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## The Lithic and Ceramic Artifacts from the Spradley Site (41NA206), Nacogdoches County, Texas

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## The Lithic and Ceramic Artifacts from the Spradley Site (41NA206), Nacogdoches County, Texas

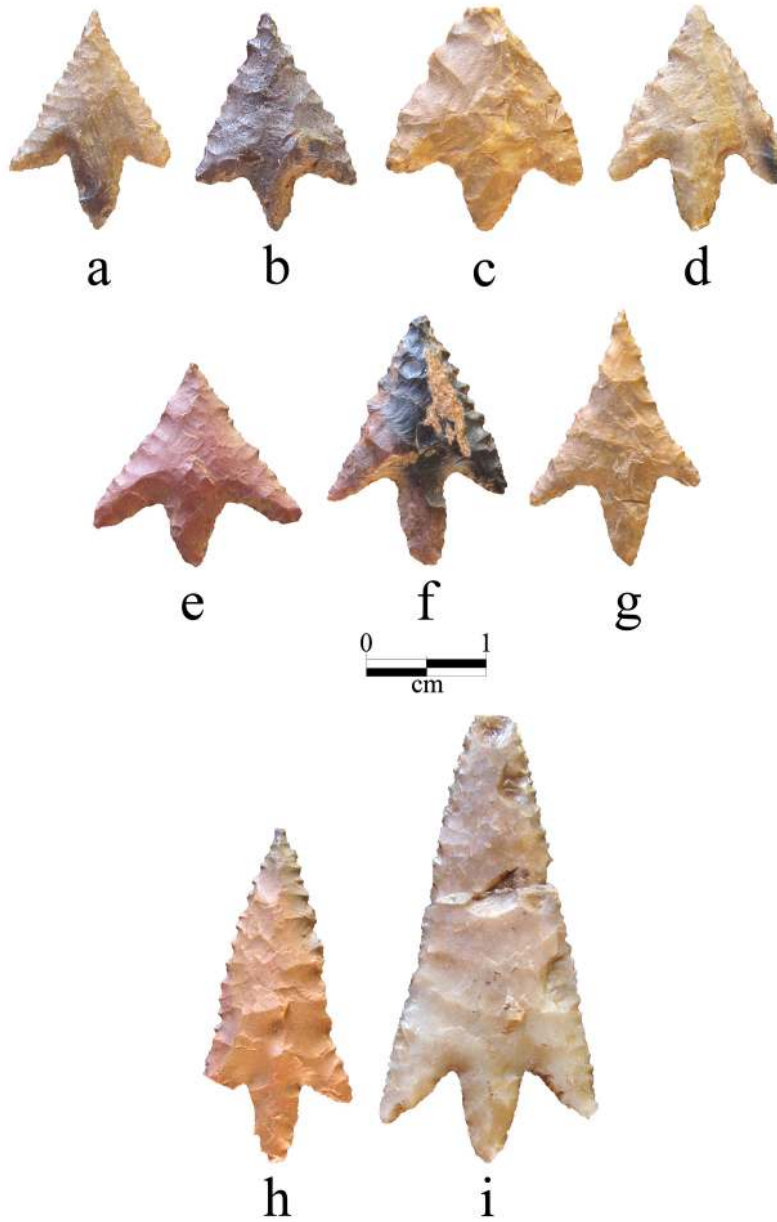
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**The Lithic and Ceramic Artifacts  
from the Spradley Site (41NA206),  
Nacogdoches County, Texas**

*Timothy K. Perttula and Paul Marceaux*



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Perdiz arrow points from the Spradley site

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## Abstract

The Spradley site (41NA206) is a Native American archaeological site in the Bayou La Nana valley in Nacogdoches County in the East Texas Pineywoods. Bayou La Nana is a southward-flowing tributary to the Angelina River. The site is best known for its late 17<sup>th</sup>-early 18<sup>th</sup> century Historic Caddo period occupation, and the recovery of a number of European trade goods from habitation deposits, but the site was also occupied in Late Archaic (ca. 5000-2500 years B.P.), Woodland (ca. 2500-1150 years B.P.), and pre-A.D. 1400 Caddo periods. The Spradley site was the scene of Stephen F. Austin State University (SFASU) Field School in 2001, 2003, and 2005. This publication presents the first comprehensive and detailed publication of both the lithic and ceramic artifacts recovered from the SFASU work at the Spradley site.

The chipped stone tools from the Spradley site are dominated by arrow points and arrow point fragments (n=70) and arrow point preforms (n=12). Also present are flake tools (n=9), scrapers (n=3), drills (n=3), bifaces (n=6), and dart points (n=23). The identified arrow point and dart point types in the Spradley site assemblage indicate that it was used during Late Archaic (from ca. 2000 B.C.), Woodland, and pre-A.D. 1400 Caddo periods, as well as during the post-A.D. 1680 Historic Caddo period. All of the dart points and dart point fragments are made from local lithic raw materials, almost exclusively from petrified wood. Five different dart point types are present in the sample, including Gary (n=6), Kent (n=7), Godley (n=1), Pontchartrain (n=2), and Yarbrough (n=); the Pontchartrain and Yarbrough dart points are of Late Archaic manufacture (ca. 5000-2500 years B.P.). The Gary, Godley, and Kent dart points are temporal diagnostics of the Woodland period (ca. 2500-1150 years B.P.) in this part of the Pineywoods.

Most of the arrow points are made on local lithic raw materials (83 percent)—among them petrified wood, quartzite, and local earth-toned cherts—but 17 percent are made on non-local cherts. One arrow point fragment is made from a bluish-green glass. The oldest arrow point styles in the arrow point assemblage include Friley (n=5) and Scallorn (n=1) points, likely manufactured during late Woodland period times (ca. A.D. 700-900). These are followed by ca. A.D. 900-1200 arrow point styles: Alba (n=1) and Colbert (n=2). There are two ca. A.D. 1200-1400 Bonham arrow points in the assemblage. A Late Caddo arrow point type in the assemblage is the Bassett point (n=3). The majority of the arrow points are associated with the principal Caddo occupation, one dating to early Historic period times. This includes 23 Perdiz points, cf. Perdiz points (n=8), cf. Turney (n=4), and a single Cuney point. One bluish-green glass arrow point fragment also is part of this component

There are 40 body sherds from sandy paste Goose Creek Plain, *var. unspecified* vessels in the assemblage from the Spradley site. These are part of the Woodland period Mossy Grove culture occupation of the site that occurred sometime between ca. 500 B.C.-A.D. 800. The sherds are from vessels made with a non-tempered and locally available sandy clay.

The remaining 8806 sherds from the Spradley site excavations are from plain wares, utility wares, and fine ware vessels. The plain wares comprise 52 percent of the collection. Sherds from utility ware vessels account for 37 percent of the assemblage, and fine wares only account for 10.5 percent of the sherds from the site. The assemblage has a plain/decorated sherd ratio of 1.12, a brushed to plain sherd ratio of 0.51, and a brushed to other wet paste sherd ratio of 2.68. Brushed marks are present on 56.6 percent of the decorated sherds (n=4156).

Sherds that compare favorably to a number of types that occur on other Neches-Angelina River basin ancestral Caddo sites of late Frankston phase age (ca. A.D. 1560-1680), or date to the early part of the

Allen phase (ca. A.D. 1680-1720), are identified in the Spradley site assemblage. They include Hume Engraved, Keno Trilled, Killough Pinched, King Engraved, La Rue Neck Banded, Lindsey Grooved, Maydelle Incised, Patton Engraved, Poynor Engraved, and Spradley Brushed-Incised. Sherds from Patton Engraved and Spradley Brushed-Incised, both Allen phase types, are most common in the Spradley site assemblage.

The ceramic sherds are from vessels tempered primarily with grog or burned bone. Grog occurs in 56 percent of the sherds, while bone temper is present in 35 percent of the sherds. Crushed hematite is present in 7 percent of the sherd sample. Vessels made with shell temper (0.7 percent of the sherds) are from non-locally produced wares, likely made by Caddo groups along the Red River to the northeast in Northwest Louisiana and Southwest Arkansas.

There are a number of decorative classes in the utility wares. Sherds with brushed marks dominate these wares, accounting for 71 percent of the utility wares. A number of the brushed-incised sherds are from Spradley Brushed-Incised vessels that have parallel brushing with overlapping straight incised lines opposed or perpendicular to the brushing. Patton Engraved is the dominant fine ware type at the Spradley site. The frequency of curvilinear, horizontal, and parallel engraved lines with tick marks suggests that *var. Freeman*, *var. Allen*, and *var. Fair* of Patton Engraved are present in the Spradley site fine wares. Patton Engraved, *var. Freeman* is the earliest of the varieties, likely dating to the late 17<sup>th</sup> century, while *var. Allen* is a slightly later Patton Engraved variety, perhaps dating from the early 18<sup>th</sup> century.

In comparison with other contemporaneous Allen phase sites in Nacogdoches County, where ceramics are primarily grog-tempered, bone-tempered pottery is much more abundant at the Spradley site, suggesting the existence there of a different tradition of ceramic technology and manufacture there. The closest ceramic comparisons between the Spradley site and other known Nacogdoches County historic Caddo sites is with 41NA223, also on Bayou Lanana. There are distinct spatial groupings of Allen phase sites in Nacogdoches County, including Group I on Bayou La Nana (including the Spradley site). Most ceramic groups represent the core of known Hasinai Caddo ceramic assemblages in the Angelina River basin, or are linked with the Nasoni Caddo and Mission Nasoni (1716-1730). The Spradley site occupation is most closely affiliated with the Nacogdoche Caddo, and these defined ceramic groups represent different but clearly related and interacting social groups or communities of Caddo peoples living in the Angelina River basin in historic times.

Further archaeological research concerning the Spradley site excavations remains to be completed. This includes the reporting of the excavations themselves, along with the presentation of the identified features documented in the work. Still to be completed is the analysis of the recovered lithic debris at the Spradley site, the plant and animal remains found in the archaeological deposits, and a full accounting and analysis of the 18<sup>th</sup> century European artifacts found at the site.

## **Acknowledgments**

We first want to thank the many students that attended the 2001, 2003, and 2005 Stephen F. Austin State University (SFASU) Field Schools, and worked hard, and we acknowledge the planning by the late Dr. James E. Corbin in initiating the field schools at the Spradley site. George Avery, SFASU Curator of Collections, provided access to the collections for this research project.

Sandra Hannum, Paul Shawn Marceaux, Tom Middlebrook, Robert Z. Selden, Jr., and Lance Trask each prepared figures for the report.



## Introduction

The Spradley site (41NA206) is an important Native American archaeological site in the Bayou La Nana valley in Nacogdoches County in the East Texas Pineywoods (Figure 1). Bayou La Nana is a southward-flowing tributary to the Angelina River and merges with it about 15 km below the city of Nacogdoches, Texas. The Spradley site itself lies about 5 km south of the city.

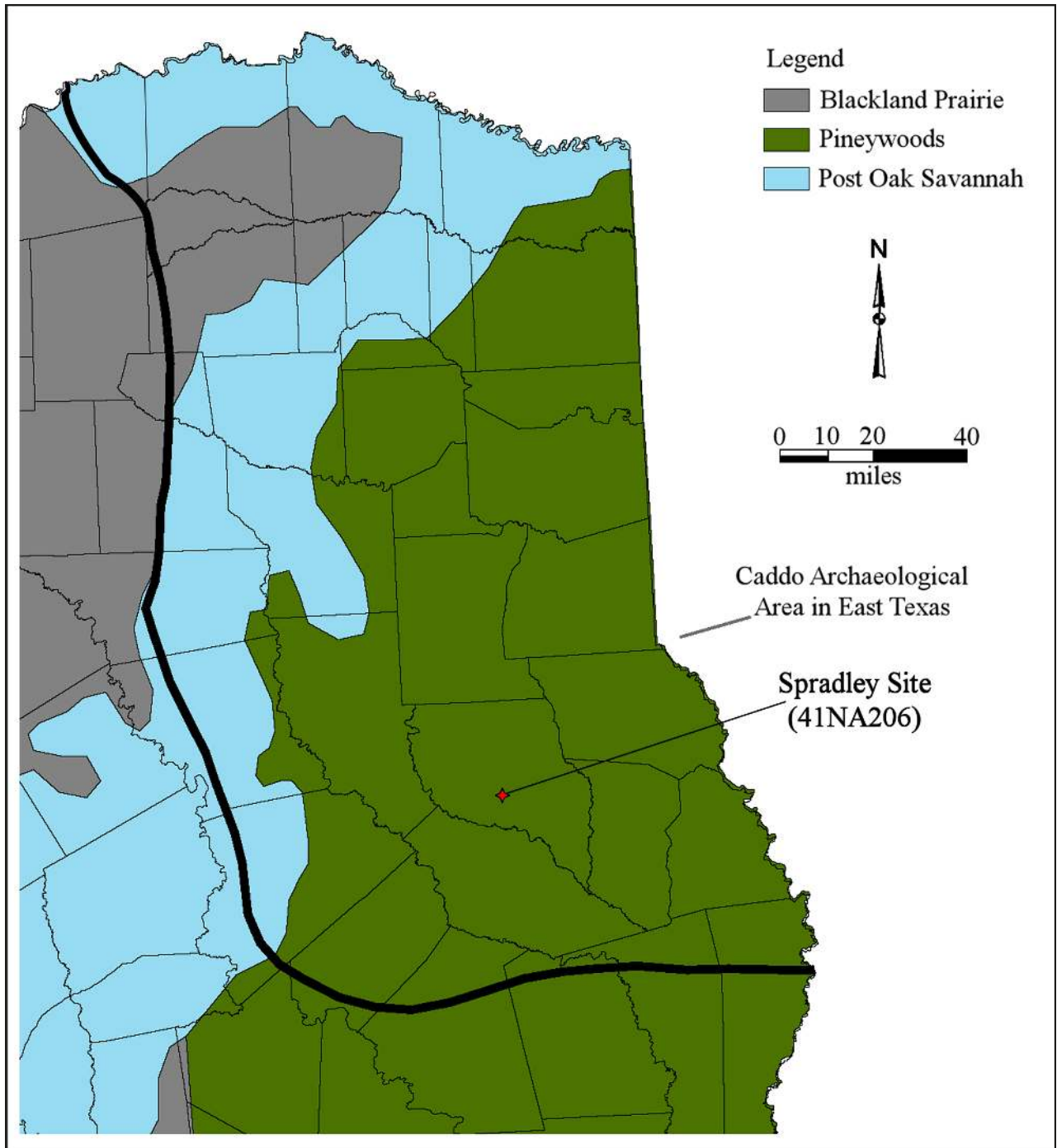
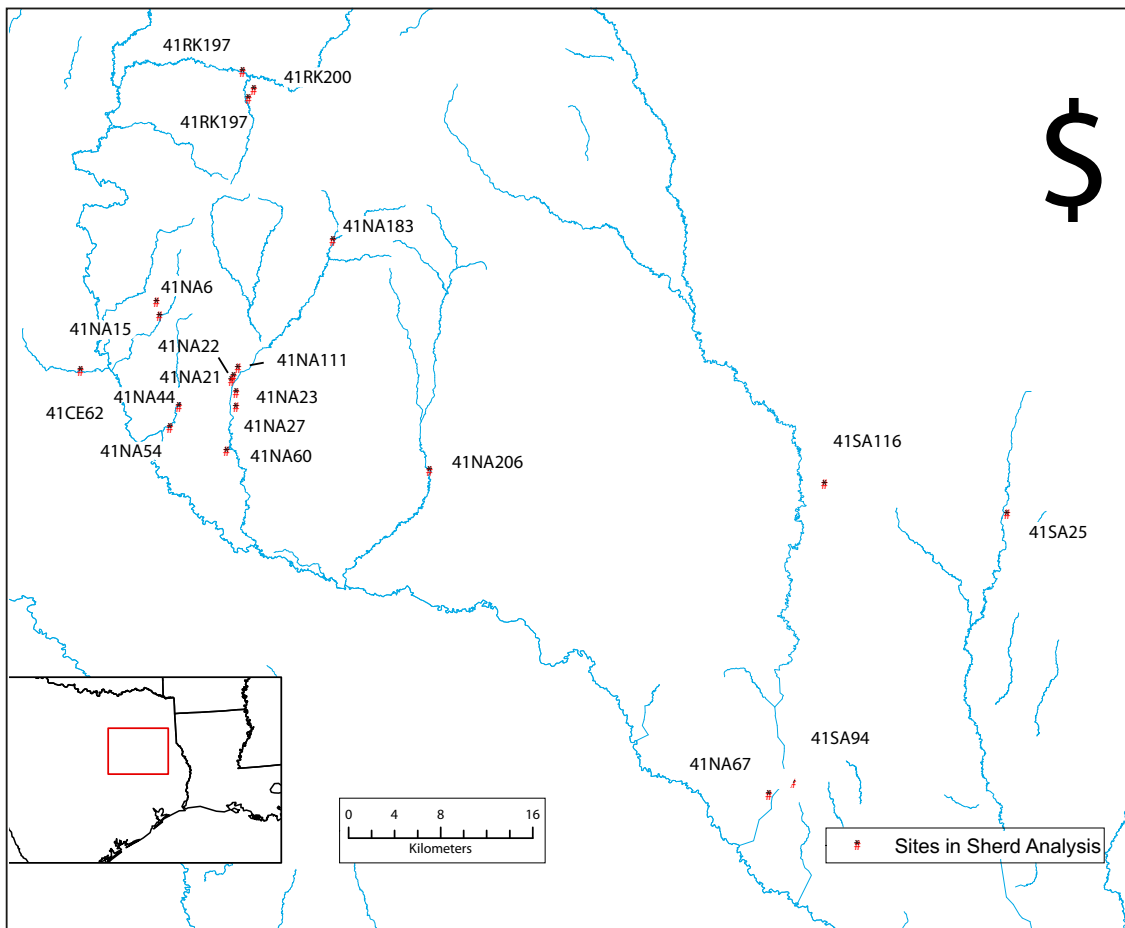


Figure 1. Location of the Spradley site in the East Texas Pineywoods.

