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The East Texas Caddo: Modeling Tempo and Place

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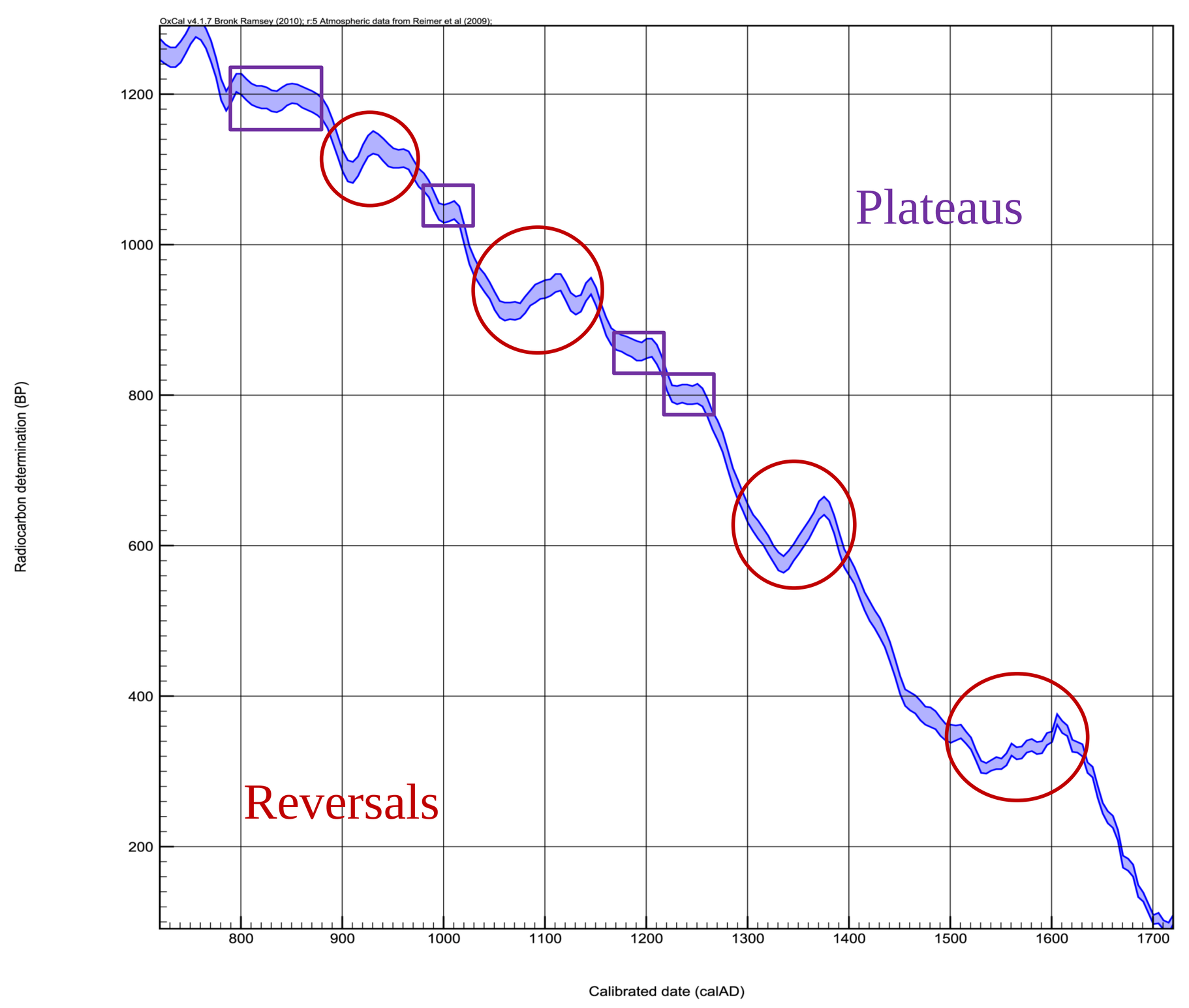
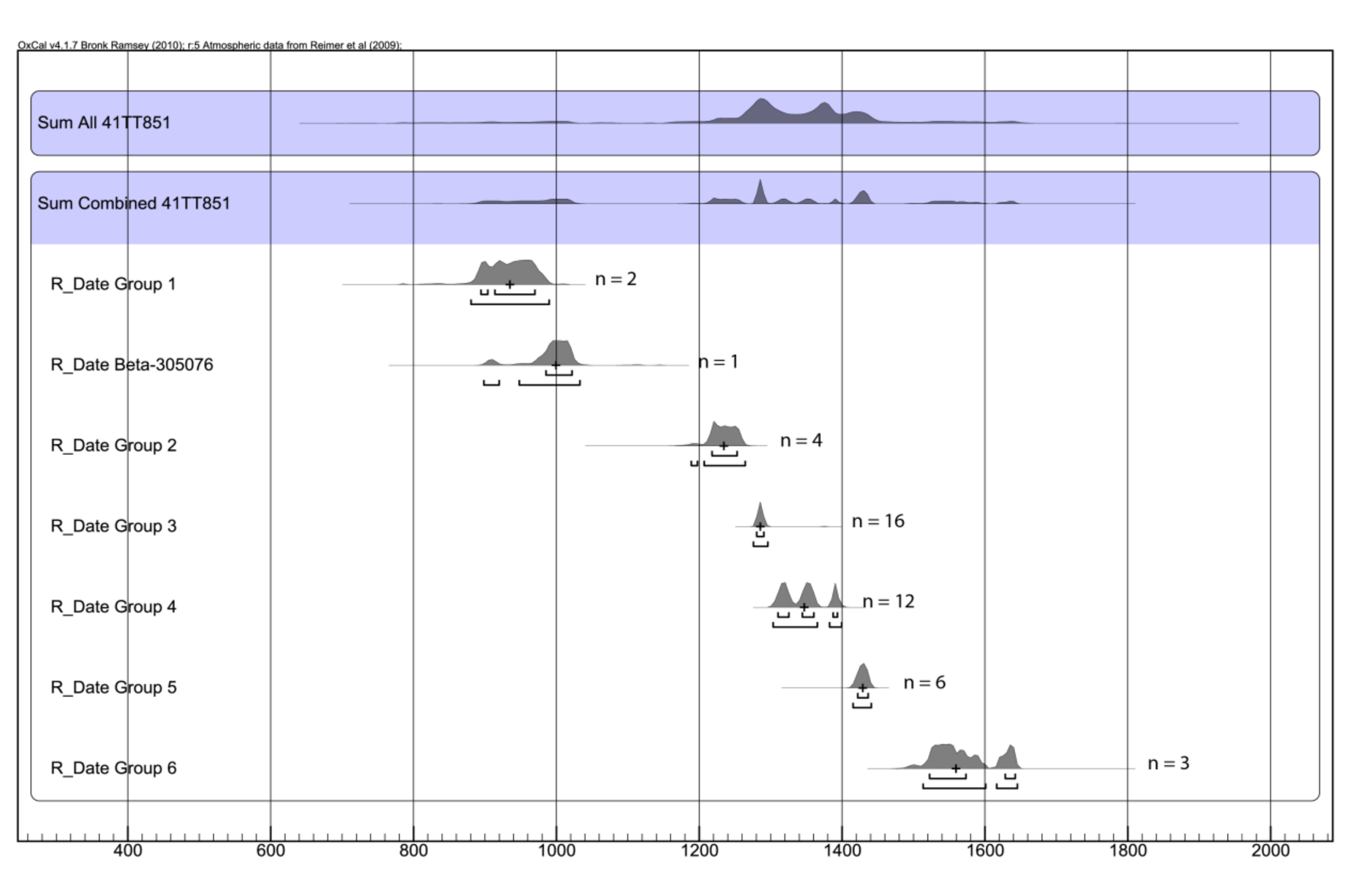
CADDO RADIOCARBON

