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Radiocarbon Dates from the Pine Snake Site (41CE467), Cherokee County, Texas

Timothy K. Perttula

Introduction

The Pine Snake site is a late 17th to early 18th century Caddo Indian archaeological site located on private land in the northwestern part of Cherokee County, Texas, in the valley of the westward-flowing Flat Creek, a tributary to the Neches River (Perttula et al. 2013). This is an area of the Pineywoods of East Texas that contains extensive numbers of Caddo archeological sites along all major and minor streams. Post-A.D. 1400 Frankston phase and post-A.D. 1650 Historic Caddo Allen phase sites, especially cemeteries dating to either phase, are particularly abundant in this part of East Texas. However, not many of these sites in the upper Neches River basin have had radiocarbon assays obtained from charred plant remains in feature contexts, and consequently the absolute age of most of these ancestral Caddo components and phases are not well or definitively established. Fortunately, charred *Carya* sp. nutshells are abundant in feature contexts in habitation deposits at the Pine Snake site, and samples of these remains have been submitted to DirectAMS (Seattle, Washington) for radiocarbon dating.

Radiocarbon Samples and Calibrated Dates

Shovel testing across the Pine Snake site (Figure 1) and the subsequent excavation of 5+ 1 x 1 m units (Figure 2) in and around a discovered hearth feature (Feature 1) and its associated very dark grayish-sediments led to the recovery of dateable samples of charred *Carya* sp. nutshells from 20-30 cm bs and 30-35 cm bs in Units 781, 783, and 785 (Table 1). The Feature 1 hearth basin extends from 31-48 cm bs in its center, and the charred plant remains sampled for radiocarbon dating are associated with the hearth deposits.

Table 1. Radiocarbon dates from the Pine Snake site (41CE467).

DirectAMS #	Unit	cm bs	Conventional age, 1 sigma, B.P.	Calibrated age, 2 sigma, B.P.
D-AMS 014250	781	20-30	260-212	281-307
D-AMS 014251	785	30-35	276-226	283-311
D-AMS 014225	783	20-30	278-222	282-315

The radiocarbon analyses discussed in this article were done by DirectAMS of Seattle, Washington. The radiocarbon ages obtained on these samples (see Table 1) have been calibrated to 2 sigma, years B.P., using IntCal13 (Reimer et al. 2013).

The conventional or corrected radiocarbon age of the three samples range from 278-212 years B.P., or A.D. 1672-1738. The conventional ages of the three samples overlap in age between 260-222 years B.P., or A.D. 1690-1728 (see Table 1). The two sigma calibrated age of the three radiocarbon samples from the Pine Snake site range from A.D. 1630-1678, overlap between A.D. 1631-1670, with calibrated median ages ranging from A.D. 1655-1664. The cumulative summed calibrated age ranges of the three dates are shown in Figure 3.