The site is best known for its late 17<sup>th</sup>-early 18<sup>th</sup> century Historic Caddo period occupation, and the recovery of a number of European trade goods (Marceaux 2011:114, 361) from habitation deposits, but the site was also occupied in Late Archaic (ca. 5000-2500 years B.P.), Woodland (ca. 2500-1150 years B.P.), and pre-A.D. 1400 Caddo periods. There are a number of other known Historic Caddo period settlements in Nacogdoches County, but most of these lie west and northwest of the Spradley site on other tributaries to the Angelina River (Figure 2).



**Figure 2. The Spradley site (41NA206) and other Historic Caddo sites in the general vicinity. Figure courtesy of Paul Shawn Marceaux.**

The site was found and first investigated by Tom Middlebrook in 1998. This work consisted of four shovel tests, two auger holes, and two rounds of surface collections. Based on its archaeological potential, Dr. James E. Corbin led a Stephen F. Austin State University Field School there in 2001, and further Field Schools by Stephen F. Austin State University under the direction of Victor Galan took place at the Spradley site in 2003 and 2005. Excavations were concentrated in the northwestern and southeastern portions of the known site boundaries (Figure 3a); in 2008, the site area was in pasture (Figure 3b).

There have been a few presentations about the work and findings from the Spradley site given at professional conferences over the years. However, only now in this article will a comprehensive and detailed publication of the lithic and ceramic artifacts recovered in the work at the Spradley site be presented.



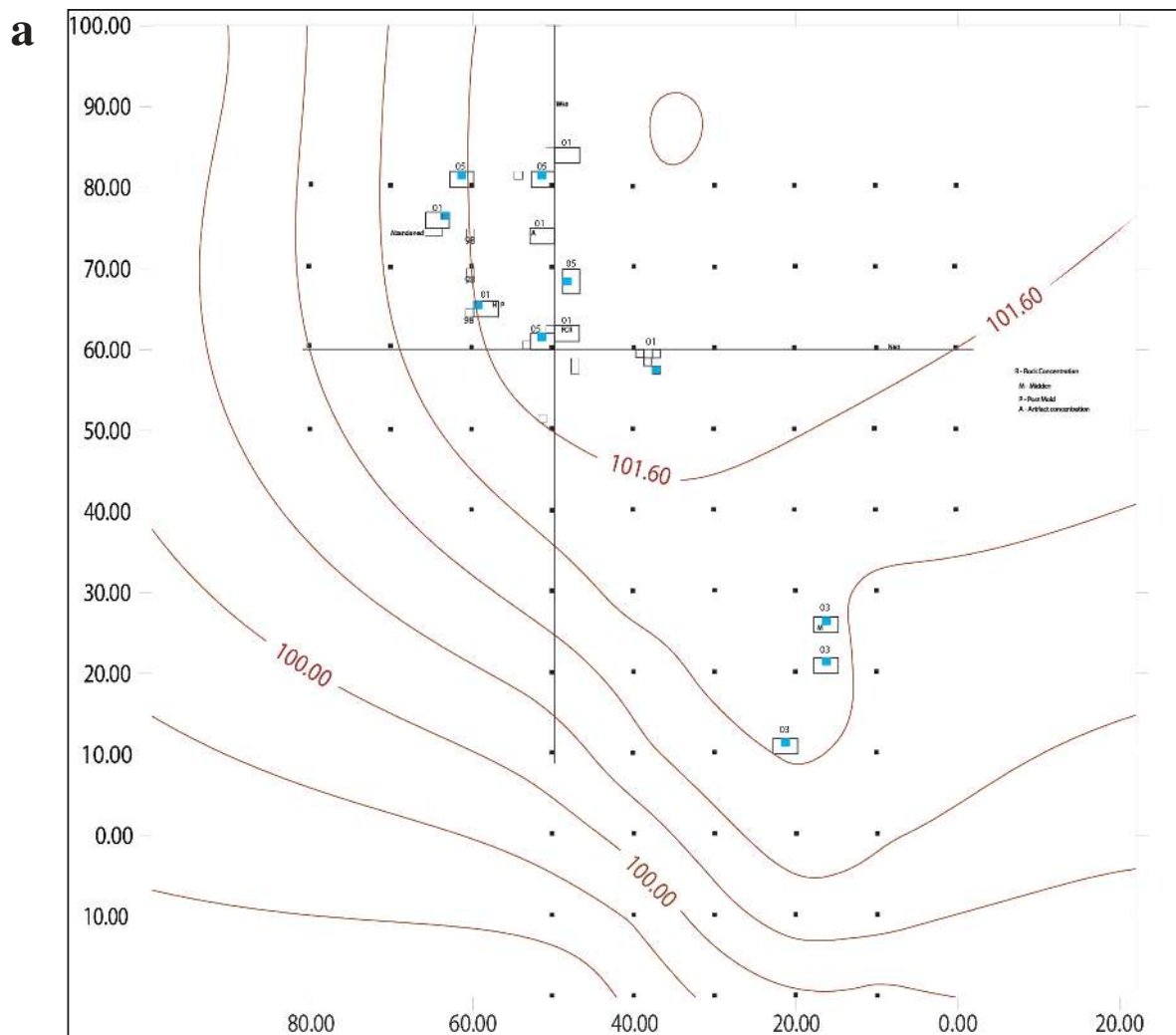


Figure 3. Spradley site: a, excavation areas; Map provided courtesy of Victor Galan; b, overview of the Spradley site in 2008.

## Chipped and Ground Stone Tools, by Timothy K. Perttula

Lithic tools and the debris from lithic tool manufacture are relatively abundant in the archaeological deposits at the Spradley site, particularly micro-flakes from tool finishing, serration, and resharpening recovered in fine screening. The tool assemblage includes 126 chipped stone tools and 12 ground stone tools.

### *Chipped Stone Tools*

The chipped stone tools are dominated by arrow points and arrow point fragments (n=70) and arrow point preforms (n=12), as these comprise 75 percent of the tool assemblage. Also present are flake tools (n=9), scrapers (n=3), drills (n=3), bifaces (n=6), and dart points (n=23). The identified arrow point and dart point types in the Spradley site assemblage indicate that it was used during Late Archaic, Woodland, and pre-A.D. 1400 Caddo periods, as well as during the post-A.D. 1680 Historic Caddo period.

Both arrow points, arrow point preforms, and dart points occur in archaeological deposits in both the northwestern and southeastern parts of the site, and from similar depths (Table 1), although not in identical proportions by depth. Arrow points are most abundant from 0-20 cm bs (72.8 percent), from 20-30 cm bs for arrow point preforms (66.6 percent), and 20-30 cm bs (39.1 percent) for dart points. The overlapping spatial and vertical distributions of projectile points ranging in age from ca. 2000 B.C. to post-A.D. 1680 in the deposits at the Spradley site indicate that the landform has been a stable surface for thousands of years, and the artifacts that accumulated on its surface represent a palimpsest of occupation and use over a considerable span of time by Caddo peoples and their prehistoric ancestors.

**Table 1. Depth of arrow points, arrow point preforms, and dart points at the Spradley site.**

Level	Arrow point		Arrow point preform		Dart point	
	No.	%	No.	%	No.	%
1	22	31.4	2	16.7	4	17.4
2	29	41.4	5	41.6	4	17.4
3	14	20.0	3	25.0	9	39.1
4	2	2.9	1	8.3	3	13.0
5	1	1.4	1	8.3	2	8.7
6	2	2.9	-	-	1	4.3
Totals	70	100.0	12	100.0	23	100.0

### **Flake Tools**

Expedient flake tools are present only in the northwestern part of the excavated areas at the Spradley site, between N57-N73 and W30-W60. They are also concentrated in levels 1 and 2 (0-20 cm bs) (Table 2).



**Table 2. Flake tools from the Spradley site.**

Provenience	Raw Material	Description
N73-W50, lv. 2	yellow chert	non-cortical; bilateral working edges: 10.0+ mm, 11.0+ mm
N72-W52, wall	translucent gray chert	non-cortical; unilateral working edge: 14.0+ mm
N70-W60, lv. 2	translucent gray chert	bilateral working edges: 8.2 mm and 14.0 mm
N69-W48, lv. 1	gray chert	cortical; bilateral working edges: 9.0 mm and 15.8 mm
N64-W59, lv. 1	translucent grayish-brown chert	non-cortical; unilateral working edge: 20.0 mm
N60-W50, lv. 2	brownish-red chert	cortical; unilateral working edge: 5.6 mm
N60-W50, lv. 2	gray chert	non-cortical; unilateral working edge: 9.9 mm
N60-W30, lv. 2	petrified wood	unilateral working edge: 7.6 mm
N57-W47, lv. 1	brown chert	cortical; unilateral working edge: 5.6 mm

The flake tools have either unilateral (n=6) or bilateral (n=3) working edges, with micro-edge flaking from tool use. Such tools were likely used in the processing of smaller amounts of resources, including both plant and faunal remains. More than 55 percent of the flake tools—including 67 percent of the bilateral flake tools and 50 percent of the unilateral flake tools (see Table 2)—are on flakes of non-local cherts, probably from Central Texas sources (see Girard 1995:66, 70; Perttula et al. 2010:Table 16).

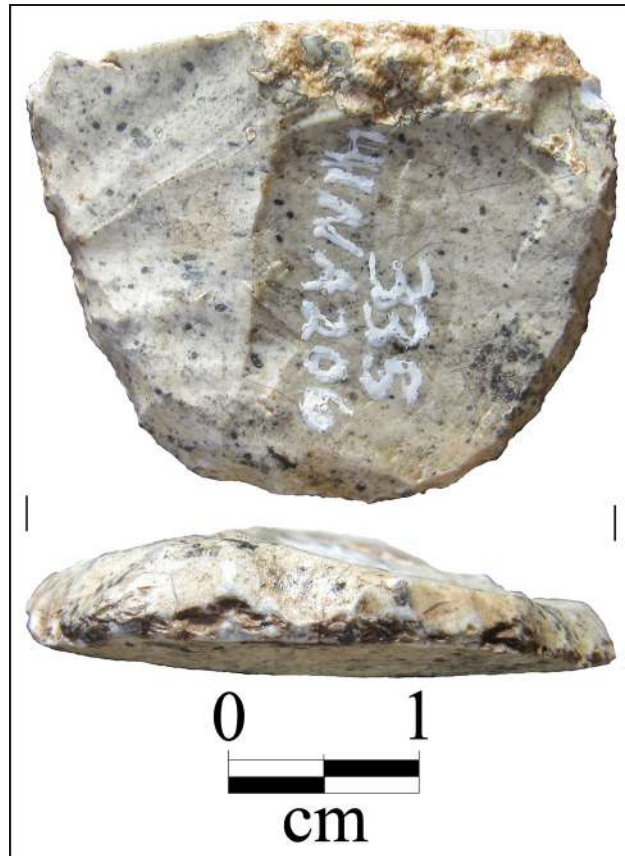
### Scrapers

Three flake scrapers are in the lithic tool assemblage from the Spradley site. They are from the northwestern part of the investigated area at the site (Table 3). The large end scraper is on hematite, a local lithic raw material, and it has a broad and unifacial scraping edge. The other two scrapers are on flakes of non-local gray and translucent gray chert, with working edges that range from 20.0-49.0 mm in extent (Figure 4).

**Table 3. Scrapers from the Spradley site.**

Provenience	Raw Material	Description
N73-W51, lv. 1	translucent gray chert	bifacial side scraper, 20.0 mm working edge
N64-W47, lv. 1	hematite	unifacial end scraper; 36.0 mm working edge
N61-W47, lv. 4	gray chert	unifacial end and side scraper; non-cortical; working edges: 49.0 mm

The low proportion of scarping tools suggests that the butchering and processing of large game animals was not an important activity during the various occupations at Spradley, unlike other Historic Caddo Allen phase sites (Perttula et al. 2010:39). The generally small size of the scrapers suggests that the focus of Caddo butchering and processing activities was on medium-sized prey that was being hunted, principally deer.



**Figure 4.** Scraping tool from the Spradley site (N61-W47, lv. 4).

## Drills

The three flake drills were also recovered from archaeological deposits in the northwestern part of the investigated area at the Spradley site (Table 4). Two of the drills are on flake bases, and they have unifacial bits that range from 10.1-13 mm in width; they are on either local or non-local lithic raw materials (Figure 5). The one bifacial drill bit is on a non-local gray chert. The drill bits have evidence of edge crushing/blunting and use-wear on and near the unifacially or bifacially chipped tip.

**Table 4. Drills from the Spradley site.**

Provenience	Raw Material	Description
N80-W40, lv. 2	petrified wood	unifacial bit width: 10.1 mm
N73-W50, lv. 2	gray chert	unifacial drill bit on flake base; length, 22 mm, width, 13 mm, thickness, 5 mm
N58-W37, lv. 1	gray chert	bifacial bit fragment, 3.7 mm thick

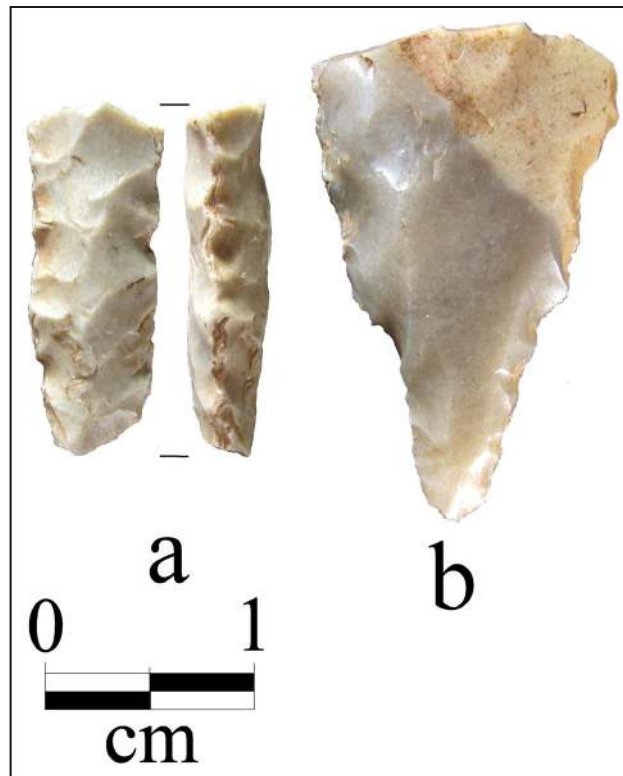


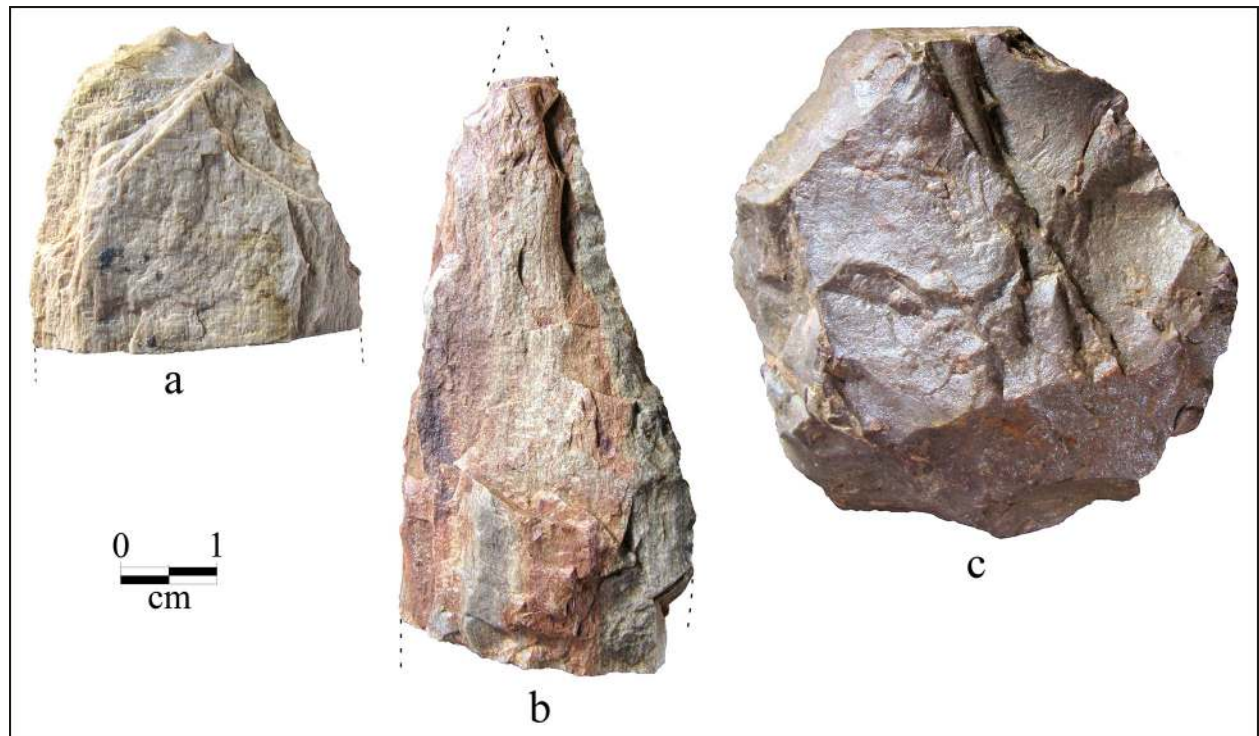
Figure 5. Drills from the Spradley site.