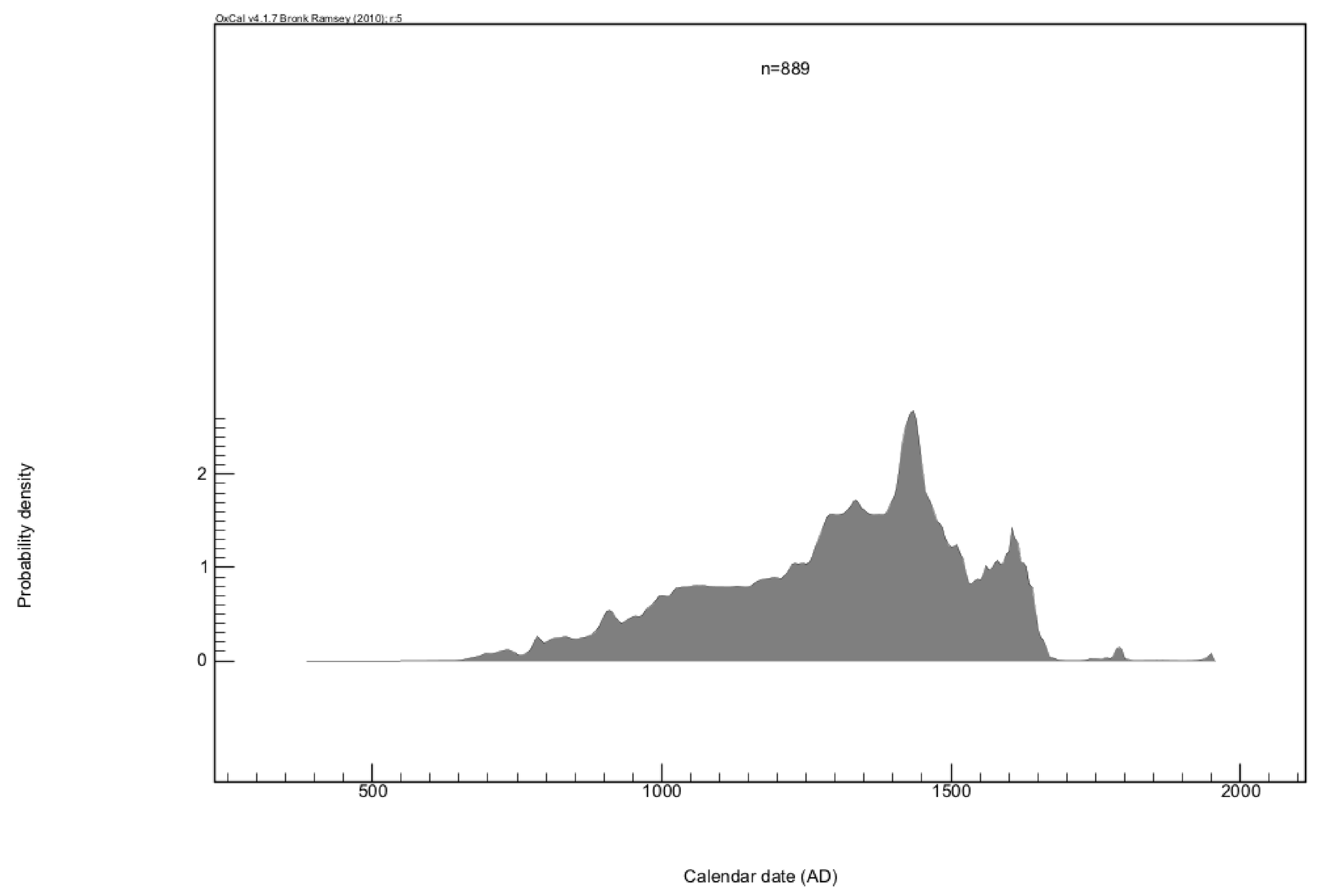
While large strides have been made in Caddo archaeological research during the last 30 years, there remains no shortage of research questions and problems that can be addressed concerning the ca. A.D. 800-1680 Caddo-era occupation of East Texas. For instance, what did the development and progression of Caddo political and economic systems look like through time and across space, and were there specific nexuses of power that can be identified? How and when did Caddo political, economic, and religious systems manifest themselves across the region in the form of multiple mound centers, community cemeteries, shaft tombs for the elite, evidence for long-distance trade, and the establishment of sedentary farming communities?



