

AN ACCELERATOR MASS SPECTROMETRY DATE FROM
A "LATE ARCHAIC" COMPONENT IN ROGER MILLS COUNTY

J. Peter Thurmond

A cluster of three largely deflated site remnants has been recorded by the author since 1983 on the west branch of Dry Creek, in the Washita basin, five kilometers south of Cheyenne in Roger Mills County, Oklahoma. The sites are 34RM334, Thurmond Ranch #13; 34RM470, Thurmond Ranch #44; and 34RM507, Thurmond Ranch #45. A charcoal sample has recently been collected from a hearth exposed at 34RM334, and the results of a radiocarbon assay of that sample are reported herein.

I refer to these as "site remnants" because the three appear to have been isolated from one another by the historic era incision of the west branch of Dry Creek and one of its right bank tributaries some 12 meters below the elevation of its channel at the time the sites were occupied. One would assume that, prior to this incision, a continuous scatter of campsite debris was distributed about the confluence across the nearly level floor of an upland valley at 640 meters AMSL. The site remnants are now associated with valley fill deposits perched along the rim of the modern canyon. Preserved stratigraphy at all three site remnants indicates that this campsite debris was buried about 50 cm below the surface after its deposition and prior to its exposure by erosion.

Lag veneers of Ogallala Formation gravels occupy the adjoining valley slopes, and were heavily exploited as sources of raw material for chipped stone tools. These quarry/workshop activity areas interdigitate with the campsite areas along the valley margin at all three site remnants.

Corner-notched dart points have been recovered from all three site remnants, and are referable to the types Ensor, Marcos and Palmillas. No arrow points or pottery have been recovered. The campsite areas are associated with the dart points and other well-thinned bifaces, a relatively few retouched flakes, latter-stage debitage, spirally fractured long bone fragments of deer and bison and heat-fractured fragments of Ogallala Fm. gravels, presumably derived from hearths. The quarry workshop areas have produced numerous tested cobbles, cores and corticate flakes. The lithics from all three site remnants are overwhelmingly dominated by Ogallala quartzite. A detailed analysis of these assemblages is under preparation by the author for submission to the annual bulletin of the Society.

In 1983, TXD, Inc. built a wellsite road across the canyon at this confluence, and constructed a dam between 34RM334 and 34RM407. Blading of a spillway for the dam on the east side of the canyon exposed a previously buried expanse of campsite debris on the north end of 34RM334, recorded as

Area C. Heavy rains this past spring filled the lake and caused overflow over the spillway, resulting in the exposure of a rock-lined hearth in this area of the site. Most of the feature had been destroyed by the time I found it, several days after this overflow began. The hearth was probably a shallow, basin-shaped feature, about 50 cm in diameter, lined with burned slabs of red sandstone and Ogallala Fm. quartzitic gravels. I collected 1.3 gm of woody charcoal from the sides and undersides of the undisturbed hearthstones. The sample appeared to be composed of twig and small branch fragments of cottonwood and hackberry.

The sample was deemed too small for a standard radiocarbon assay by the Radiocarbon Laboratory of the University of Texas at Austin (Sam Valastro, p.c.). It was therefore submitted to the Institute of Nuclear Sciences in Lower Hutt, New Zealand for assay utilizing an accelerator mass spectrometer. The results of that assay are reported below:

Sample NZA-712 34RM334C
Date Run: 9/15/89 Graphite yield: 2.2 mg
d13C: (24.95) per mille
D14C: (199.7) ± (8.1) per mille
Conventional radiocarbon age: 1789 ± 81 B.P.
Dendro calibrated age: 95% CI = A.D. 65-414
68% CI = A.D. 128-335
(Following Stuiver and Reimer 1986)

It has been common practice among archeologists working on the Southern Plains to classify as "late Archaic" those sites from which we have recovered corner-notched dart points but which fail to produce arrow points or pottery (c.f. Hughes 1977; Etchieson, Speer and Hughes 1978; Thurmond, Andrews and Freeman 1981; Ferring 1982). It would appear that such an assumption may be unfounded, and that some such components date well into the Woodland period. The radiocarbon dates from Deadman's Shelter (Willey and Hughes 1978), Delavare Canyon (Ferring 1982) and Swift Horse (Briscoe 1987) indicate that pottery appeared on the Southern Plains soon after A.D. 0. We have therefore assumed that components producing corner-notched dart points without pottery or arrow points dated before that time, to an interval something like 1000 B.C. to A.D. 0.

The date reported herein from 34RM334C would suggest that many such components may in fact be of Woodland age. Caution in making the classificatory break between "late Archaic" and "Woodland" on the basis of small artifact collections from a given site on the Southern Plains would seem judicious at this point in time.

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