### Bifaces

The recovered bifaces are from the northwestern area of archaeological deposits at the Spradley site, between N64-84 and W47-62 (Table 5), and from 0-40 cm bs. All of the bifaces are on local lithic raw materials (50 percent are on petrified wood), and these pieces represent evidence of the bifacial tool manufacture from local pebbles and cobbles by flake reduction (Figure 6). They range from 8-22 mm in thickness, and their intended end product was likely the completion of a bifacially flaked dart point for use during either the Late Archaic and/or the Woodland period occupations of the Spradley site.

Table 5. Bifaces from the Spradley site.

Provenience	Raw Material	Description
N84-W49, lv. 4	petrified wood	non-cortical, length, 31+ mm, width, 33 mm, thickness, 9 mm
N83-W47, lv. 3	quartzite	ovoid, non-cortical, length, 50 mm, width, 46 mm, thickness, 22 mm
N80-W62, lv. 2	brown chert	early stage, non-cortical, length, 24.2 mm, width, 19.2 mm, thickness, 9.3 mm
N76-W65, lv. 4	petrified wood	cortex on 1 surface, length, 58+ mm, width, 28 mm, thickness, 10 mm
N64-W58, lv. 1	brown chert	early stage, non-cortical; length, 28 mm, width, 17 mm, thickness, 8 mm
N64-W57, lv. 3	petrified wood	non-cortical, length, 29+ mm, width, 28 mm, thickness, 10.5 mm



**Figure 6. Bifaces from the Spradley site: a, N64-W57, lv. 3; b, N76-W65, lv. 4; c, N83-W47, lv. 3.**

### Dart Points

Eighteen dart points and five dart point fragments are in the chipped stone tool assemblage at the Spradley site (Table 6). With only a few exceptions, the dart points were recovered from the northwest investigation area, suggesting this was the principal locus of both Late Archaic and Woodland utilized portions at the site. All of the dart points and dart point fragments are made from local lithic raw materials, almost exclusively (91 percent) from petrified wood. There are single examples of quartzite (Gary point) and red chert (tip fragment).

**Table 6. Dart points from the Spradley site.**

Provenience	Type	Raw Material	L	W	Th	SW
N80-W51, lv. 3	Gary	petrified wood	32.6	19.8	7.2	13.0
N75-W64, lv. 3	Gary	quartzite	-	-	10.5	15.0
N74-W65, lv. 1	Gary	petrified wood	25.9	16.8	5.6	14.0
N60-W40, lv. 3	Gary	petrified wood	48.0	21.1	10.9	11.5
N21-W17, lv. 1	Gary	petrified wood	35.0	19.2	7.0	9.4
N0-W20, lv. 3	Gary	petrified wood	28.0	18.9	9.5	9.6
N20-W15, lv. 1	Godley	petrified wood	42.2	15.2	7.5	10.2
N84-W47, lv. 1	Kent	petrified wood	34.0+	29.0	10.8	18.2
N75-W65, lv. 3	Kent	petrified wood	42.0	20.0	10.0	12.9
N75-W63, lv. 4	Kent	petrified wood	39.1	24.0	4.8	17.0

**Table 6. Dart points from the Spradley site, cont.**

Provenience	Type	Raw Material	L	W	Th	SW
N74-W52, lv. 2	Kent	petrified wood	33.7+	22.6+	6.6	16.8
N65-W59, lv. 3	Kent	petrified wood	-	17.2	7.2	13.0
N60-W50, lv. 5	Kent	petrified wood	-	19.2	5.2	13.0
N60-W20, lv. 3	Kent	petrified wood	29.2+	19.6	9.2	14.0
N76-W65, lv. 4	Pontchartrain	petrified wood	89.0	24.1	12.0	18.6
N69-W47, lv. 6	Pontchartrain	petrified wood	59.0	19.2	10.5	14.0
N73-W50, lv. 3	Yarbrough	petrified wood	49.2	22.9	7.6	16.0
N60-W30, lv. 2	UID type	petrified wood	32.0	15.1+	5.1	10.0+
N76-W63, lv. 3	tip	red chert	-	-	4.8	-
N75-W64, lv. 2	tip	petrified wood	-	23.0	7.8	-
N59-W37, lv. 4	tip	petrified wood	-	-	4.6	-
N80-W52, lv. 2	tip/blade	petrified wood	-	15.2	7.9	-
N60-W51, lv. 5	blade	petrified wood	-	24.7	8.1	-

UID=unidentified; L=length; W=width; Th=thickness; SW=stem width

Five different dart points are present in the sample, including Gary (n=6, Figure 7a-b), Kent (n=7, Figure 7c-e), Godley (n=1, Figure 7f), Pontchartrain (n=2 (Figure 7h-i), and Yarbrough (n=1, Figure 7g); the Pontchartrain and Yarbrough dart points are of Late Archaic manufacture (ca. 5000-2500 years B.P.). The Gary, Godley, and Kent dart points are temporal diagnostics of the Woodland period (ca. 2500-1150 years B.P.) in this part of the Pineywoods (see Turner et al. 2011; Webb 2000; Anderson and Smith 2003). The one dart point of unidentified type had a rudimentary and broken contracting stem, and may be another Gary point

### Arrow Points

Not including one arrow point made from chipped glass, there are 70 arrow points and fragments in the Spradley site tool assemblage. The arrow points occur in both the northwestern and southeastern parts of the investigated areas (Table 7). Arrow points comprise 55 percent of the chipped stone tools recovered in archaeological investigations at the site.



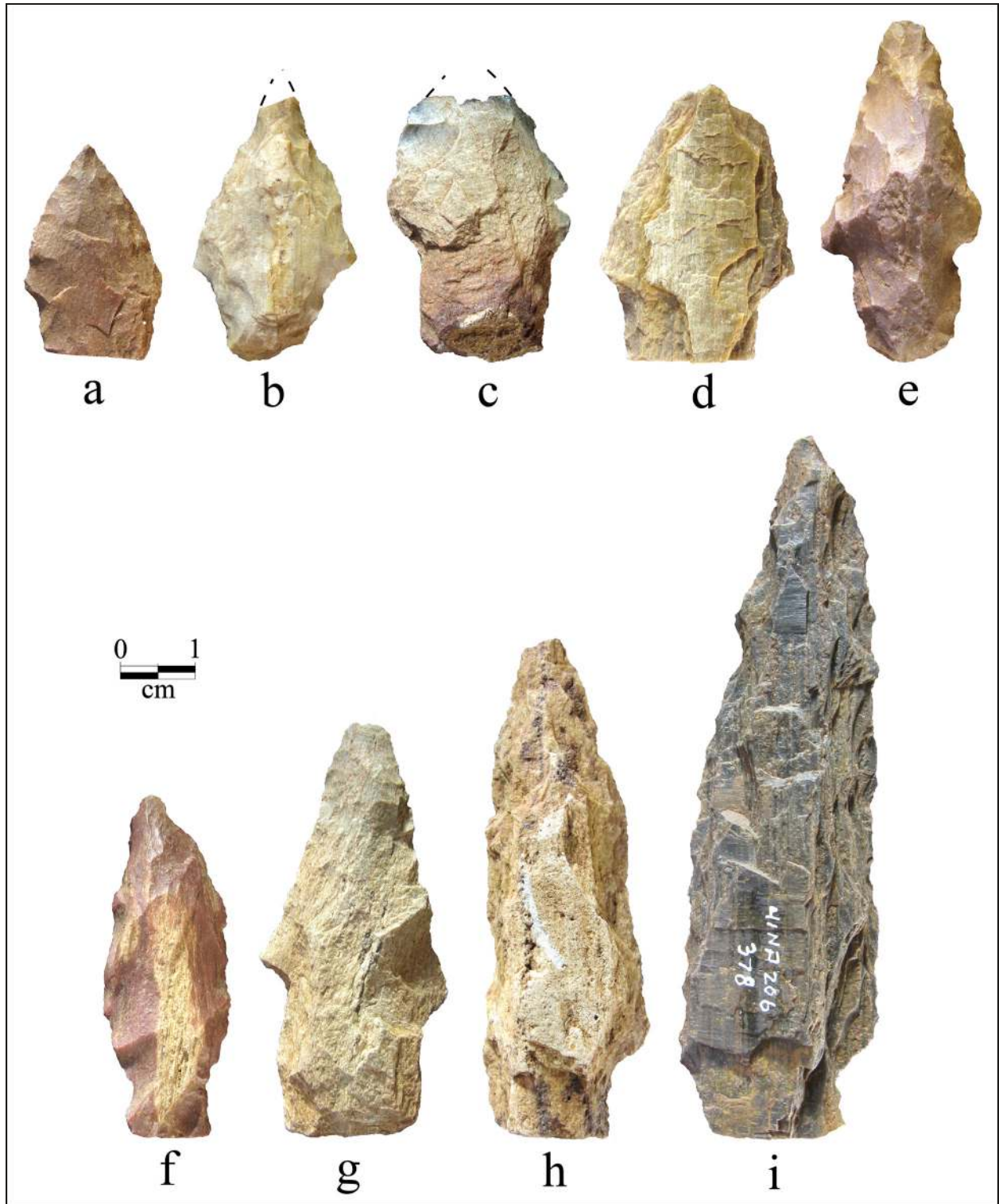


Figure 7. Selected dart points in the Spradley site chipped stone tool assemblage.

**Table 7. Arrow points from the Spradley site.**

Provenience	Type	Raw Material	L	W	Th	SW
N60-W50, lv. 2	Alba	petrified wood	24.5	16.2	4.1	5.1
N75-W64, lv. 3	Bassett	petrified wood	13.5+	8.9	2.8	1.9
N69-W47, lv. 2	Bassett	petrified wood	14.5	17.6	3.8	2.5
N21-W17, lv. 2	Bassett	petrified wood	14.2	11.0	2.5	1.6
N74-W52, lv. 2	Bonham	light red chert	14.2	10.2	2.8	5.0
N74-W51, lv. 1	Bonham	petrified wood	20.7+	17.0	3.2	5.4
N75-W64, lv. 2	Colbert	petrified wood	25.0	15.9	3.4	6.7
N65-W57, lv. 3	Colbert	red chert	18.8	11.2	2.2	3.1
N59-W38, lv. 1	Cuney	translucent gray chert	17.1	8.9	1.5	3.1
N80-W61, lv. 1	Friley	petrified wood	19.2	17.8	3.6	5.9
N80-W61, lv. 1	Friley	quartzite	17.1	11.0	2.4	5.7
N76-W63, lv. 1	Friley	petrified wood	21.0	18.0	2.1	5.7
N64-W58, lv. 2	Friley	petrified wood	14.2	8.8	2.5	4.9
N62-W49, lv. 1	Friley	petrified wood	18.7	15.0	3.2	5.1
N84-W47, lv. 1	Perdiz	brownish-gray chert	22.8+	14.0	4.6	4.4
N83-W48, lv. 2	Perdiz	petrified wood	17.8	12.7	1.4	2.6
N74-W50, lv. 1	Perdiz	red chert	16.2	16.3	3.0	2.5
N65-W59, lv. 2	Perdiz	petrified wood	18.0	14.0	2.3	2.8
N65-W57, lv. 2	Perdiz	petrified wood	18.0+	14.9	2.8	1.8
N64-W59, lv. 2	Perdiz	petrified wood	12.9	10.0	1.5	2.0
N64-W58, lv. 1	Perdiz	brown chert	16.1	12.0	2.1	2.0
N62-W49, lv. 4	Perdiz	brown chert	17.6+	15.4	3.0	3.8
N61-W48, lv. 3	Perdiz	petrified wood	19.0	12.8+	3.3	4.7
N61-W47, lv. 2	Perdiz	quartzite	17.2	12.2	2.5	2.0
N60-W50, lv. 2	Perdiz	petrified wood	21.5	13.5	2.3	5.2
N60-W50, lv. 2	Perdiz	petrified wood	17.9+	17.0	2.3	4.4
N60-W50, lv. 6	Perdiz	brown chert	11.6	9.0	2.2	1.9
N60-W47, UID lv.	Perdiz	brown chert	16.9	9.3	3.0	1.4
N58-W39, lv. 1	Perdiz	petrified wood	14.0+	14.1	1.9	3.0
N58-W39, lv. 1	Perdiz	petrified wood	20.0	14.0	3.1	3.0
N58-W38, lv. 1	Perdiz	petrified wood	20.2	13.0+	2.7	3.3
N57-W47, lv. 1	Perdiz	petrified wood	24.0	12.9+	4.2	3.7
N26-W17, lv. 2	Perdiz	translucent gray chert	36.9+	17.0	2.0	3.2
N26-W16, lv. 2	Perdiz	brown chert	20.1	13.9	2.5	2.8
N21-W17, lv. 4	Perdiz	petrified wood	23.9	17.0	4.4	3.8
N21-W16, lv. 1	Perdiz	brown chert	27.0	12.0	3.1	2.8
N11-W21, lv. 1	Perdiz	petrified wood	16.9	9.0	2.1	4.0

