 13 14C dates from the Woodland period occupation at the Broadway site were combined into three groups (Figure 12). Group 1 consists of two assays (Beta-1575990 and Beta-173089); Group 2 has six assays (Beta-1548688, Beta-1550960, Beta-1730891, Beta-154857, Beta-1575991, and Beta-1730905); and Group 3 has five assays (Beta-1730990, Beta-1575991, Beta-1624981, Beta-1570979, and Beta-1824612). Group 1 has an age range from A.D. 442-574, and Group 1 dates from A.D. 635-771, indicating a temporal hiatus of 98 cal. 14C years between Group 1 and Group 2, and 111 cal. 14C years between Group 2 and Group 1. Occupational periods span 87 cal. 14C years, 132 cal. 14C years, and 86 cal. 14C years, respectively.

ARCHAEOLOGICAL INTERPRETATION

Early Woodland (ca. 500 B.C. – A.D. 0) Middle Woodland (ca. A.D. 0 – 400) Late Woodland (ca. A.D. 400 – 800)