THE CADDO SAMPLE

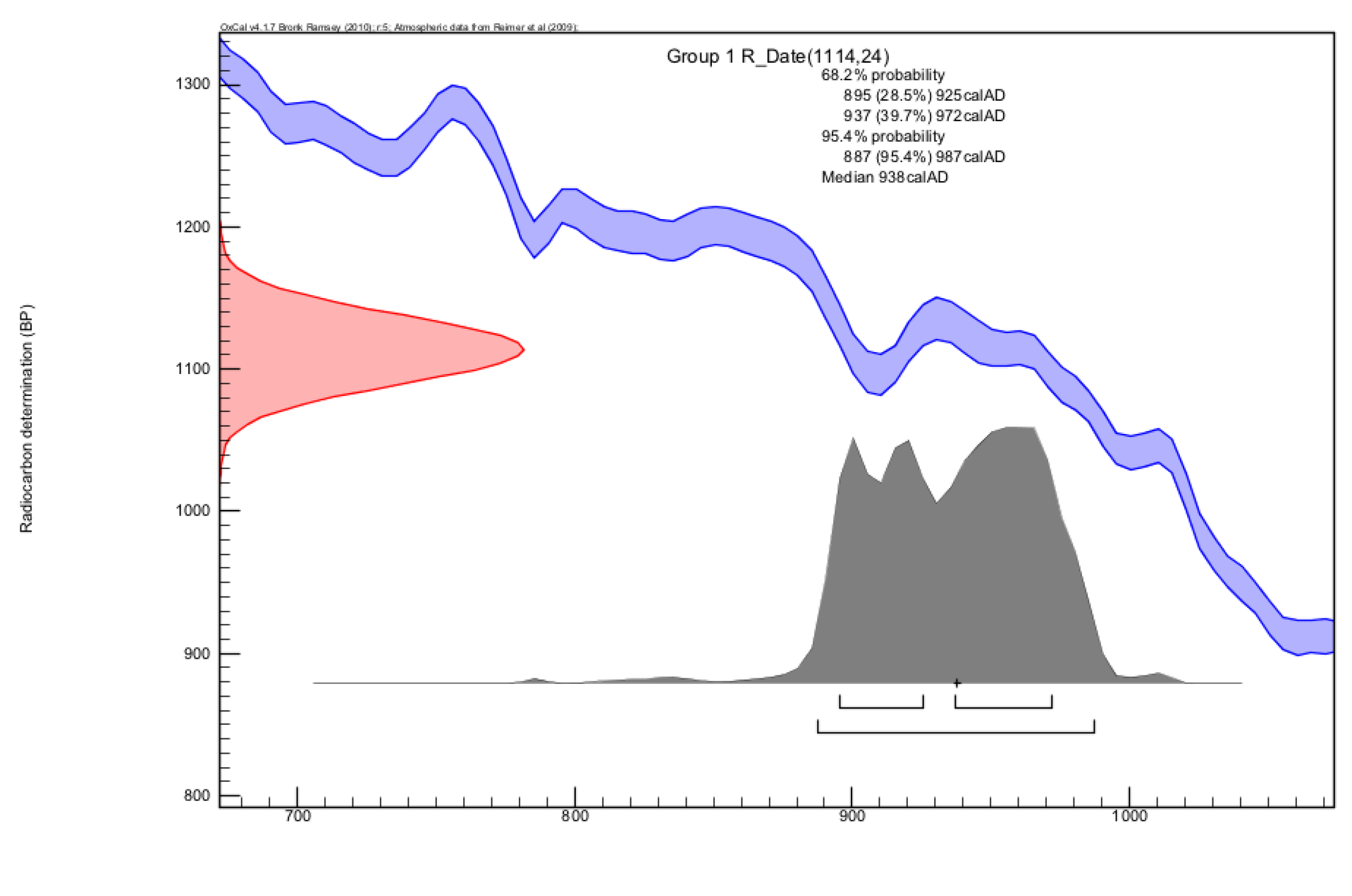
The raw sample of Caddo ^{14}C dates (n=889, ΔT=58) exceeds the minimum number of dates needed for statistical significance—750 as suggested by Michczyńska and Pazdur (2004) and 500 by Williams (2012)—but the combined sample (n= 405, ΔT=53 does not. However, the distilled sample of 405 dates reduces probability bias introduced by sites with large catalogs of ^{14}C dates, and provides a more accurate representation of the temporal character for sites with ≥10 ^{14}C dates, which were combined for two reasons: (1) to reduce the standard deviation and increase the accuracy of each site's temporal assignments and (2) to reduce sampling bias created by the number of samples during statistical analyses.





