

**Carol Fiorillo Macaulay**

*AMS (Accelerated Mass Spectrometry) Dating of a Late Prehistoric Campsite in North-Central Texas, Upper Sprague Site (41HM54), Hamilton County, Texas*  
(Anthropology, Forensic Science and Archaeology / Arts and Sciences)

Archaeological investigations at the Upper Sprague site (41HM54) began in 2004 when Frank Sprague, a private landowner in Hamilton County, contacted the Texas Historical Commission (THC) with a request for help with the investigation of an archaeological site located on his property. Carol Macaulay of the Department of Anthropology, Forensic Science and Archaeology was invited to participate. To initiate this investigation, a total of four excavation blocks, designated as Areas A, B, C, and D, were opened and tested, and excavation activities at this site are in progress. Areas A, B and C are currently being investigated by the Tarrant County Archeological Society (TCAS) while excavation activities in Area D were conducted by the 2007 and 2008 Baylor University Archaeological Field Schools. To date, a 26 square meter block has been opened, with plans to expand it during subsequent field schools. Area D excavations have revealed two occupations dating to the Late Prehistoric Period (A.D. 800–1500). The upper level consists primarily of lithic reduction debris, Perdiz arrow points and bison bone, indicative of the Toyah Interval (A.D. 1200–1500) of the Late Prehistoric Period. The lower level represents an intact living surface complete with a basin-shaped hearth, freshwater mussel and *Rabdotus* shell concentrations, burned rock clusters, a linear burned-daub feature, bison bone, bison bone tools, Scallorn, Bonham and Alba arrow points. These arrow points suggest that this occupational living surface dates to the Austin Interval (A.D. 800–1200); however, the presence of bison bone in association with these artifacts raises many questions. It is commonly accepted that bison did not make an appearance into central Texas until A.D. 1300 (Dillehay 1974); therefore, it has become apparent that AMS (accelerated mass spectrometry) dating of a series of well selected samples is needed in order to address critical research issues at the Upper Sprague site and publish a report on these investigations.