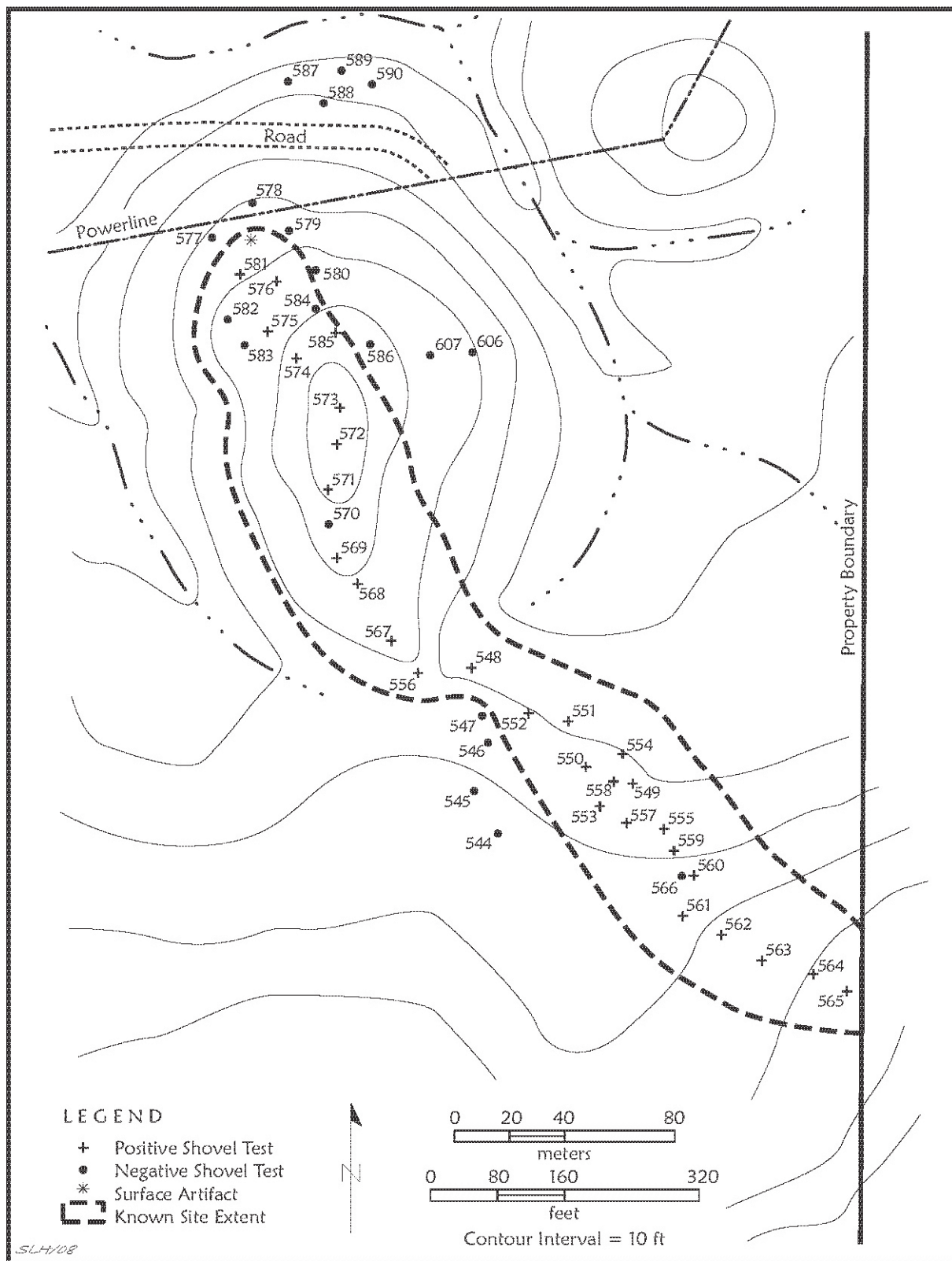


Figure 1. Map of the Pine Snake site.