TEMPORAL FRAMEWORK

Borrowing—philosophically—from Pauketat (2007), we need to dig deeper into the cultural nuances and traditions of the Caddo people to investigate how they influenced the creation of this socially powerful group of complex mound-building societies at the western edge of the Eastern Woodlands, not the other way around. To us, the logical first step in addressing the temporal and spatial character of the East Texas Caddo tradition is through an analysis of the ^{14}C data presented here. Although "deceptively simple" (Perttula 2012:12), the current chronology of the Caddo tradition embraces "no unstated assumption…that [these] periods represent linear or evolutionary views of regional developments or that archaeological developments within the East Texas Caddo area conform in any way from one region to another within the overall regional framework" (Perttula 1992:58).

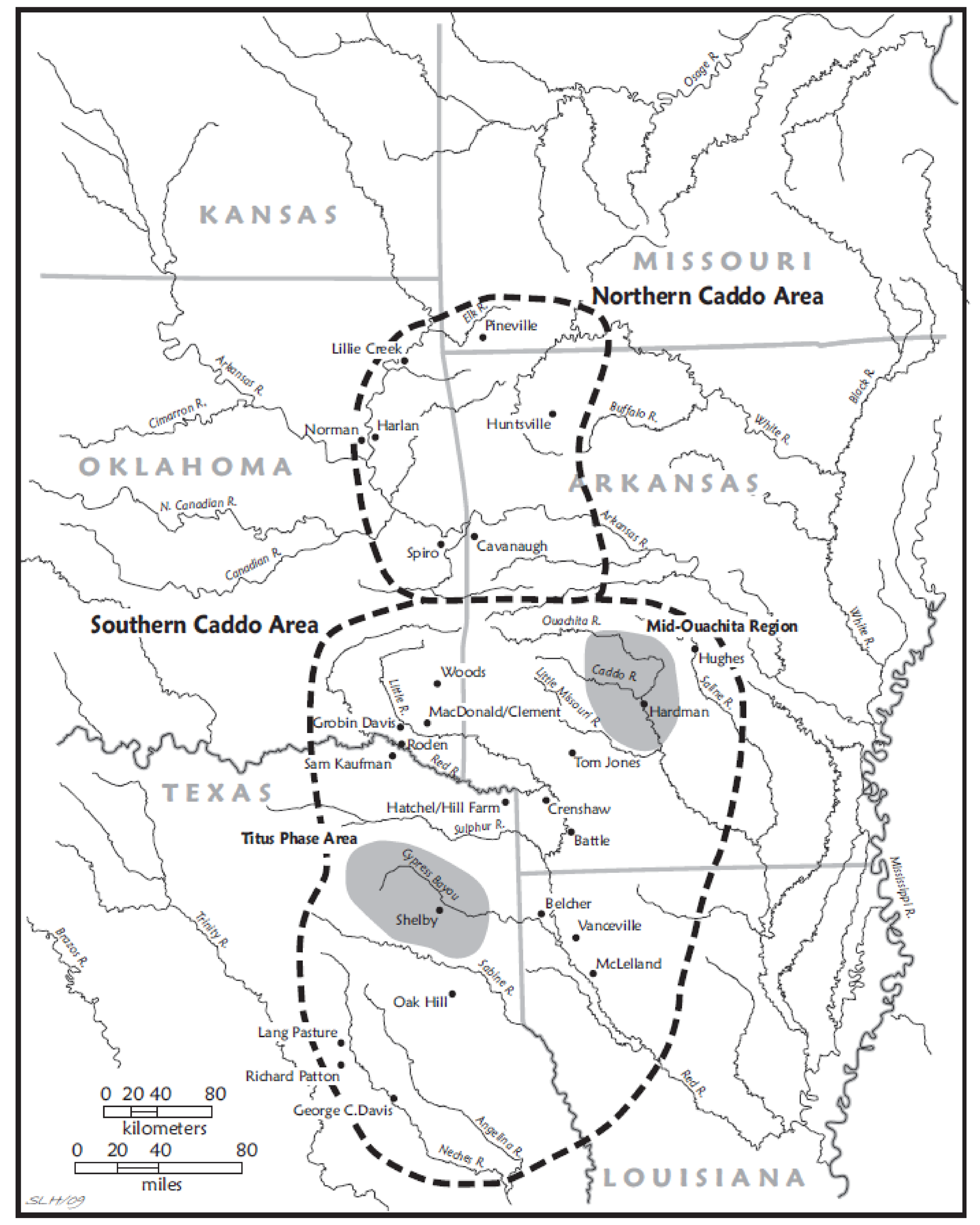


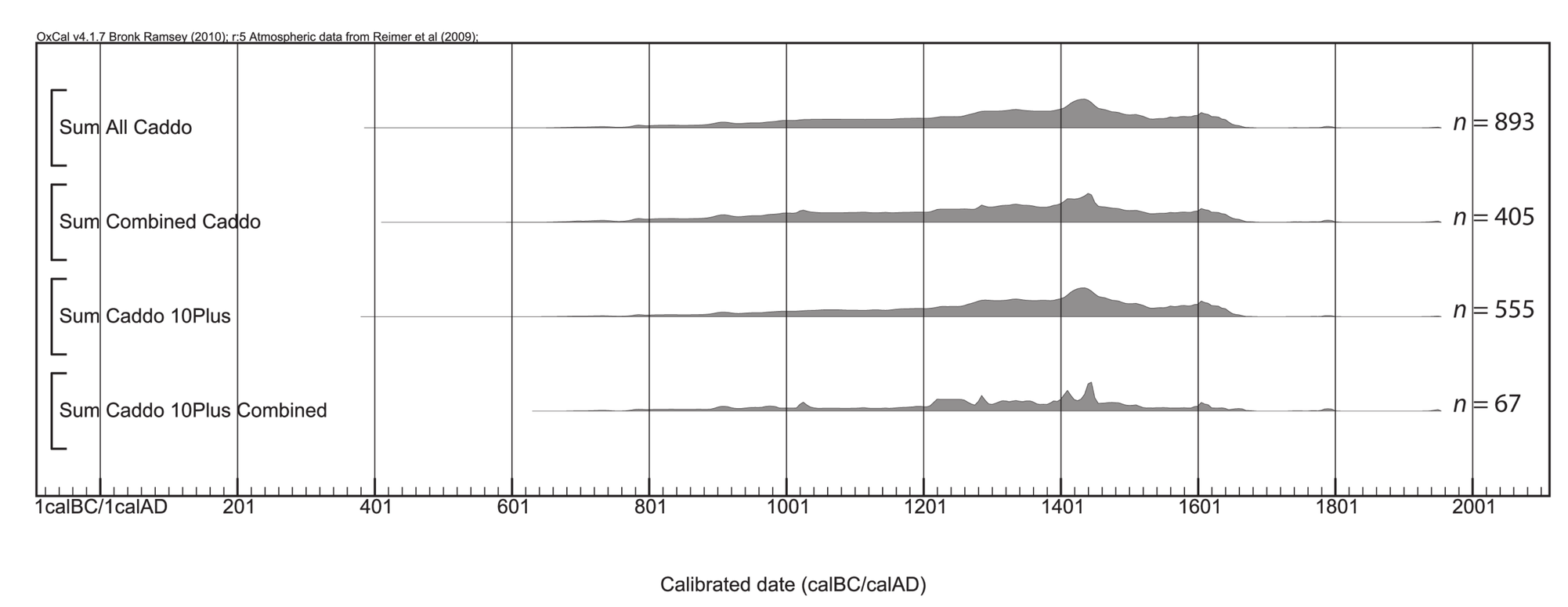
TEMPORAL RANGE OF OCCUPATION

Caddo sites with ≥10 ^{14}C dates include Lang Pasture (41AN38), George C. Davis (41CE19), Kitchen Branch (41CP220), Pilgrim's Pride (41CP304), Hickory Hill (41CP408), Spider Knoll (41DT11), Arnold (41HP102), Hurricane Hill (41HP106), Peerless Bottoms (41HP175), Pine Tree Mound (41HS15), Tallow Grove (41NA231), Beech Ridge (41NA242), Nawi haia ina (41RK170), Oak Hill Village (41RK214), Ear Spool (41TT653), George E. Richey (41TT851), William A. Ford (41TT852), James E. Richey (41TT853), and Rookery Ridge (41UR133). The number of dates garnered through investigations at each of these sites is biased by variable research designs, mitigation strategies, and access to funding.