**Table 7. Arrow points from the Spradley site, cont.**

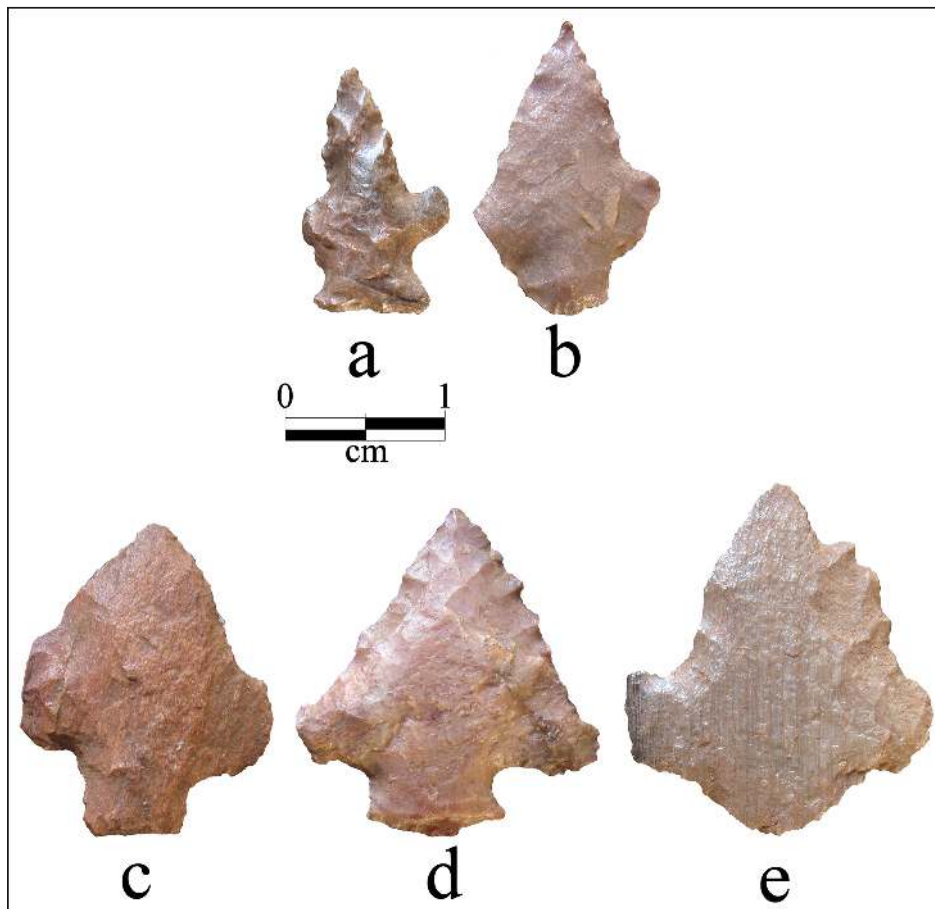
Provenience	Type	Raw Material	L	W	Th	SW
N80-W62, lv. 3	cf. Perdiz	petrified wood	23.0	13.1	3.8	2.8
N80-W0, lv. 2	cf. Perdiz	petrified wood	24.1+	16.0	3.8	5.3
N75-W65, lv. 2	cf. Perdiz	red chert	16.7+	17.0	5.1	6.2
N73-W63, lv. 3	cf. Perdiz	brown chert	19.0	14.1	2.5	4.7
N74-W51, lv. 2	cf. Perdiz	petrified wood	18.2	11.2	3.3	2.5
N73-W50, lv. 3	cf. Perdiz	petrified wood	20.5	12.9	3.8	4.8
N73-W50, lv. 2	cf. Perdiz	petrified wood	17.0+	13.1	3.7	5.7
N61-W52, lv. 1	cf. Perdiz	red chert	14.0+	10.2	2.5	3.6
N11-W20, lv. 2	Scallorn	red chert	13.7	11.0	1.8	5.0
N81-W50, lv. 5	cf. Turney	translucent dark grayish-brown chert	30.0	14.1	2.7	-
N65-W58, lv. 1	cf. Turney	dark gray chert	29.0	13.1	2.5	-
N65-W57, lv. 3	cf. Turney	gray chert	20.1	12.5+	3.2	-
N11-W20, 0-20	cf. Turney	translucent gray chert	-	14.0	1.6	-
N80-W51, lv. 2	UID type	gray chert	32.0	12.1	4.3	7.9
N76-W65, lv. 2	UID type	petrified wood	25.4	10.0	4.6	5.8
N80-W50, lv. 3	blade/notch	petrified wood	-	12.5	2.1	-
N80-W61, lv. 1	tip	gray chert	-	8.3	2.4	-
N80-W60, lv. 3	tip	red chert	-	11.5	3.0	-
N75-W63, lv. 2	tip	petrified wood	-	12.1	4.0	-
N69-W47, lv. 2	tip	petrified wood	-	8.0	3.3	-
N62-W49, lv. 2	tip	translucent gray chert	-	10.9	2.5	-
N58-W39, lv. 1	tip	petrified wood	-	8.3	1.3	-
N80-W62, lv. 2	tip/blade	petrified wood	15.6+	12.2	2.4	-
N80-W50, lv. 3	tip/blade	brown chert	-	12.6	3.0	-
N65-W59, lv. 2	tip/blade	bluish-green glass	-	17.5	2.5	-
N61-W48, lv. 2	tip/blade	petrified wood	-	9.9	2.3	-
N60-W50, lv. 2	tip/blade	brownish-gray translucent chert	20.9+	17.5+	3.9	-
N50-W50, lv. 3	tip/blade	gray chert	-	10.0	1.5	-
N26-W17, lv. 3	tip/blade	red chert	-	14.8	2.6	-
N25-W17, lv. 1	tip/blade	brown chert	-	9.3	1.7	-
N25-W17, lv. 1	tip/blade	brown chert	-	17.5	2.3	-
N25-W17, lv. 3	tip/blade	brown chert	-	10.2	1.6	-
N25-W15, lv. 3	tip/blade	brown chert	-	12.8	2.1	-
N10-W22, lv. 6	tip/blade	quartzite	-	10.5	3.9	-

UID=unidentified; L=length; W=width; Th=thickness; SW=stem width



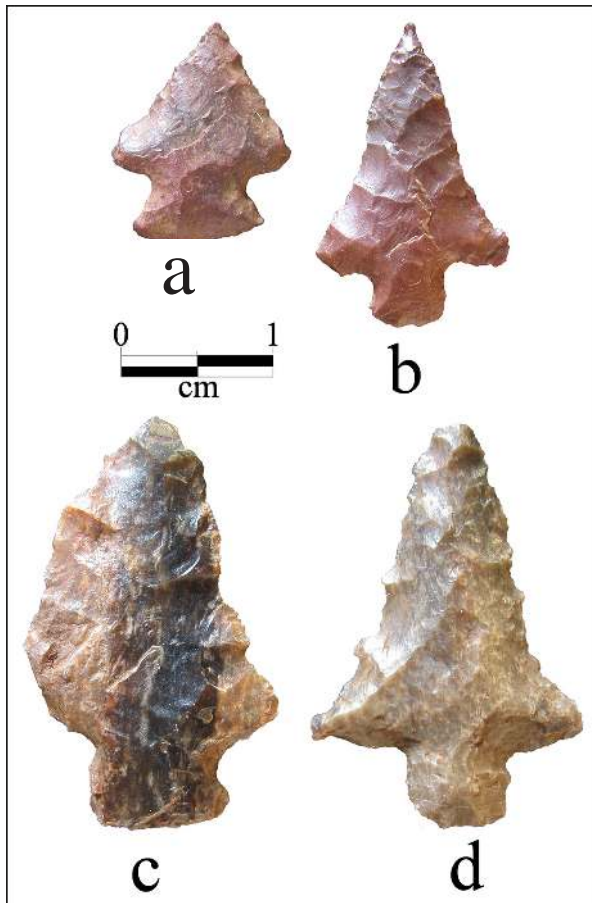
Most of the arrow points are made on local lithic raw materials (83 percent)—among them petrified wood, quartzite, and local earth-toned cherts—but 17 percent are made on non-local cherts (see Table 7). One arrow point fragment is made from a bluish-green glass. This includes the one Cuney arrow point, two of the Perdiz and cf. Perdiz points (6.5 percent), all four of the cf. Turney arrow points, one unidentified arrow point, and four (22 percent) of the fragmentary arrow points. None of the Alba, Bassett, Bonham, Colbert, Friley, and Scallorn arrow points in the assemblage are made from non-local lithic raw materials.

The oldest arrow point styles in the arrow point assemblage include Friley (n=5) and Scallorn (n=1) points (Figures 8 and 9), and these may have been manufactured during late Woodland period times (ca. A.D. 700-900), when arrow points first began to be made in East Texas (Shafer and Walters 2010). These are followed by ca. A.D. 900-1200 arrow point styles—the Alba (n=1) and Colbert (n=2) types (Figure 9b-d). There are two Bonham arrow points in the assemblage (Figure 10), and these are considered likely to date from ca. A.D. 1200-1400, indicating some use of the Spradley site during the Middle Caddo period.

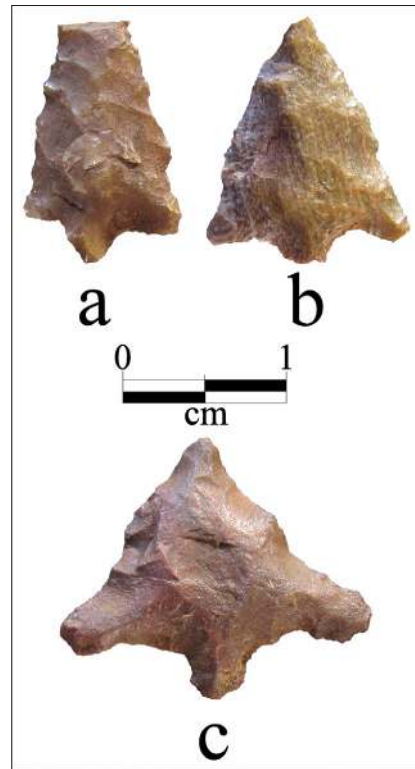


**Figure 8. Friley arrow points from the Spradley site.**

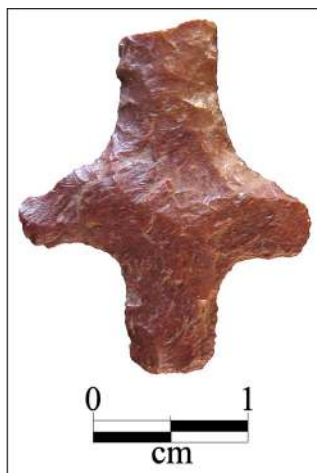
A Late Caddo arrow point type in the assemblage is the Bassett point (n=3, Figure 11). Girard (1995:152) suggests Bassett and Perdiz arrow points are associated in the Historic Caddo component at the Deshazo site, and this may well be the case at the Spradley site, but in other East Texas contexts, they tend to be found in deposits dating from ca. A.D. 1500-1680.



**Figure 9. Scallorn, Colbert, and Alba arrow points from the Spradley site.**



**Figure 11. Bassett arrow points from the Spradley site.**



**Figure 10. Bonham arrow points from the Spradley site.**

The majority of the arrow points are thought to be associated with the principal Caddo occupation, one dating to early Historic period times. This includes 23 Perdiz points (Figure 12), cf. Perdiz points (with a rounded or flat contracting stem, often unifacially manufactured, n=8) (Figure 13), cf. Turney (a triangular form with a slight concave base, n=4) (Figure 14a-d), and a single Cuney point (Figure 15) (see Turner et al. 2011). The one bluish-green glass arrow point fragment also is part of this component (Figure 16, see below).

On Historic Caddo sites in East Texas, triangular arrow point forms are predominant on sites from the Sabine River north to the Red River, while Perdiz, Cuney, and Turney arrow points occur almost exclusively on Historic Caddo sites in the Neches and Angelina river basins (Table 8). At the Spradley site, Perdiz and cf. Perdiz points comprise 86 percent of the arrow points in the Historic Caddo period component, compared to 11 percent cf. Turney arrow points, and 3 percent that are Cuney points. The proportion of Perdiz points at the Spradley site is much more like the assemblage

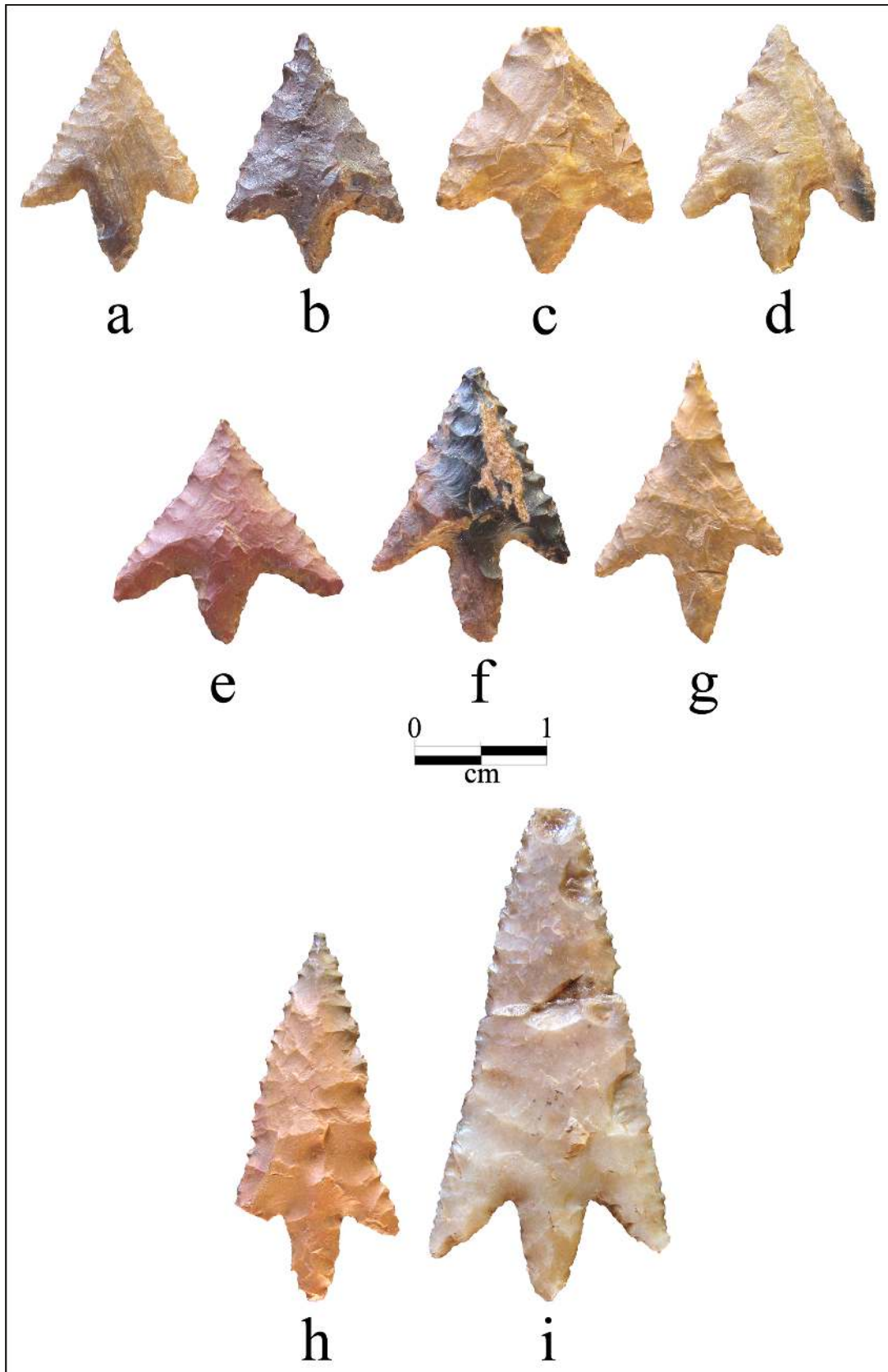
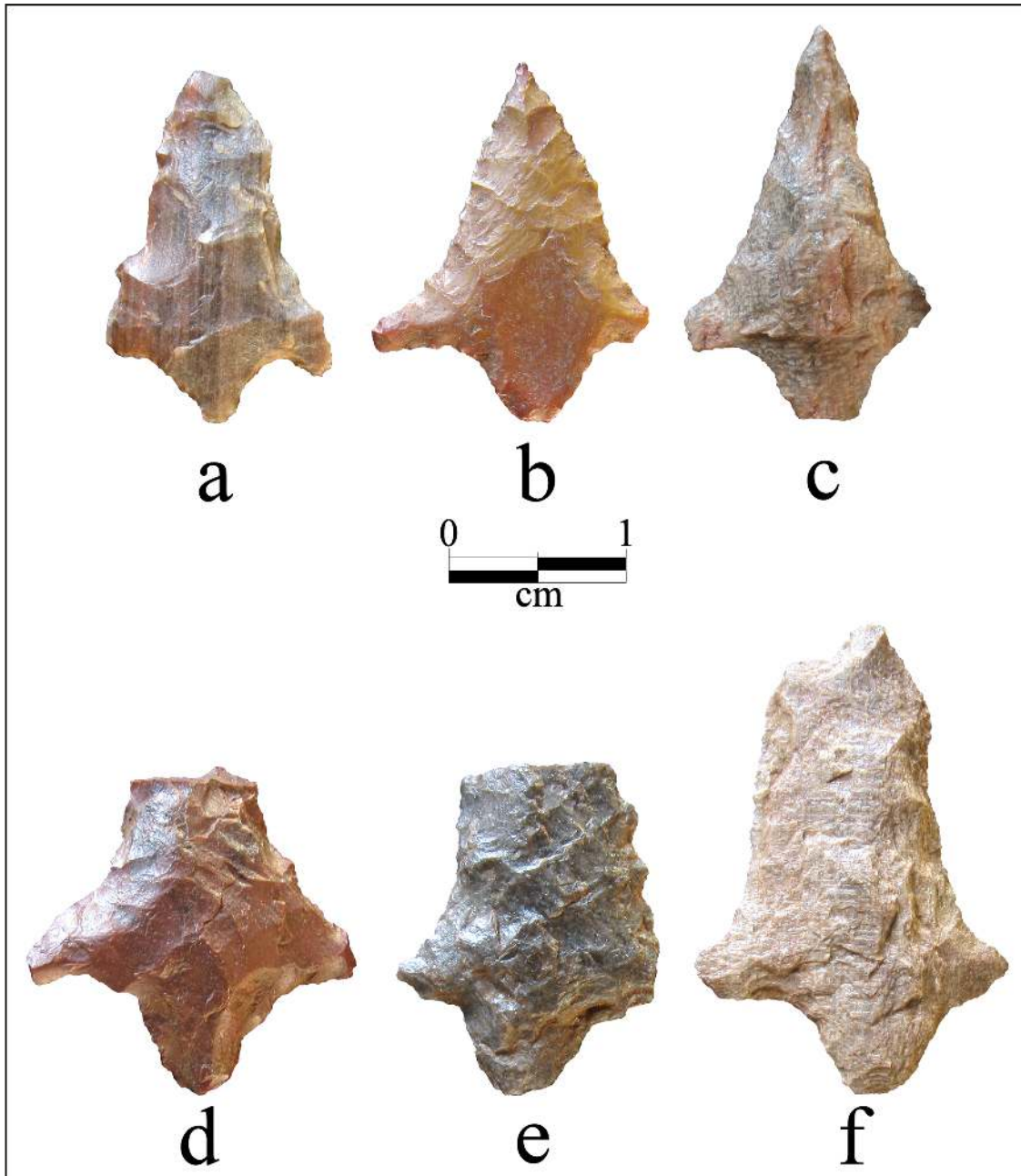


Figure 12. Perdiz arrow points from the Spradley site.