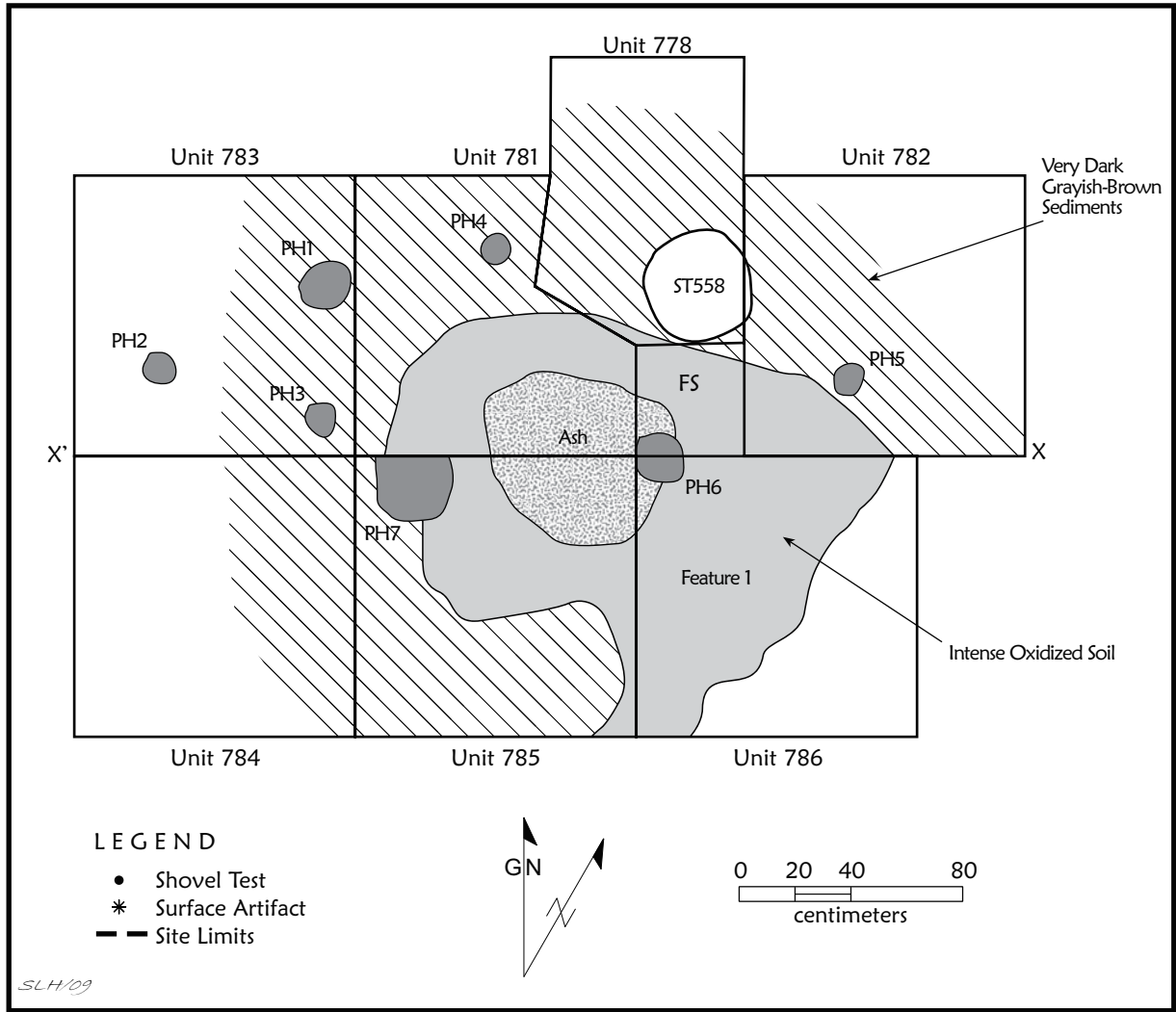


Figure 2. Plan of excavations in and around Feature 1 in the southern part of the Pine Snake site.

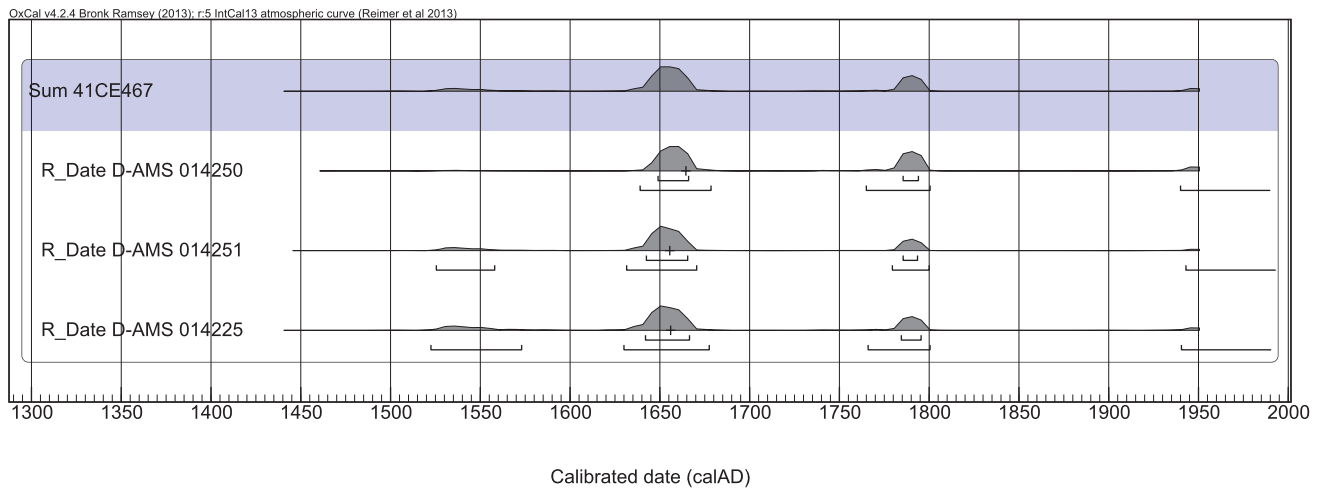


Figure 3. Cumulative summed probabilities of the three calibrated radiocarbon dates from the Pine Snake site. Figure provided by Robert Z. Selden, Jr.

Summary and Conclusions

The Pine Snake site (41CE467) is an Allen phase Caddo habitation site in the Flat Creek valley, a westward-flowing tributary to the Neches River. Test excavations in the habitation deposits recovered charred *Carya* sp. nutshells in association with organically-stained sediments and a hearth feature. Three samples of nutshells from different proveniences in and immediately proximal to the hearth were submitted for radiocarbon analysis to more definitively establish the age of the Allen phase component at the site.

The radiocarbon results indicate that the charred nutshells from the Pine Snake site have conventional or corrected radiocarbon ages that range from 278-212 years B.P., or A.D. 1672-1738; they overlap in age between 260-222 years B.P., or A.D. 1690-1728. The two sigma calibrated age of the three radiocarbon samples from the site range from A.D. 1630-1678, overlap between A.D. 1631-1670, and have calibrated median age ranges between A.D. 1655-1664. The calibrated radiocarbon ages indicate that the habitation deposits in this one area of the Pine Snake site date to the early years of the Allen phase, at least a generation before any sustained contact between Caddo peoples and European explorers and traders.

Acknowledgments

Sandy Hannum prepared Figures 1 and 2 in this article, and Robert Z. Selden, Jr. provided Figure 3..

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