ABSTRACT

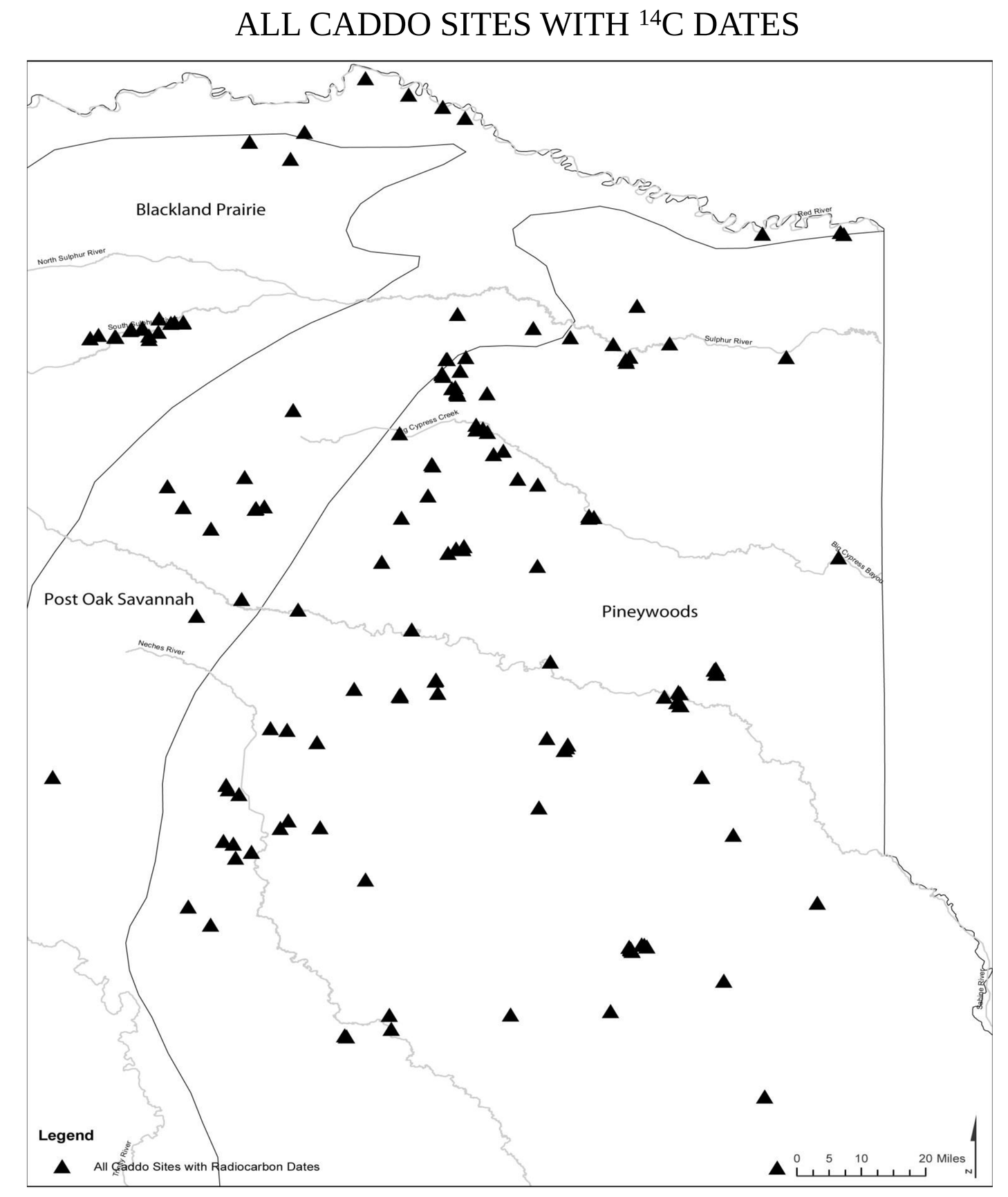
Analysis of the Caddo sample (n=889 dates) from the East Texas radiocarbon database is used to establish the tempo and place of Caddo era (ca. A.D. 800-1680) archaeological sites, site clusters, and communities across the region. The temporal and spatial distribution of radiocarbon ages from settlements, mound centers, and cemeteries across the region have utility in exploring the development and geographical continuity of the Caddo peoples; establishing the specific times when areas were abandoned or population sizes diminished; and defining times and areas illustrating an intensification in mound center construction and large cemeteries became a focus of community social practices.