**Figure 13. cf. Perdiz arrow points from the Spradley site.**

at the Deshazo site (96 percent of all the arrow points are Perdiz) (see Girard 1995) than at the younger 18<sup>th</sup> century Henry M. settlement, where only 8.3 percent are Perdiz points. Instead, at the Henry M. site, Turney and triangular Fresno points represent 67 percent of the arrow point assemblage (see Perttula et al. 2010:Table 17), compared to only 1.6 percent at the Deshazo site and 11 percent at the Spradley site. Similarly, Cuney points are relatively abundant at Henry M., accounting for 25 percent of the assemblage, but only between 2.4-3 percent of the arrow points at the Deshazo and Spradley sites. In any events, these changes in arrow point styles suggest that there were rapid changes in the style and use of arrow points over time in the early years of contact between Europeans and Caddos in East Texas.



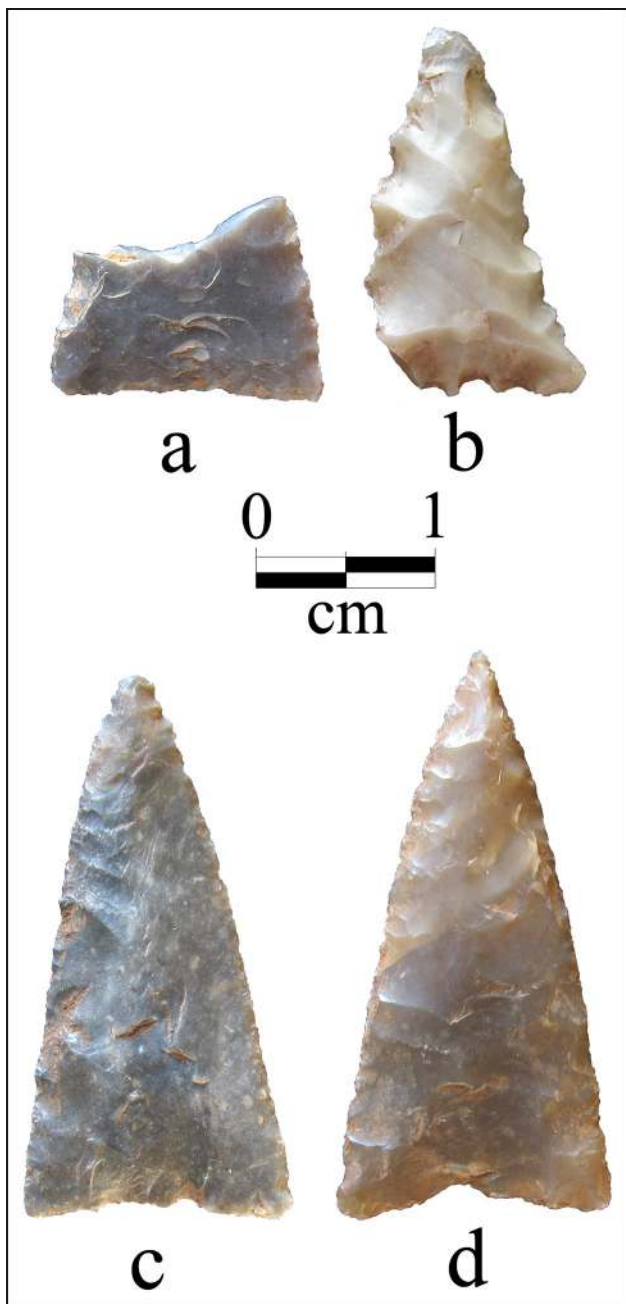


Figure 14. cf. Turney arrow points from the Spradley site.

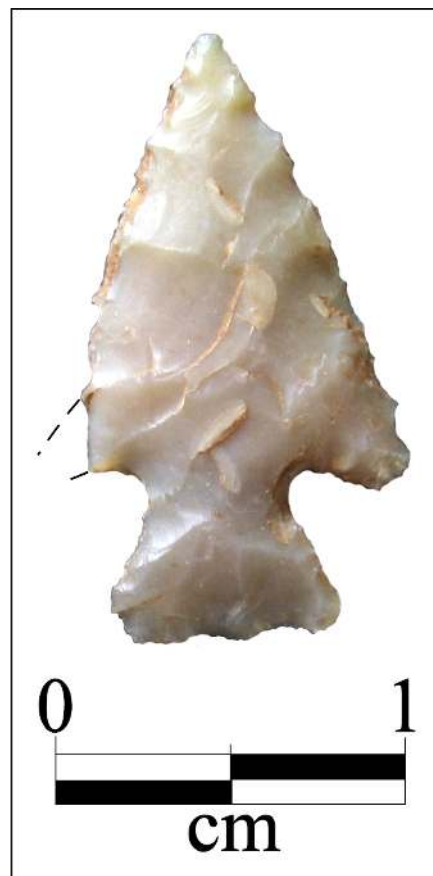


Figure 15. Cuney arrow point from the Spradley site.

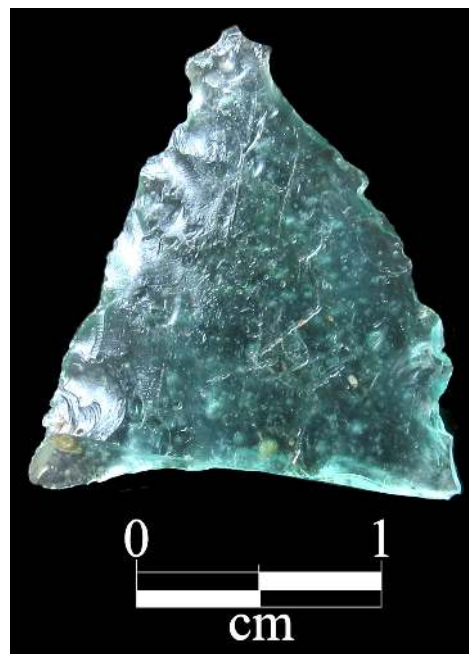


Figure 16. Arrow point fragment from the Spradley site made from a bluish-green glass.

Table 8. Distribution of arrow point forms on selected Historic Caddo sites in East Texas and Southwest Arkansas.

Sites	Fresno	Maud	Harrell	Talco	Nodena	Turney	Perdiz	Cuney	SS [UID]
Red River									
3LA97	8			4	8				
41BW2	4			1	1				2
41BW5	67	4	1	1					
41LR1	863		20						
Sabine River									
41RA13	173	1	3	1		1			
41GG3	++								
41RK132	1								
41HS261	7								
Neches and Angelina Rivers									
41AN2	2						29		
41AN8								1	
41AN13						1	1	1	
41AN26	1					3	11	3	
41AN32							1	1	
41AN34								1	
41CE6								1	
41CE25						5	29	2	
41AN183									
41HO64							1		
41HO211						1	1	1	
41NA18							2		
41NA27						1	118	3	
41NA60				1		4	1	3	
41NA206*	4					4	31	1	
41NA311						4	1		
41SM77									1

SS==straight-stemmed, unidentified to type

+++present, but no. not specified

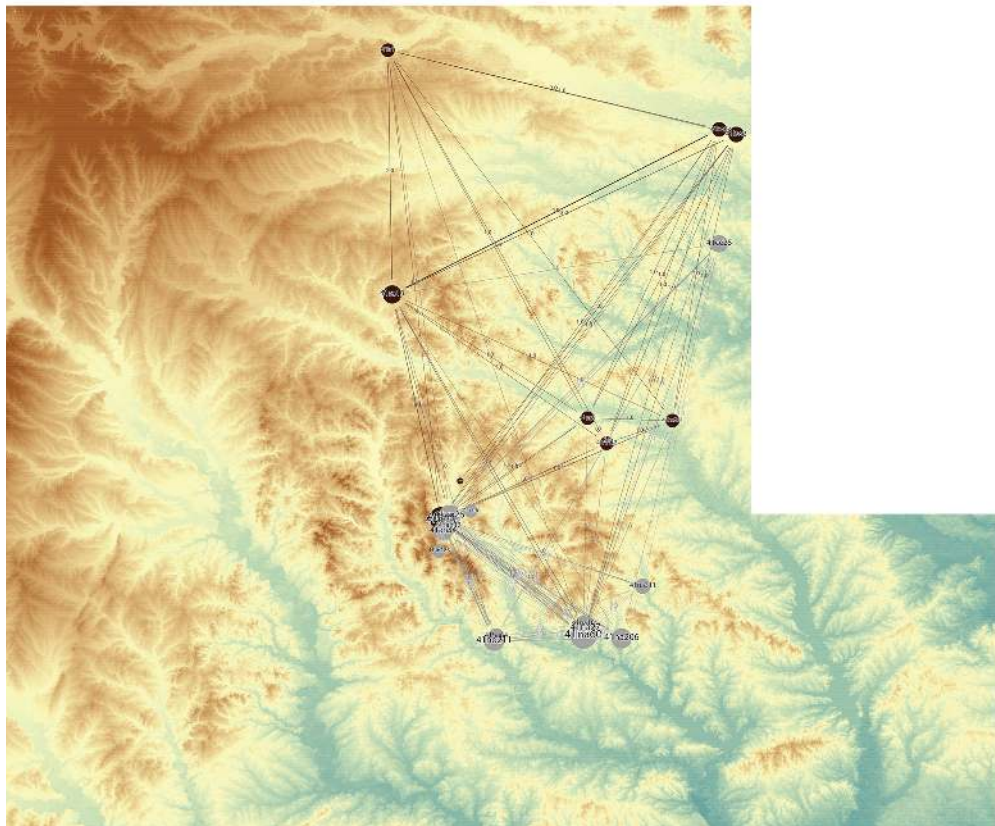
\*three Bassett points may be part of this component as well

These mutually distinctive distributions suggest that there were two contemporaneous social networks of Caddo communities in East Texas: (1) a northern network of Kadohadacho, Nasoni, and Nadaco groups, and their descendants in the upper Sabine River basin, in the Red, Big Cypress, and Sabine river basins (areas in black on Figure P), and (2) a southern Hasinai Caddo network of communities in the Neches and Angelina river basins (areas in gray on Figure 17). Based also on some shared ceramic vessel types and arrow point types, this latter network of Caddo communities were also interacting with Nadaco Caddo communities on the Sabine River as well as Caddo groups on the upper Sabine River basin (Figure 17).

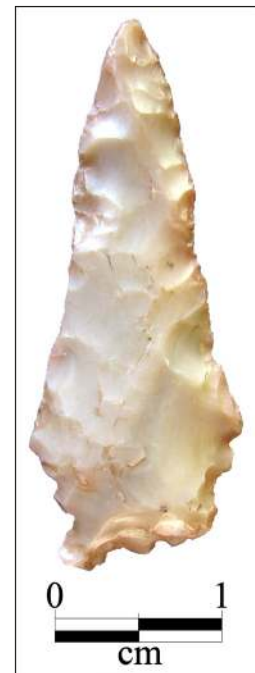
One of the unidentified arrow points has an expanding stem, a concave base, one barbed shoulder, but is corner-notched (Figure 18). The other (N76-W65, level 2) has an expanding stem, a convex base, and no barbs.

**Arrow Point Preforms**

Arrow point preforms are common in both the northwestern and southeastern portions of the Spradley site, with 12 recovered preforms (Table 9). The preforms are ovoid to triangular-shaped, and generally they are unifacially flaked (Figure 19a-f). The form of three of the preforms suggest they were preforms abandoned in the course of manufacturing either Perdiz or Bassett points.



**Figure 17. Social networks of northern and southern Historic Caddo groups in East Texas. Figure provided courtesy of Robert Z. Selden, Jr.**

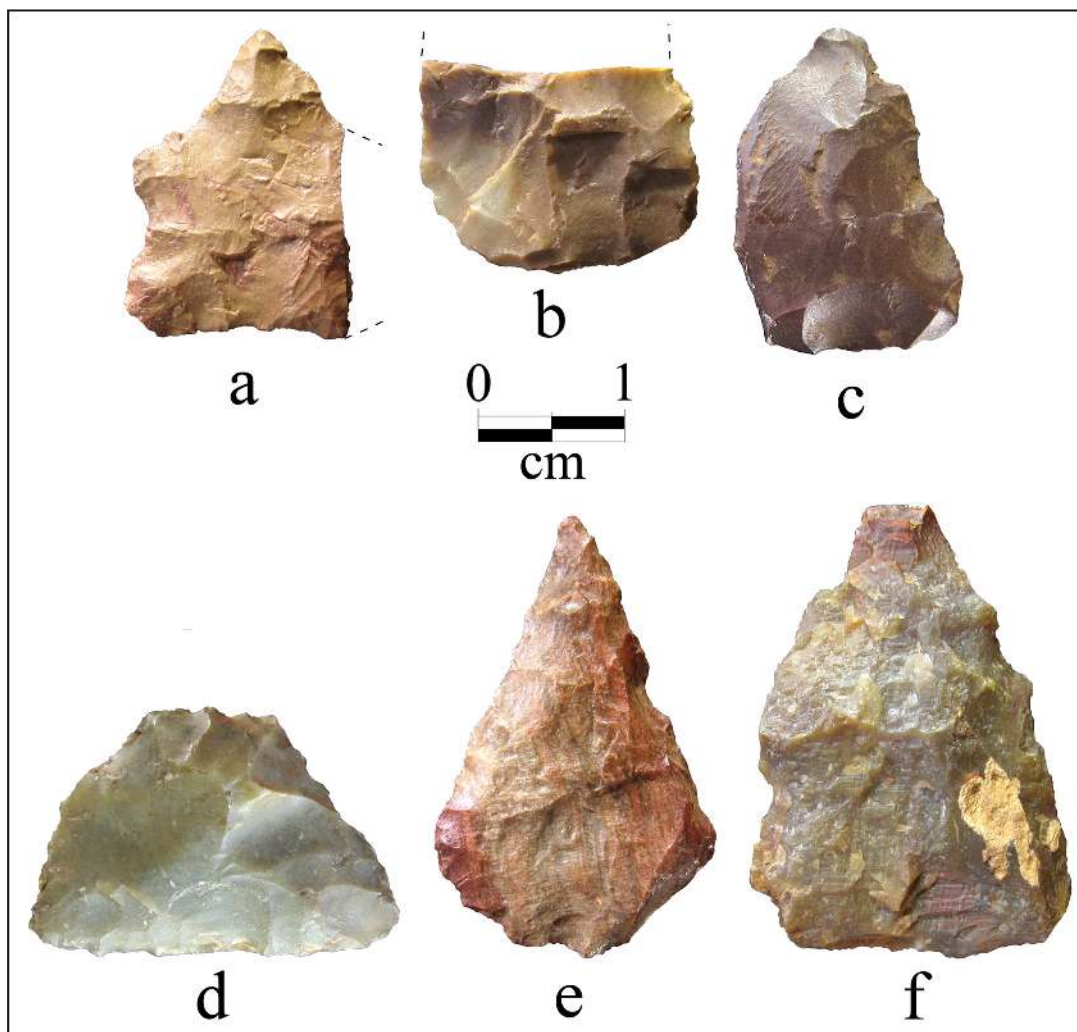


**Figure 18. Unidentified arrow point from N80-W51, level 2 at the Spradley site.**

**Table 9. Arrow point preforms from the Spradley site.**

Provenience	Raw Material	L	W	Th	SW	
N81-W60, lv. 2	petrified wood	30.2	19.0	4.3	-	triangle-shaped
N80-W60, lv. 3	translucent gray	23.9	19.0+	4.9	-	triangle-shaped
N76-W63, lv. 5	petrified wood	23.8	20.2	3.9	-	triangle-shaped
N74-W52, lv. 2	dark brown chert	21.6	14.0	4.8	-	Ovoid-shaped
N61-W48, lv. 4	petrified wood	32.8	12.8	5.3	5.6	cf. Perdiz
N60-W50, lv. 3	brown chert	26.4	18.0	3.2	-	Ovoid-shaped
N59-W39, lv. 1	translucent gray chert	-	18.0	4.5	-	Ovoid-shaped
N40-W20, lv. 2	petrified wood	22.9	12.0	5.1	-	Ovoid-shaped
N26-W17, lv. 2	brownish-red chert	23.1+	16.9	3.7	-	cf. Bassett
N26-W16, lv. 3	brown chert	-	18.3	4.4	-	Ovoid-shaped
N20-W26, lv. 2	petrified wood	31.0	21.9	4.8	-	triangle-shaped
N10-W21, lv. 1	brown chert	-	21.0	2.4	5.3	cf. Bassett

L=length; W=width; Th=thickness; SW=stem width



**Figure 19. Arrow point preforms from the Spradley site.**



Twenty-five percent of the arrow point preforms are on non-local translucent gray or dark brown chert. These are probably from Central Texas chert sources, particularly the translucent gray chert. By contrast, the arrow point preforms (n=8) from the Henry M. site are all on non-local Central Texas cherts (Perttula et al. 2010:35).

### ***Ground Stone Tools***

The ground stone tools from the Spradley site include manos (n=4), mano-pitted stones (n=3), pitted stones (n=2), and grinding slab fragments (n=3) (Table 10). More than 90 percent of the ground stone tools are from excavation units in the northwestern part of the site; only one pitted stone came from archaeological deposits in the southeastern part of the site.