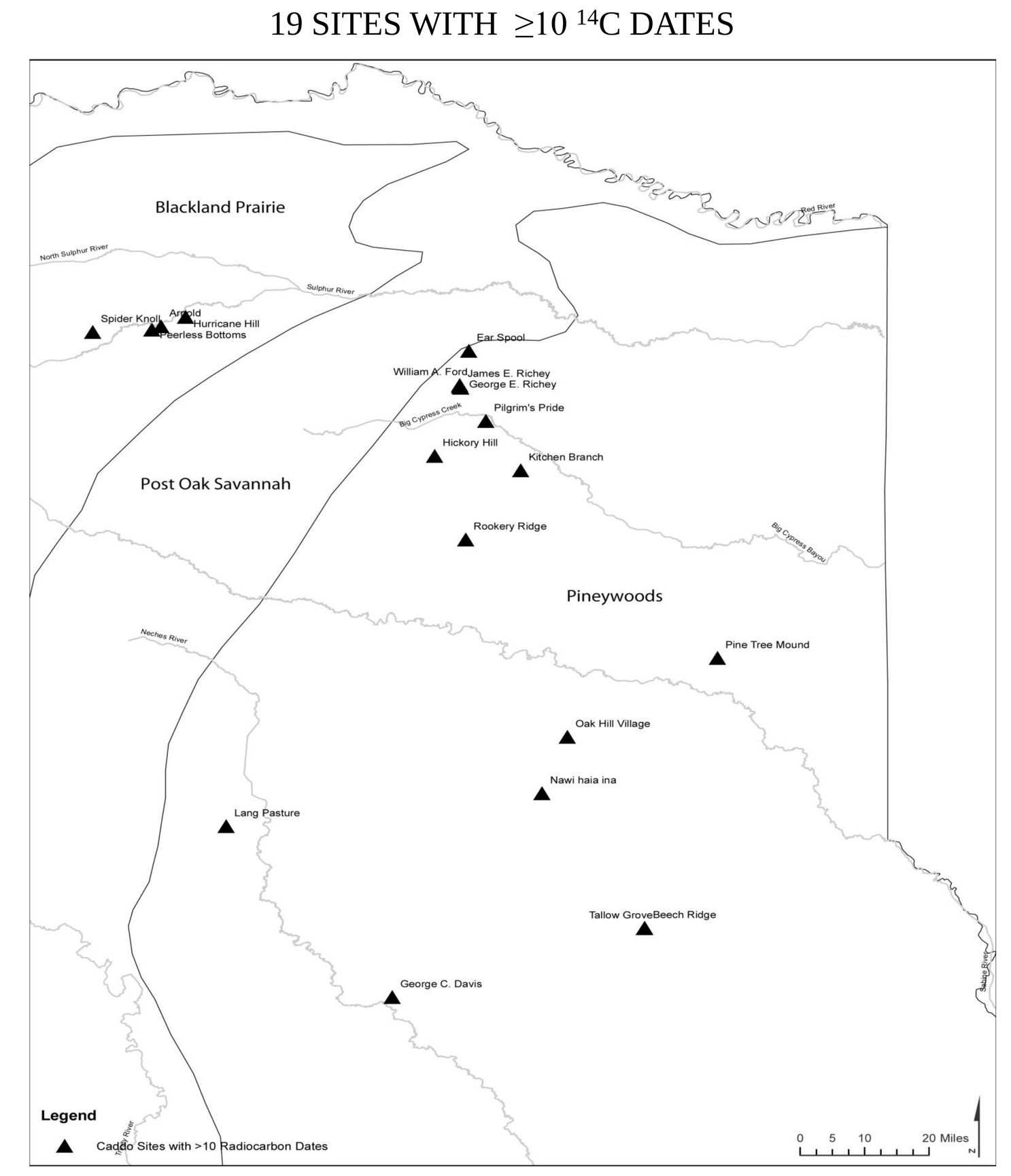


Summed probability distributions illustrating the effect of the date combination process upon the entirety of the Caddo tradition dates, and upon those sites with ≥10 ^{14}C samples.

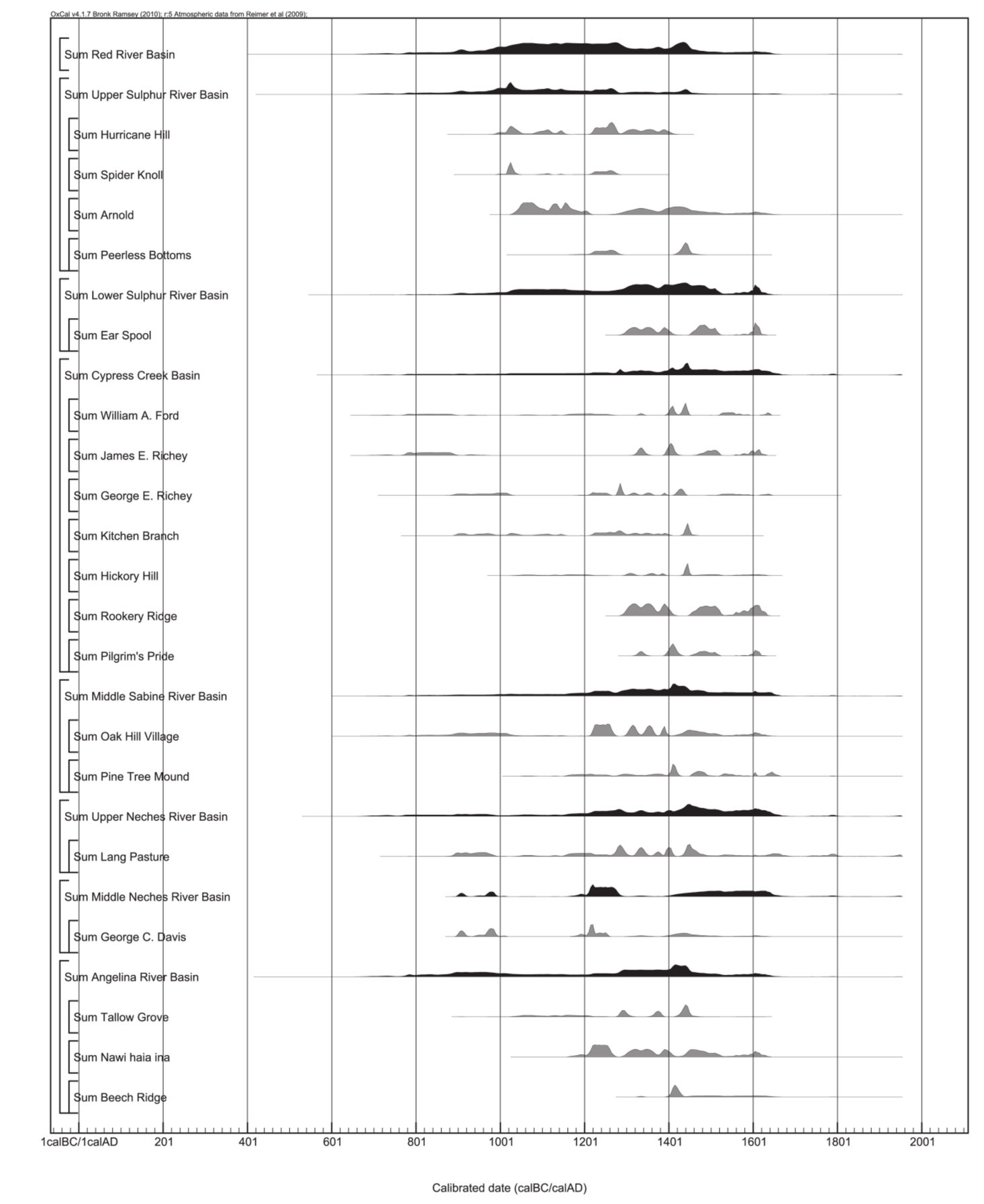
ALL CADDO SITES WITH ^{14}C DATES



19 SITES WITH ≥10 ^{14}C DATES



*References available upon request.



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 400 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.