**Table 10. Ground stone tools from the Spradley site.**

Provenience	Raw Material (mm)	L (mm)	W (mm)	Th
1-sided grinding slab and slab fragments				
N81-W61, lv. 3	FSS	-	-	11
N69-W48, lv. 3	FSS	-	-	14
N62-W47, lv. 4	FSS	105	59	25
1-sided mano fragment				
N50-W40, lv. 5	FSS	-	-	36
2-sided mano and mano fragments				
N80-W52, lv. 5	FSS	68	57	39
N67-W47, lv. 6	Hematite	-	-	41
N61-W47, lv. 2	FSS	53+	42+	27
2-sided mano and 1-sided pitted stone				
N64-W59, lv. 4	FSS	79	56	31
2-sided mano and 2-sided pitted stone				
N57-W47, lv. 2	FSS	86	59	43
1-sided mano and pitted stone				
N80-W52, lv. 5	FSS	73	54	41
1-sided pitted stone				
N80-W60, lv. 6	FSS	-	-	33
N21-W16, lv. 2	FSS	109	67	32

FSS=ferruginous sandstone; L=length; W=width; Th=thickness

The ground stone tools are made from locally-available ferruginous sandstone (92 percent) and hematite (8 percent). The diameter of the pits on the pitted manos and pitted stones ranges from 15-26 mm, with a mean diameter of 20.7 mm. The emphasis on grinding slabs, manos, and pitted stones suggests these implements were used in the grinding and processing of plant foods.

A similar range of ground stone tools were found in the much larger ground stone tool assemblage (n=159) at the Deshazo site (see Varien 1995:31-32); many (i.e., pitted stones, pitted manos, and polishing stones) of these tools were apparently associated with the Woodland period occupation of the site, but others were part of the Historic Caddo tool kit (i.e., manos, celts, and abraders) as they were at the Historic Caddo Allen phase Henry M. site (41NA60). At the latter site, the 39 ground stone tools included manos (44 percent), mano-pitted stones (2.6 percent), pitted stones (15.4 percent), grinding slabs (15.4 percent), metates (5.1 percent), and grooved abraders (18.0 percent (Perttula et al. 2010:47-48).

### *Glass Arrow Point*

One of the arrow points in the assemblage is made from a piece of bluish-green glass that is flat and only 2.5 mm in thickness (see Figure 16); it was recovered in Unit N65-W59, level 2 (10-20 cm bs). The point is broken and only the tip and serrated blade remain; the blade is 17.5 mm in width.

## **Ceramic Vessel Sherds and Pipes, by Paul Shawn Marceaux and Timothy K. Perttula**

### *Ancestral Caddo Ceramic Artifacts*

The large assemblage of ancestral Caddo ceramic vessel sherds, more than 8800 in total, recovered in the work at the Spradley site were analyzed in detail by Marceaux (2011:361-376, and Appendix 2-5). A summary of the findings of those analyses are presented in this section of the report.

The 8806 sherds are from plain wares, utility wares, and fine wares (Table 11). The plain wares comprise 52 percent of the collection; 37 percent of the rim sherds are from plain vessels. Sherds from utility ware vessels account for 37 percent of the assemblage, as well as 37 percent of the rims, and fine wares only account for 10.5 percent of the sherds from the site; fine ware rims represent, however, 25 percent of the assemblage.

**Table 11. Ceramic wares at the Spradley site.**

Sherd type	Plain ware	Utility ware	Fine ware	N
Rim	184	181	124	489
Body	4399	3046	803	8248
Base	67	2	-	69
Totals	4650	3229	927	8806

Ceramic metrics for the assemblage include a plain/decorated sherd ratio of 1.12, a brushed to plain sherd ratio of 0.51, and a brushed to other wet paste sherd ratio of 2.68. Brushed marks are present on 56.6 percent of the decorated sherds (n=4156).

Sherds that compare favorably to a number of types known to occur on other Neches-Angelina River basin ancestral Caddo sites of late Frankston phase age (ca. A.D. 1560-1680), or date to the early part of the Allen phase (ca. A.D. 1680-1720), were identified in the Spradley site assemblage. They include the following types:

- Hume Engraved (n=4 sherds)
- Keno Trailed (n=1)
- Killough Pinched (n=3)
- King Engraved (n=7)
- La Rue Neck Banded (n=5)
- Lindsey Grooved (n=8)
- Patton Engraved (n=126)
- Poynor Engraved (n=4)
- Poynor-Patton Engraved hybrid (n=4)
- Spradley Brushed-Incised (n=44)

Clearly most of the sherds of identifiable type in the assemblage are from Patton Engraved fine ware vessels and Spradley Brushed-Incised utility ware vessels.

The ceramic sherds from the Spradley site are from vessels tempered primarily with grog (fired clay) or burned bone (Table 12). Grog occurs in 56 percent of the sherds, with the highest proportions in the utility wares (61 percent), while bone temper is present in 35 percent of the sherds; the highest proportion of bone use is in the fine wares (41 percent). Crushed hematite is present in 7 percent of the sherd sample, with the highest proportion of this temper present in the fine wares. Vessels made with shell temper are from non-locally produced wares, likely made by Caddo groups along the Red River to the northeast in Northwest Louisiana and Southwest Arkansas (see Perttula et al. 2012). Only 0.7 percent of the sherds in the sample have shell temper. Finally, 0.3 percent of the sherds apparently were tempered only with plant organic remains, or had organic remains left in the relatively unprocessed clay paste when certain vessels were fired.

**Table 12. Temper use in a detailed sherd analysis sample from the Spradley site.\***

Temper	Plain ware	Utility ware	Fine ware	N
grog	425	817	172	1414
bone	320	418	147	885
hematite	54	93	32	179
shell	8	7	2	17
organics	4	1	5	10
Totals	811	1336	358	2505

\*some sherds have multiple tempers

The majority of the sherds from the plain ware, utility ware, and fine wares from the Spradley site are from vessels fired in a reducing or low oxygen environment (68.4 percent) in an open pit fire; about 50 percent of these were cooled in the open air, leaving thin oxidized bands along one or both outer edges of the sherd core. Only 21.5 percent of the sherds are from vessels that were fired in an oxidizing or high oxygen fire, and another 8.0 percent are from vessels that were incompletely oxidized during firing. Finally, 1.9 percent have evidence in sherd cores of smudging, sooting, and/or refiring.

The ceramic vessels at the Spradley site tend to be thin-walled, with mean rim sherd thickness ranging from 5.6 mm (plain ware), 6.7 mm (utility ware), and 5.6 mm for the fine wares. Body wall thickness across all three wares ranges from 6.0-7.3 mm, with the body wall thickness of utility ware vessels about 20 percent thicker than the fine wares. Measured base sherds have a mean thickness of 10.3 mm.

Vessel forms include jars (among the utility wares), as well as bottles, bowls, carinated bowls (including globular carinated bowls), and vessels with rim peaks, probably compound bowls. Rim sherds tend to be direct or freestanding (n=169) and another 49 have an everted rim. Lips are primarily rounded (n=200), but others have a flat lip (n=18), and others have exterior folded lips (n=78).

There are a number of decorative classes in the utility wares (Table 13). Sherds with brushed marks (or brushed marks with either associated incised or punctated decorative elements) dominate these wares, accounting for 71 percent of the utility wares. About 48 percent of the utility ware rim sherds have brushing marks (Figure 20). A number of the brushed-incised sherds are from Spradley Brushed-Incised vessels that have parallel brushing with overlapping straight incised lines opposed or perpendicular to the brushing (Figure 21).

**Table 13. Utility ware decorative classes from the Spradley site.**

Class	Rim	Body	Base	N
Appliqued	2	7	-	9
Appliqued-Brushed	-	3	-	3
Appliqued-Brushed-Punctated	-	18	-	18
Appliqued-Punctated	1	9	-	9
Brushed	83	2101	2	2186
Brushed-Incised	1	117	-	118
Brushed-Punctated	4	19	-	23
Grooved	1	6	-	7
Grooved-Brushed	1	-	-	1
Incised	33	477	-	510
Incised-Punctated	10	50	-	60
Lip Notched	4	-	-	4
Neck Banded	2	1	-	3
Neck Banded-Punctated	1	-	-	1
Neck Banded-Brushed	1	-	-	1
Pinched	4	12	-	16
Punctated	33	226	-	259
Totals	181	3046	2	3229



**Figure 20.** Brushed rim sherds from the Spradley site.



**Figure 21.** Spradley Brushed-Incised body sherds from the Spradley site.



The rims with incised decorations have horizontal or diagonal lines (Figure 22), as well as vertical or opposed incised lines; these are probably from Maydelle Incised vessels (see Suhm and Jelks 1962:Plate 52). Incised body sherds have curvilinear, straight, or parallel incised lines, as well as cross-hatched, opposed, and perpendicular elements. The incised-punctated sherds have horizontal and/or diagonal incised lines with rows of tool punctations, as well as sherds with curvilinear incised zones filled with punctations (Figure 23); these tend to occur beneath the lip and above the incised decorations. Incised lines also form zones filled with punctations. The few pinched sherds are likely all from Killough Pinched vessels (see Suhm and Jelks 1962:Plate 46). The punctated sherds have rows of punctations made with different kinds of tools on vessel rims and body sherds (Figure 24).



Figure 22. Incised rim sherds from the Spradley site.



Figure 23. Sherds with incised-punctated decorative elements from the Spradley site.



**Figure 24. Range of punctated rim and body sherds from the Spradley site.**

Sherds with applied elements account for slightly more than 1 percent of the utility ware sherds. These have applied ridge and fillet elements. Only 0.2 percent of the sherds, from Lindsey Grooved vessels, have broad grooved lines as a decorative element.

Patton Engraved is the dominant fine ware type at the Spradley site. These sherds have engraved lines with various orientations that have tick marks on the lines, usually excised tick marks, but also linear tick marks (Figure 25). Table 14 lists the decorative elements on Patton Engraved sherds from the site.



**Figure 25. Patton Engraved body sherds from the Spradley site.**

**Table 14. Patton Engraved decorative elements on sherds from the Spradley site.**

Decorative element	Rim	Body	N
cross-hatched engraved el. and parallel engraved lines with triangular tick marks	-	1	1
curvilinear engraved el. with triangular tick marks	-	3	3
curvilinear engraved line with triangular tick marks	-	19	19
curvilinear engraved lines and straight engraved line with triangular tick marks	-	1	1
curvilinear engraved lines, one with linear tick marks	-	1	1
curvilinear engraved lines, one with triangular tick marks	-	2	2
curvilinear engraved lines with triangular tick marks	-	6	6
diagonal line with downward-pointing triangular tick marks	1	-	1
engraved element with linear tick marks	1	-	1
engraved element with triangular tick marks	2	5	7
engraved line with linear tick marks	-	2	2
engraved line/lines with triangular tick marks	-	18	18
slanted scroll with triangular tick marks	1	-	1
horizontal engraved line with downward-pointing triangular tick marks	9	-	9
horizontal engraved line with linear tick marks	1	-	1



**Table 14. Patton Engraved decorative elements on sherds from the Spradley site, cont.**

Decorative element	Rim	Body	N
horizontal engraved line/lines with triangular tick mark	3	-	1
horizontal engraved lines, one with triangular tick marks	1	-	1
horizontal engraved lines with large excised triangles	1	-	1
horizontal engraved lines with triangular tick marks facing each other	7	-	7
horizontal engraved line with triangular tick marks and diagonal engraved lines	-	1	1
horizontal engraved lines with upward-pointing triangular tick marks	-	1	1
opposed engraved lines, one with triangular tick marks	1	1	2
opposed engraved lines with triangular tick marks	-	1	1
parallel engraved lines with triangular tick marks	-	9	9
parallel engraved lines with triangular tick marks facing each other	-	1	1
straight engraved line with large triangular tick marks	-	1	1
straight engraved line with linear tick marks	-	1	1
straight engraved line with triangular tick marks	-	22	22
straight engraved line with triangular tick marks and parallel	-	1	1
straight engraved line with triangular tick marks with white pigment	-	1	1
Totals	28	98	126

The frequency of curvilinear, horizontal, and parallel engraved lines with tick marks (see Figure 25) suggests that *var. Freeman*, *var. Allen*, and *var. Fair* of Patton Engraved are present in the Spradley site fine wares (see Perttula 2011:Figure 6-66a-d). Patton Engraved, *var. Freeman* is the earliest of the varieties, likely dating to the late 17<sup>th</sup> century, while *var. Allen* is a slightly later Patton Engraved variety, perhaps dating from the early 18<sup>th</sup> century (Perttula 2011:286).

Two rim sherds may be from either Poynor Engraved, *var. Freeman* or Patton Engraved, *var. Freeman* vessels. They have horizontal engraved lines with triangular tick marks and vertical dividers/brackets (see Perttula 2011:Figure 6-64h and Figure 6-66c).

Hume Engraved sherds in the assemblage (Figure 26b, e-f) have engraved ladder (*var. Hume*) and hatched engraved triangle elements (*var. Allen*) (see Perttula 2011:Figure 6-6e-f). Both of these varieties are found primarily in Allen phase contexts in the Neches-Angelina river basins (Perttula 2011:286). The one Keno Trailed, *var. unspecified* body sherd has broad curvilinear trailed lines. King Engraved sherds have cross-hatched engraved zones, sometimes with horizontal brushing on the vessel body. Finally, there are four sherds that compare favorably to Poynor Engraved in having cross-hatched elements, engraved divider elements, and engraved elements with hatched triangles (see Perttula 2011:Figure 6-64b, e, h).



**Figure 26. Patton Engraved and Hume Engraved sherds from the Spradley site: a, c-d, Patton Engraved; b, e-f, Hume Engraved.**

**Ceramic Comparisons between certain Historic Caddo Sites in Nacogdoches County, Texas: Spradley (41NA206), Henry M. (41NA60), and Deshazo (41NA27)**

The Henry M., Deshazo, and Spradley sites are three of the better and recently studied Historic Caddo ceramic assemblages in East Texas (see Fields 1995; Middlebrook and Perttula 2008; Perttula et al. 2010; Marceaux 2011). All three sites are in Nacogdoches County (see Middlebrook 2007:Figure 1), Henry M. and Deshazo on Bayou Loco, and Spradley on Lanana Creek. How do these sites compare to each other with respect to the decorative classes present in the utility wares and fine wares? All three sites are dominated by brushed utility wares (Table 15). At Spradley, however, brushed pottery comprises 52.6 percent of the decorated sherds compared to 72.7-84.2 percent of the decorated sherds from Henry M. and Deshazo. Incised, punctated, and incised-punctated decorative classes, moreover, are also abundant in the Spradley ceramic assemblage (20.0 percent), but much rarer in the Henry M. and Deshazo utility wares (3.6 to 7.2 percent).

**Table 15. Decorative classes in the utility ware and fine ware ceramics.**

Decoration	Spradley	Henry M.	Deshazo*
<b>Utility Wares</b>			
Brushed	52.6+	<u>72.3</u>	<u>84.2</u>
Brushed-incised	<u>2.8</u>	0.3	0.7
Brushed-appliqued	0.5	Trace	0.2
Brushed-punctated	0.5	0.1	0.9
Grooved	0.2	<u>2.4</u>	0.2
Neck banded	0.1	0.1	Trace
Appliqued	0.2	Trace	0.3
Appliqued-punctated	0.2	-	0.5
Incised	<u>12.4</u>	5.2	2.0
Punctated	<u>6.2</u>	1.7	1.3
Incised-punctated	<u>1.4</u>	0.3	0.3
Pinched	0.4	-	Trace
Lip notched	0.1	-	Trace
<b>Fine wares</b>			
Engraved	<u>22.3</u>	13.0	8.7
Engraved-brushed	-	0.8	-
Engraved-punctated	-	-	0.1
Trailed	<0.1	-	Trace
No. of decorated sherds	4156	2132	23,448

+ = percentage; \*see Fields (1995) and Marceaux (2011)

Fine wares—especially from Patton Engraved vessels—comprise between 13.8 percent and 22.3 percent of the decorated sherds at the Spradley and Henry M. sites (see Table 15), but only 8.8 percent at the Deshazo site, suggesting that fine wares were equally abundant and regularly accessible to the inhabitants at both of these Historic Caddo sites, but less so at Deshazo.

Henry M. and Deshazo ceramics are primarily grog-tempered (83-90.4 percent) (Table 16). Bone-tempered pottery, conversely, is much more abundant at the Spradley site, suggesting the existence of a different tradition of ceramic manufacture and technology there when compared to the wide-spread use of grog temper at the two Bayou Loco sites. Shell-tempered pottery is rare in each of these assemblages (less than 0.7 percent). Later (ca. post-1750) Caddo ceramic assemblages in the Angelina River basin have higher percentages of shell-tempered wares: 5.4 percent at 41NA223 (ca. 1750-1800, Perttula 2008a) and 8.3 percent at the D'Ortolan site (41NA299, ca. 1790-1820, Perttula 2008b).

**Table 16. Temper comparisons between the three Historic Caddo sites.**

Temper	Spradley	Henry M.	Deshazo
bone-tempered	35.4%	9.2%	17.0%
shell-tempered	0.7%	0.4%	-
grog-tempered	56.6%	90.4%	83%

We can extend the ceramic comparisons to a broader part of Nacogdoches County (Table 17), employing several categories of decoration/utility ware metrics originally proposed by Middlebrook (2007:Table 1) as a means to differentiate contemporaneous ceramic assemblages, and also perhaps to distinguish different Caddo groups and communities living in the area. In Table 17, selected assemblages are used that have more than 196 total sherds, and list them by drainage. The use of ceramic metrics (i.e., ratios of various categories of decorated sherds as well as use of different tempers) has become an important analytical tool in assessing the stylistic similarity of different assemblages of Late Caddo and Historic Caddo ceramic assemblages in East Texas (see especially Marceaux 2011; Perttula 2016). Recent compilations of ceramic vessel sherd assemblages from sites in the Neches, Angelina, and Sabine River basins that focus on the distinctive character of Caddo utility ware vessel decorations in Hasinai Caddo archaeological sites, particularly the common use of brushing as a decorative method, and the ratio of brushed to other wet paste decorated sherds.

**Table 17. Ceramic comparisons with selected other Historic Caddo sites in Nacogdoches County, Texas.**

Site*	% Brushed**	Brushed/Plain	% Brushed/Brushed + Plain
<b>Lanana Creek sites</b>			
41NA206	26.6	0.50	33.4
41NA223	18.1	0.32	24.2
<b>Angelina River sites and Bayou Loco</b>			
41NA6	65.1	4.61	82.2
41NA15	54.0	4.29	81.1
41NA54	70.2	3.8	79.0
<b>Bayou Loco sites</b>			
41NA21	46.2	1.21	54.7
41NA22	48.7	1.34	57.3
41NA23	43.0	1.15	53.5
41NA27	66.1	2.9	74.3
41NA60	59.8	2.8	73.8
41NA111	69.4	5.44	84.5
<b>Legg Creek</b>			
41NA44	34.1	1.07	51.8
<b>Attoyac Bayou</b>			
41NA67	7.2	0.12	10.7

\* Except for 41NA223, the sherd data from the other listed sites is from Middlebrook (2007:Table 1).

\*\*% Brushed is the percentage of all sherds with brushing as the only surface treatment; Brushed/Plain is the ratio of brushed sherds to plain or undecorated sherds; and % Brushed/Brushed + Plain is the percentage of the sherds with brushing compared to all the sherds in a collection that do not have “more elaborate decorative styles such as incised, engraved, or punctated” (Middlebrook 2007:101).

An inspection of Table 17 indicates the following:

- The closest ceramic comparisons between the Spradley site and the other known Nacogdoches County historic Caddo sites is with 41NA223, also on Bayou Lanana;
- Bayou Loco and Angelina River sites are dominated by brushed utility wares. In the case of the Bayou Loco sites, they can be divided into two groups based on the relative proportion of brushed wares, one group with proportions ranging from 43-48.7 percent and the other with proportions between 59.8-69.4 percent (see Table 17); and
- the Lanana Creek Caddo sites (including the Spradley site), Legg Creek sites, and Attoyac Bayou sites are part of a different local ceramic tradition, where brushed pottery is much less important in the utility wares and in the overall ceramic assemblage, particularly in Caddo sites on Attoyac Bayou and Lanana Creek (see Table 17).

Table 17 makes clear that there are distinct spatial groupings of Allen phase sites in Nacogdoches County. Table 18 reshuffles the sites to regroup them by proportional similarity in the percentages and ratios expressed in the same ceramic attributes employed in Table 17, irrespective of stream drainage, leading to the recognition of five groupings: Group I on Lanana Creek, Group II on the lower Bayou Loco, Group III on the upper part of Bayou Loco and other streams draining into the Angelina River, Group IV includes sites on Bayou Loco and Legg Creek, and a single site near the confluence of Attoyac Bayou and the Angelina River (Figure 27).

**Table 18. Groups I-V of Historic Caddo Ceramic Assemblages.**

Site*	% Brushed**	Brushed/Plain	% Brushed/Brushed + Plain
<b>Group I: Lanana Creek sites</b>			
41NA206	26.6	0.50	33.4
41NA223	18.1	0.32	24.2
<b>Group II: Bayou Loco</b>			
41NA60	59.8	2.8	73.8
41NA27	66.1	2.9	74.3
<b>Group III: Angelina River and Bayou Loco</b>			
41NA15	54.0	4.29	81.1
41NA6	65.1	4.61	82.2
41NA111	69.4	5.44	84.5
41NA54	70.2	3.8	79.0
<b>Group IV: Bayou Loco sites and Legg Creek</b>			
41NA44	34.1	1.07	51.8
41NA21	46.2	1.21	54.7
41NA22	48.7	1.34	57.3
41NA23	43.0	1.15	53.5
<b>Group V: Attoyac Bayou</b>			
41NA67	7.2	0.12	10.7

\*\*% Brushed is the percentage of all sherds with brushing as the only surface treatment; Brushed/Plain is the ratio of brushed sherds to plain or undecorated sherds; and % Brushed/Brushed + Plain is the percentage of the sherds with brushing compared to all the sherds in a collection that do not have “more elaborate decorative styles such as incised, engraved, or punctated” (Middlebrook 2007:101).

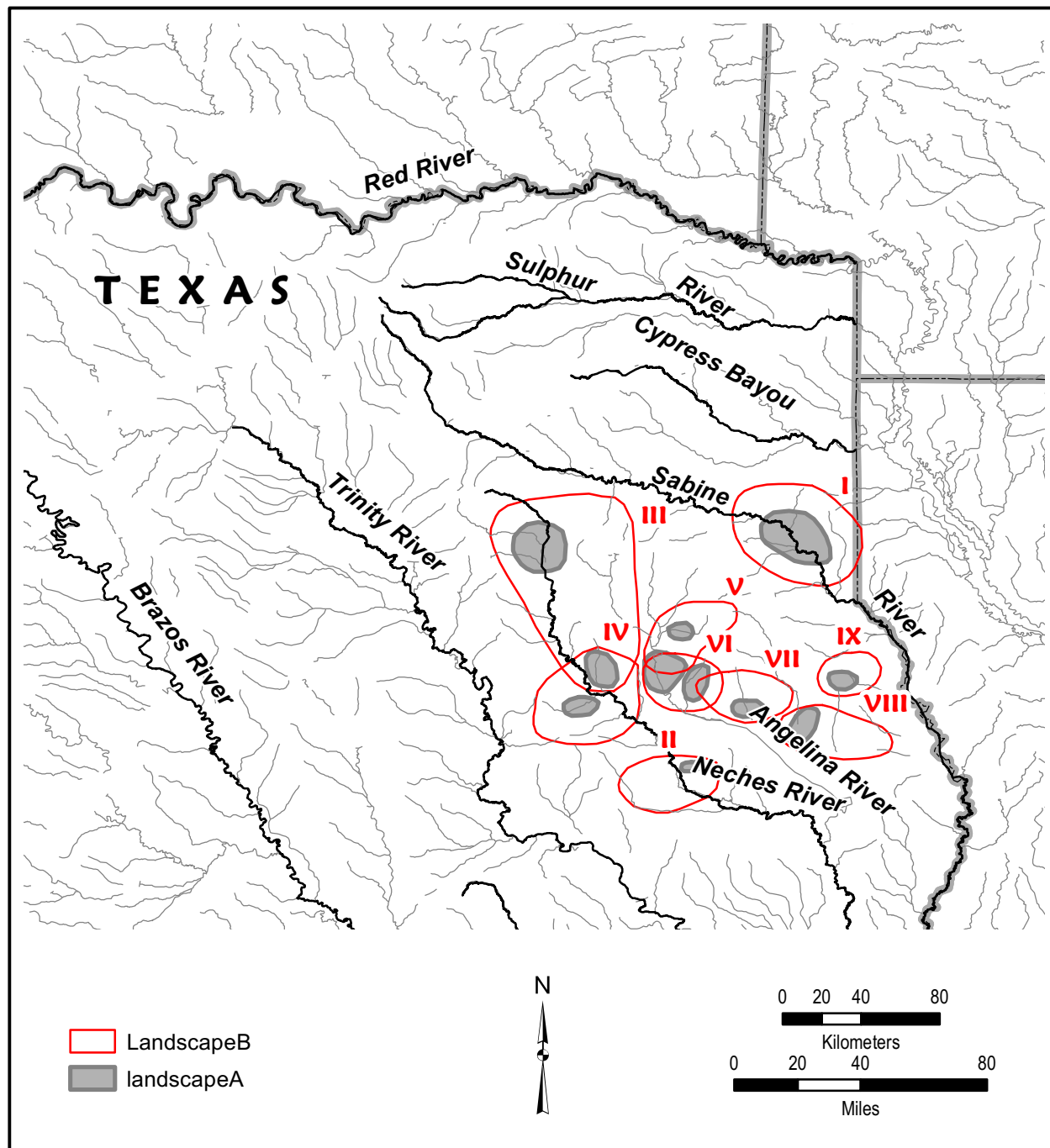


Figure 27. Location of Group I to Group V Historic Caddo ceramic assemblages in Nacogdoches County (after Middlebrook 2007:Figure 1).



The most recent ceramic metric compilation is provided in Table 19. The Nadaco (I), lower Neches (II), and upper Neches (northern part of III) ceramic clusters and groups are also divergent from the remainder of the groups, the latter concentrated in the mid-Neches and Angelina River basins (Figure 28), as are the ceramic clusters in the Attoyac Bayou basin (VIII). The lower Neches and upper Neches groups have the highest proportion of brushed sherds in decorated sherd assemblages and the highest ratios of brushed to other wet paste sherds. The Group IV Neche II and Nabadache clusters are similar in proportions of brushed sherds and in brushed to other wet paste sherd ratios, suggesting these spatially related sites are also closely related in cultural practices.

**Table 19. Comparisons between East Texas Historic Caddo assemblages.**

Areas	Percent Brushed in Decorated Sherds	Brushed/Wet Paste	Cluster
I, Nadaco, Sabine River	64.8	1.95	Nadaco
II, lower Neches	90.8	11.38	None Identified
III, Upper Neches	82.7-88.1	8.14-9.63	Upper Neches
III, Neche, I	87.4	6.34	Neche
IV, Neche, II	81.3	6.74	Neche
IV, Nabadache	71.4	4.36	Nabadache
V, Middle Angelina II	70.0	2.30	Legg Creek
V, Nasoni/East Fork Angelina	66.8	3.08	Nasoni
VI, Middle Angelina I	84.7	6.71	King Creek
VI, Bayou Loco I	81.8	8.89	Bayou Loco South
VII, Bayou Loco II	60.9	1.86	Bayou Loco North
VII, Bayou La Nana	56.5	2.25	Nacogdoche
VIII, Attoyac Bayou II	50.0	1.72	Attoyac
VIII, Attoyac Bayou I	30.4	0.61	Upper/Lower Attoyac
IX, Ais mission	0.0	0.0	Ais

lower Angelina: 41AG22

Ais mission: Corbin et al. 1980, 1990

Middle Angelina I: 41CE62, 41NA6, 41NA15

Middle Angelina II: 41NA44, 41NA54

Bayou La Nana: 4NA206 (Spradley)

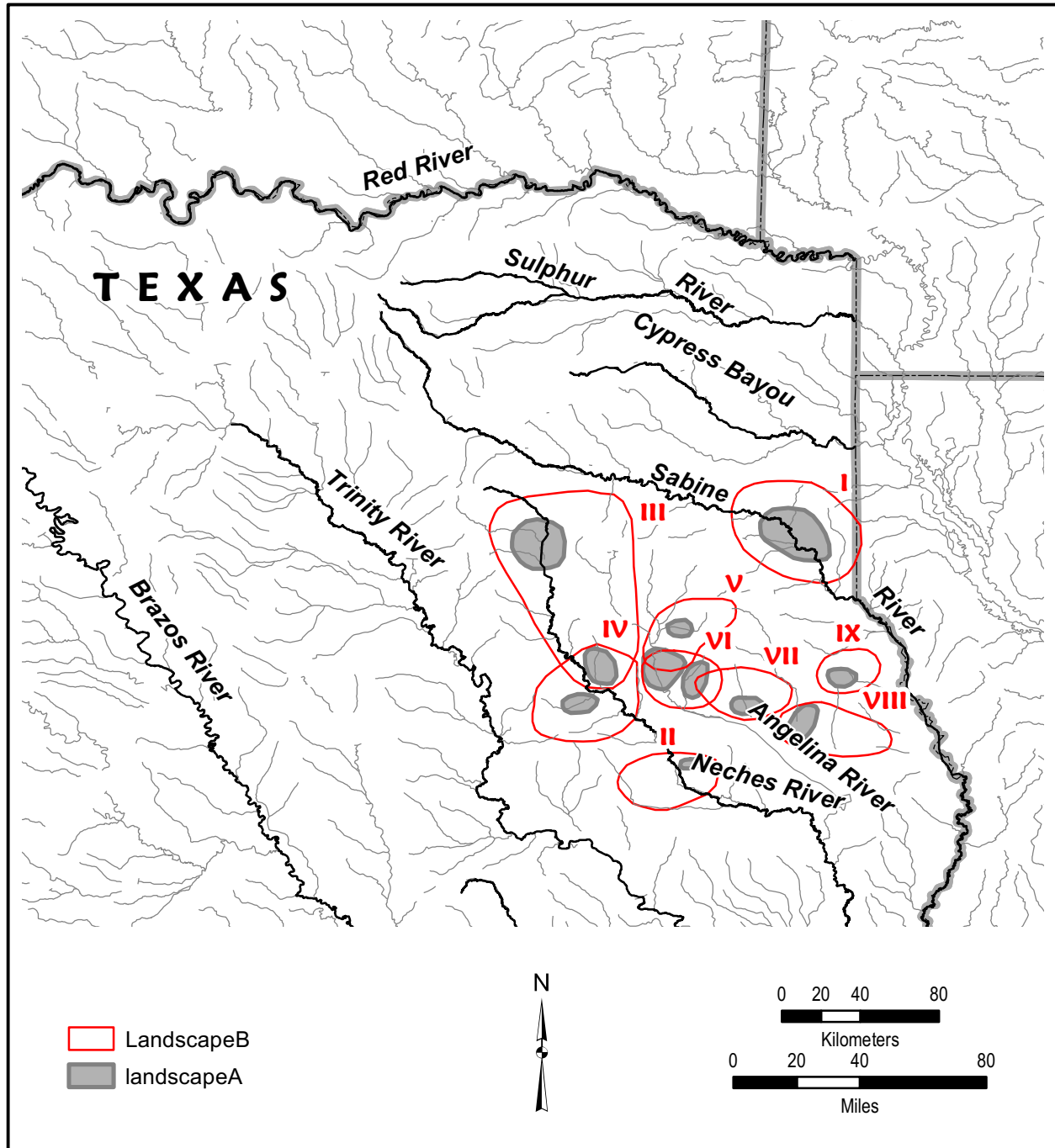
Bayou Loco I: 41NA21, 41NA22, 41NA23, 41NA27 (Deshazo), 41NA60 (Henry M.), 41NA111

Bayou Loco II: 41NA183

Attoyac Bayou I: 41NA67, 41SA116

Attoyac Bayou II: 41SA94

Ceramic groups V-VI represent the core of known Hasinai Caddo ceramic assemblages in the Angelina River basin (see Figure 28 and Table 19). Ceramic group V has been readily linked with the Nasoni Caddo, since Mission Nasoni (1716-1730) is one of the sites included in the Table 19 compilation. This group in turn is stylistically similar in its utility wares to mid-Angelina River basin sites on Legg Creek, while other mid-Angelina River basin sites (King Creek) are stylistically similar to both Bayou Loco and Bayou La Nana assemblages (see Figure 21 and Table 19). These latter groups may



**Figure 28. Spatial groupings of Historic Caddo and Historic Ais ceramic clusters I-IX in East Texas.**

be affiliated with both Hainai and Nacogdoche Caddo groups living in this part of East Texas throughout the 18<sup>th</sup> century, with the Spradley site occupation most closely affiliated with the Nacogdoche.

The Attoyac group (VIII) has much lower proportions of brushed sherds and more equitable brushed to other wet paste sherd ratios (0.61-1.72) than the other groups. The ethnic affiliation of this group of sites is not known.

What do these ceramic groups represent other than generally contemporaneous historic sites occupied by Caddo peoples? This ceramic sherd data from a number of sites and areas indicates that the utility wares of the East Texas Hasinai (and the Nadaco on the Sabine) can help identify specific groups/communities of ceramic practice, and if they can be linked confidently to specific Caddo groups known through ethnographic and historic records, then archaeologists are in a much better position to determine the direction of cultural and ceramic change through time, particularly concerning what happened to these groups from pre-contact times through much of the 18th century, and perhaps beyond. It is our opinion, then, that these group represent different but clearly related and interacting social groups or communities of Caddo peoples living in the Angelina River basin in historic times (Corbin 2007; Perttula 2016).

### **Pipes**

One ceramic pipe sherd from an elbow pipe was recovered in N61-W49, level 3. This is a bone-tempered bowl/distal stem sherd that has 6+ rows of small circular punctations above the flat bowl base (Figure 29). Napoleon (1995:Figure 53h) illustrates a similar decorated pipe from the Deshazo site (41NA13), and pipes of this style have also been reported from the upper Neches River basin (Perttula 2011:Figure 6-24d). Jackson (1933:75) refers to these as Neches pipes.