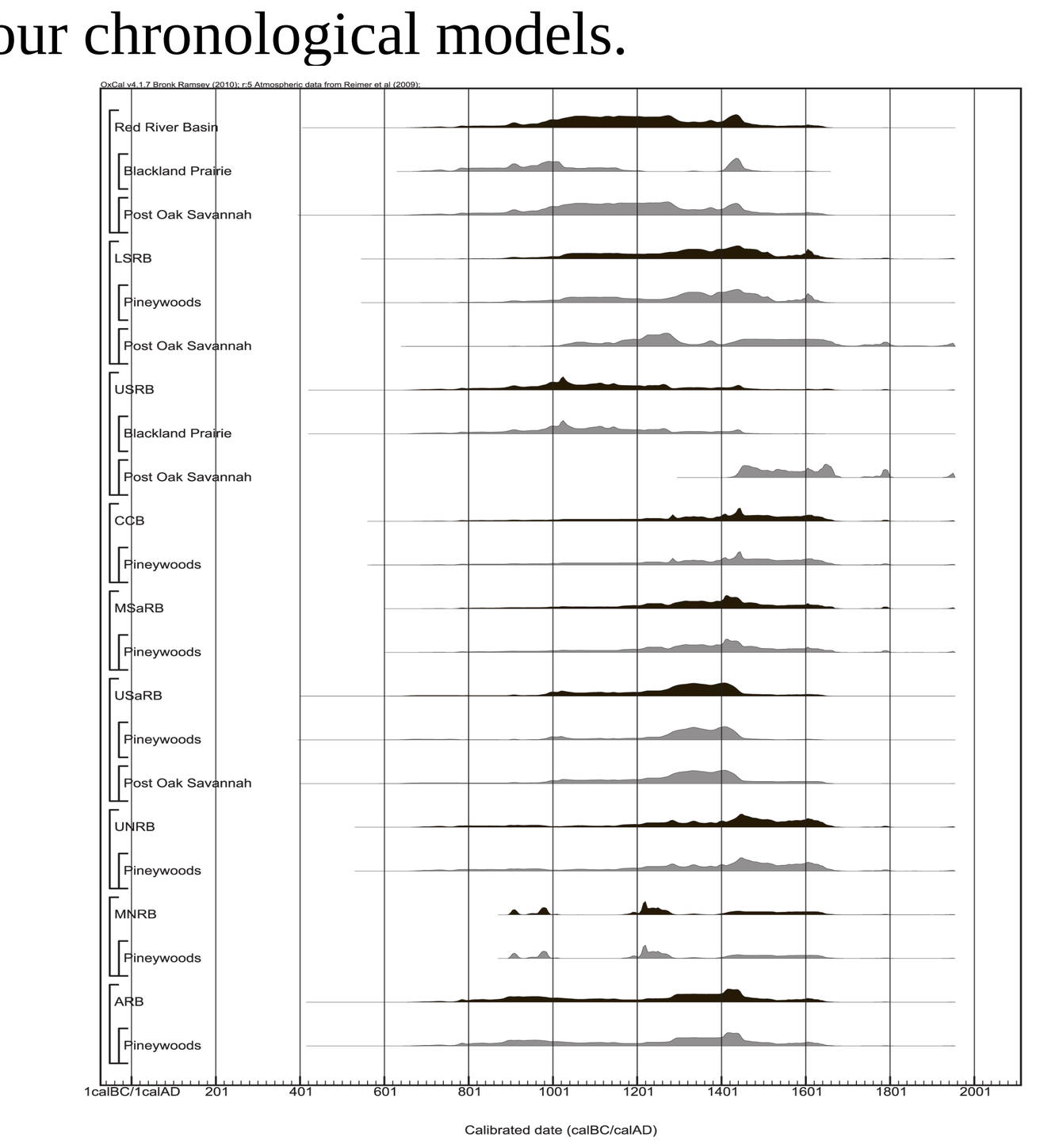
Period	Dates (A.D.)
Formative Caddo	800 – 1000
Early Caddo	1000 – 1200
Middle Caddo	1200 – 1400
Late Caddo	1400 – 1680
Historic Caddo	1680 – 1860+

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 analyses of the Woodland period of East Texas. This analysis represents only a small sample of ^{14}C dates from the ETRD, which remains a large and understudied amalgam of radiocarbon dates that is available for use within current cultural resource management endeavors. Through the systematic employment of this methodological approach, it is plausible that similar analyses would strengthen the arguments presented here (i.e., shorter hiatuses during the later and better-understood Caddo period, and longer hiatuses ranging from the Archaic through Paleoindian periods), providing a productive medium through which dialogues regarding the material culture of East Texas can continue to be developed.

RESULTS

This approach to the interpretation of ^{14}C data can be fruitful, but whether it is capable of rendering accurate predictions regarding occupation intensity or the warrants further consideration. While hesitant to use the proportion of radiocarbon dates as a marker for population dynamics, we are more comfortable using the temporal dynamics from site-specific analyses for this discussion, which—once refined through the date combination process—can provide a more accurate measure of regional occupation, once a sufficient sample of well-dated Caddo sites throughout East Texas stream basins and environmental habitats is obtained. Certainly changes in the frequency of ^{14}C dates might be employed as a proxy for indicating population fluctuations, but we need to remain vigilantly skeptical as we continue to refine our chronological models.



DISCUSSION

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 remains one of the least well-known 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 ^{14}C samples in the East Texas Radiocarbon Database are representative of this period speaks to the need for further research.