**Figure 29. Punctated elbow pipe sherd from the Spradley site.**

**Woodland Period, Mossy Grove Ceramic Artifacts, by Timothy K. Perttula**

There are 40 body sherds from sandy paste Goose Creek Plain, *var. unspecified* vessels (see Story 1990) in the assemblage from the Spradley site (Table 20). These are part of the Woodland period, Mossy Grove culture occupation of the site that occurred sometime between ca. 500 B.C.-A.D. 800.

**Table 20. Sandy paste ceramic sherds from the Spradley site.**

Lot No.	Provenience	Description
138	N75-W65, lv. 2	plain body sherd, fired and cooled in a reducing environment
139	N75-W63, lv. 2	plain body sherd, fired and cooled in an oxidizing environment
142	N58-W39, lv. 1	plain body sherd, fired and cooled in a reducing environment
182	N75-W65, lv. 3	plain body sherd, fired and cooled in an oxidizing environment
184	N75-W63, lv. 3	plain body sherd, incompletely oxidized during firing
315	N73-W52, lv. 4	plain body sherd, fired and cooled in an oxidizing environment
326	N61-W48, lv. 3	plain body sherd, fired and cooled in a reducing environment
331	N62-W47, lv. 4	plain body sherd, fired and cooled in a reducing environment
371	N76-W63, lv. 3-4	plain body sherd, fired and cooled in a reducing environment
419	N65-W59, lv. 4	plain body sherd, incompletely oxidized during firing
447	N0-W20, lv. 3	plain body sherd, fired and cooled in a reducing environment
489	N20-W50, lv. 1	plain body sherd, fired and cooled in an oxidizing environment
518	N20-W26, lv. 1	plain body sherd, fired and cooled in a reducing environment
543	N10-W22, lv. 1	plain body sherd, fired and cooled in a reducing environment
550	N20-W25, lv. 5	plain body sherd, fired and cooled in a reducing environment
550	N20-W25, lv. 5	plain body sherd, fired and cooled in a reducing environment
567	N10-W22, lv. 5	plain body, fired in a reducing environment and cooled in the open air
567	N10-W22, lv. 5	plain body sherd, fired and cooled in an oxidizing environment
589	N11-W20, lv. 5	plain body sherd, fired and cooled in an oxidizing environment
607	N21-W15, lv. 1	plain body sherd, fired and cooled in a reducing environment
611	N21-W15, lv. 5	plain body sherd, fired and cooled in a reducing (44-54 cm bs) environment
616	N25-W15, lv. 4	plain body sherd, fired in a reducing environment and cooled in the open air
618	N25-W15, lv. 5	plain body sherd, fired and cooled in a reducing environment
622	N25-W16, lv. 2	plain body sherd, fired and cooled in a reducing environment
624	N25-W16, lv. 3	plain body sherd, fired and cooled in a reducing environment
634	N25-W17, lv. 2	plain body sherd, fired in a reducing environment and cooled in the open air
652	N26-W16, lv. 1	plain body sherd, incompletely oxidized during firing
656	N26-W16, lv. 3	plain body, opposed suspension holes, fired in a reducing environment and cooled in the open air
656	N26-W16, lv. 3	plain body, fired and cooled in a reducing environment
663	N26-W15, lv. 2	plain body sherd, incompletely oxidized during firing
666	N26-W15, lv. 3	plain body sherd, sooted/smudged
666	N26-W15, lv. 3	plain body sherd, fired and cooled in a reducing environment
666	N26-W15, lv. 3	5 plain body sherds, incompletely oxidized during firing
688	N80-W60, lv. 6	plain body sherd, fired in a reducing environment and cooled in the open air
694	N61-W51, lv. 6	2 plain body sherds, 1 incompletely oxidized during firing, 1 sooted/smudged

The low density of sherds covers a ca. 80 x 50 m area (ca. 1 acre) on the landform, from N0 to N80 and W15 to W65, and occur in each arbitrary level, from 0-60 cm bs. About 70 percent of the sherds are from units excavated in the southeastern portion of the grid, on an upland toe slope (see Figure 3) that slopes to the south, particularly in units N26-W15 and W16. The sherds are from at least five separate vessels, based on patterns of firing observed in the sherd core sections. Approximately 43 percent of the sherds are from vessels that were fired and cooled in a reducing or low oxygen environment. Another 25 percent were incompletely oxidized during the firing, and 15 percent were fired and cooled in an oxidizing or high oxygen environment. Five sherds (12.5 percent) were from vessels fired in a reducing environment and cooled in the open air. Finally, two sherds (5.0 percent) have sooted or smudged surfaces with a build up on charred and blackened materials on either one or both vessel surfaces.

The sherds are from vessels (probably jars) made with a non-tempered and locally available sandy clay. One vessel sherd in N26-W16 has two drilled suspension holes, indicating the vessel had been suspended during part of its use life.

### **Summary and Synthesis of the Archaeological Findings from the Spradley Site**

The Spradley site (41NA206) is an important Native American archaeological site in the Bayou La Nana valley in Nacogdoches County in the East Texas Pineywoods. Bayou La Nana is a southward-flowing tributary to the Angelina River and merges with it about 15 km below the city of Nacogdoches, Texas. The site is best known for its late 17<sup>th</sup>-early 18<sup>th</sup> century Historic Caddo period occupation, and the recovery of a number of European trade goods (Marceaux 2011) from habitation deposits, but the site was also occupied in Late Archaic (ca. 5000-2500 years B.P.), Woodland (ca. 2500-1150 years B.P.), and pre-A.D. 1400 Caddo periods. There are a number of other known Historic Caddo period settlements in Nacogdoches County, but most of these lie west and northwest of the Spradley site on other tributaries to the Angelina River.

The Spradley site was the scene of Stephen F. Austin State University (SFASU) Field School in 2001, 2003, and 2005. In this publication, we present the first comprehensive and detailed publication of both the lithic and ceramic artifacts recovered from the SFASU work at the Spradley site (see also Marceaux 2011).

The chipped stone tools from the Spradley site are dominated by arrow points and arrow point fragments (n=70) and arrow point preforms (n=12), as these comprise 75 percent of the tool assemblage. Also present are flake tools (n=9), scrapers (n=3), drills (n=3), bifaces (n=6), and dart points (n=23). The identified arrow point and dart point types in the Spradley site assemblage indicate that it was used during Late Archaic (from ca. 2000 B.C.), Woodland, and pre-A.D. 1400 Caddo periods, as well as during the post-A.D. 1680 Historic Caddo period.

All of the dart points and dart point fragments are made from local lithic raw materials, almost exclusively (91 percent) from petrified wood. Five different dart points are present in the sample, including Gary (n=6), Kent (n=7), Godley (n=1), Pontchartrain (n=2), and Yarbrough (n=); the Pontchartrain and Yarbrough dart points are of Late Archaic manufacture (ca. 5000-2500 years B.P.). The Gary, Godley, and Kent dart points are temporal diagnostics of the Woodland period (ca. 2500-1150 years B.P.) in this part of the Pineywoods.

Most of the arrow points are made on local lithic raw materials (83 percent)—among them petrified wood, quartzite, and local earth-toned cherts—but 17 percent are made on non-local cherts. One arrow point fragment is made from a bluish-green glass.



The oldest arrow point styles in the arrow point assemblage include Friley (n=5) and Scallorn (n=1) points, and these may have been manufactured during late Woodland period times (ca. A.D. 700-900), when arrow points first began to be made in East Texas. These are followed by ca. A.D. 900-1200 arrow point styles—the Alba (n=1) and Colbert (n=2) types. There are two Bonham arrow points in the assemblage, and these are considered likely to date from ca. A.D. 1200-1400, indicating some use of the Spradley site during the Middle Caddo period. A Late Caddo arrow point type in the assemblage is the Bassett point (n=3). The majority of the arrow points are thought to be associated with the principal Caddo occupation, one dating to early Historic period times. This includes 23 Perdiz points, cf. Perdiz points (with a rounded or flat contracting stem, often unifacially manufactured, n=8), cf. Turney (a triangular form with a slight concave base, n=4), and a single Cuney point. The one bluish-green glass arrow point fragment also is part of this component.

On Historic Caddo sites in East Texas, triangular arrow point forms are predominant on sites from the Sabine River north to the Red River, while Perdiz, Cuney, and Turney arrow points occur almost exclusively on Historic Caddo sites in the Neches and Angelina river basins. At the Spradley site, Perdiz and cf. Perdiz points comprise 86 percent of the arrow points in the Historic Caddo period component, compared to 11 percent cf. Turney arrow points, and 3 percent that are Cuney points. The proportion of Perdiz points at the Spradley site is much more like the assemblage at the Deshazo site (96 percent of all the arrow points are Perdiz) than at the younger 18<sup>th</sup> century Henry M. settlement, where only 8.3 percent are Perdiz points. Instead, at the Henry M. site, Turney and triangular Fresno points represent 67 percent of the arrow point assemblage, compared to only 1.6 percent at the Deshazo site and 11 percent at the Spradley site. Similarly, Cuney points are relatively abundant at Henry M., accounting for 25 percent of the assemblage, but only between 2.4-3 percent of the arrow points at the Deshazo and Spradley sites. In any events, these changes in arrow point styles suggest that there were rapid changes in the style and use of arrow points over time in the early years of contact between Europeans and Caddos in East Texas.

The arrow point preforms are ovoid to triangular-shaped, and generally they are unifacially flaked. The form of three of the preforms suggest they were preforms abandoned in the course of manufacturing either Perdiz or Bassett points.

The ground stone tools from the Spradley site include manos (n=4), mano-pitted stones (n=3), pitted stones (n=2), and grinding slab fragments (n=3). More than 90 percent of the ground stone tools are from excavation units in the northwestern part of the site.

There are 40 body sherds from sandy paste Goose Creek Plain, *var. unspecified* vessels (see Story 1990) in the assemblage from the Spradley site. These are part of the Woodland period Mossy Grove culture occupation of the site that occurred sometime between ca. 500 B.C.-A.D. 800. The sherds are from vessels (probably jars) made with a non-tempered and locally available sandy clay. One vessel sherd has two drilled suspension holes, indicating the vessel had been suspended during part of its use life.

The remaining 8806 sherds from the Spradley site excavations are from plain wares, utility wares, and fine wares. The plain wares comprise 52 percent of the collection; 37 percent of the rim sherds are from plain vessels. Sherds from utility ware vessels account for 37 percent of the assemblage, as well as 37 percent of the rims, and fine wares only account for 10.5 percent of the sherds from the site; fine ware rims represent, however, 25 percent of the assemblage. The assemblage has a plain/decorated sherd ratio of 1.12, a brushed to plain sherd ratio of 0.51, and a brushed to other wet paste sherd ratio of 2.68. Brushed marks are present on 56.6 percent of the decorated sherds (n=4156).

Sherds that compare favorably to a number of types known to occur on other Neches-Angelina River basin ancestral Caddo sites of late Frankston phase age (ca. A.D. 1560-1680), or date to the early part



of the Allen phase (ca. A.D. 1680-1720), were identified in the Spradley site assemblage. They include: Hume Engraved, Keno Trailed, Killough Pinched, King Engraved, La Rue Neck Banded, Lindsey Grooved, Maydelle Incised, Patton Engraved, Poynor Engraved, a Poynor-Patton Engraved hybrid, and Spradley Brushed-Incised. Sherds from Patton Engraved and Spradley Brushed-Incised, both Allen phase types, are most common in the Spradley site assemblage.

The ceramic sherds from the Spradley site are from vessels tempered primarily with grog or burned bone. Grog occurs in 56 percent of the sherds, with the highest proportions in the utility wares (61 percent), while bone temper is present in 35 percent of the sherds; the highest proportion of bone use is in the fine wares (41 percent). Crushed hematite is present in 7 percent of the sherd sample, with the highest proportion of this temper present in the fine wares. Vessels made with shell temper are from non-locally produced wares, likely made by Caddo groups along the Red River to the northeast in Northwest Louisiana and Southwest Arkansas. Only 0.7 percent of the sherds in the sample have shell temper.

The majority of the sherds from the plain ware, utility ware, and fine wares from the Spradley site are from vessels fired in a reducing or low oxygen environment in an open pit fire; about 50 percent of these were cooled in the open air. Only 21.5 percent of the sherds are from vessels that were fired in an oxidizing or high oxygen fire, and another 8.0 percent are from vessels that were incompletely oxidized during firing. Finally, 1.9 percent have evidence in sherd cores of smudging, sooting, and/or refiring. The ceramic vessels at the Spradley site tend to be thin-walled, with mean rim sherd thickness ranging from 5.6 mm (plain ware), 6.7 mm (utility ware), and 5.6 mm for the fine wares. Body wall thickness across all three wares ranges from 6.0-7.3 mm. Measured base sherds have a mean thickness of 10.3 mm. Vessel forms include jars (among the utility wares), as well as bottles, bowls, carinated bowls (including globular carinated bowls), and vessels with rim peaks, probably compound bowls. Rim sherds tend to be direct or freestanding (n=169) and another 49 have an everted rim. Lips are primarily rounded (n=200), but others have a flat lip (n=18), and others have exterior folded lips (n=78).

There are a number of decorative classes in the utility wares. Sherds with brushed marks (or brushed marks with either associated incised or punctated decorative elements) dominate these wares, accounting for 71 percent of the utility wares. About 48 percent of the utility ware rim sherds have brushing marks. A number of the brushed-incised sherds are from Spradley Brushed-Incised vessels that have parallel brushing with overlapping straight incised lines opposed or perpendicular to the brushing. Patton Engraved is the dominant fine ware type at the Spradley site. These sherds have engraved lines with various orientations that have tick marks on the lines, usually excised tick marks, but also linear tick marks. The frequency of curvilinear, horizontal, and parallel engraved lines with tick marks suggests that *var. Freeman*, *var. Allen*, and *var. Fair* of Patton Engraved are present in the Spradley site fine wares. Patton Engraved, *var. Freeman* is the earliest of the varieties, likely dating to the late 17<sup>th</sup> century, while *var. Allen* is a slightly later Patton Engraved variety, perhaps dating from the early 18<sup>th</sup> century.

In comparison with other contemporaneous Allen phase sites in Nacogdoches County, namely the Henry M. and Deshazo sites, the Henry M. and Deshazo ceramics are primarily grog-tempered (83-90.4 percent). Bone-tempered pottery, conversely, is much more abundant at the Spradley site, suggesting the existence of a different tradition of ceramic technology and manufacture there when compared to the wide-spread use of grog temper at the two Bayou Loco sites. The closest ceramic comparisons between the Spradley site and other known Nacogdoches County historic Caddo sites is with 41NA223, also on Bayou Lanana; Bayou Loco and Angelina River sites are dominated by brushed utility wares. In the case of the Bayou Loco sites, they can be divided into two groups based on the relative proportion of brushed wares, one group with proportions ranging from 43-48.7 percent and the other with proportions between 59.8-69.4 percent; and the Lanana Creek Caddo sites (including the Spradley site), Legg Creek sites,

and Attoyac Bayou sites are part of a different local ceramic tradition, where brushed pottery is much less important in the utility wares and in the overall ceramic assemblage, particularly in Caddo sites on Attoyac Bayou and Bayou La Nana Creek.

These findings make clear that there are distinct spatial groupings of Allen phase sites in Nacogdoches County: Group I on Bayou La Nana (including the Spradley site), Group II on the lower Bayou Loco, Group III on the upper part of Bayou Loco and other streams draining into the Angelina River, Group IV includes sites on Bayou Loco and Legg Creek, and a single site (41NA67) near the confluence of Attoyac Bayou and the Angelina River. Most ceramic groups represent the core of known Hasinai Caddo ceramic assemblages in the Angelina River basin, or linked with the Nasoni Caddo and Mission Nasoni (1716-1730). This group in turn is stylistically similar in its utility wares to mid-Angelina River basin sites on Legg Creek, while other mid-Angelina River basin sites (King Creek) are stylistically similar to both Bayou Loco and Bayou La Nana assemblages. These latter groups may be affiliated with both Hainai and Nacogdoche Caddo groups living in this part of East Texas throughout the 18<sup>th</sup> century, with the Spradley site occupation most closely affiliated with the Nacogdoche. It is our opinion, that these defined ceramic group represent different but clearly related and interacting social groups or communities of Caddo peoples living in the Angelina River basin in historic times.

Further archaeological research concerning the Spradley site excavations remains to be completed. This includes the reporting of the excavations themselves, including the methods employed in the work, the character of the archaeological deposits in the different parts of the site, and a detailed presentation of identified features documented in the work. Also still to be completed is the analysis of the recovered lithic debris at the Spradley site, the plant and animal remains found in the archaeological deposits, and a full accounting and analysis of the 18<sup>th</sup> century European artifacts found there. We hope that this work can be completed in short order, so that between this publication and future publications, a comprehensive discussion of the archaeological investigations at the early 18<sup>th</sup> century Historic Caddo settlement at the Spradley site on Bayou La Nana in Nacogdoches County, Texas, will be available to professional and avocational archaeologists and the interested public.

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