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# Paleoindian to Middle Archaic Projectile Points from East Texas

*Timothy K. Perttula*

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## INTRODUCTION

This article discusses and describes a number of distinctive Paleoindian to Middle Archaic projectile points from East Texas, centering on the middle Sabine River basin (Figure 1) and the collecting areas roamed by Buddy Calvin Jones. It is likely that these points were collected in the 1950s and 1960s from the surface at a series of sites in the Sabine River valley (Patti Haskins, February 2013 e-mail communication).

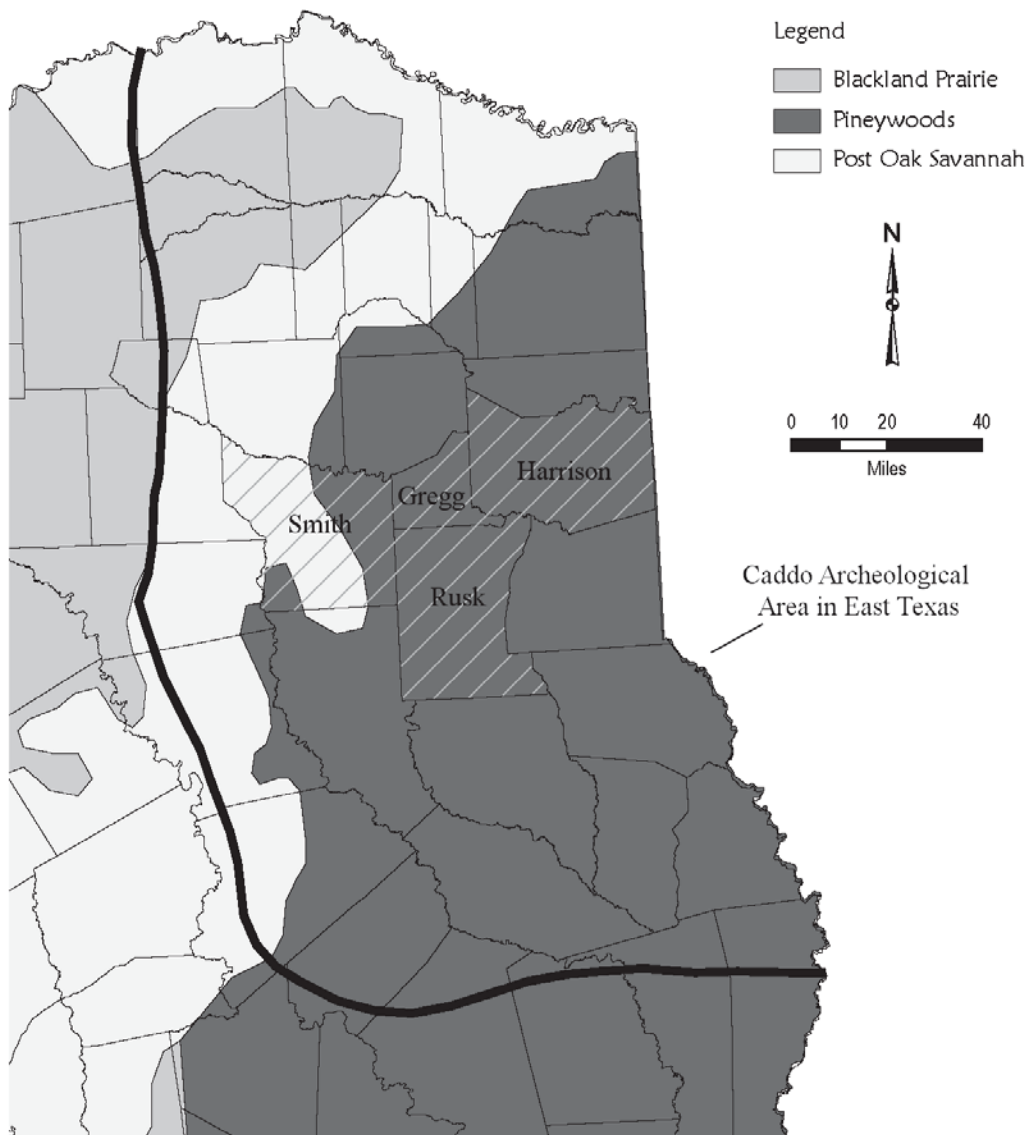


Figure 1. East Texas collecting area by Buddy Calvin Jones.

## CONTEXT

For the purposes of this article, the Paleoindian period in East Texas dates prior to 10,000 years B.P., perhaps beginning as long as 11,500 years B.P. or older, depending upon the age of any pre-Clovis era sites in the larger region. The Archaic period in East Texas lasts from 10,000 years B.P. to approximately 2500 years B.P., with the Early Archaic dating from ca. 10,000-8000 years B.P. (8050-6050 B.C.), the Middle Archaic ranging from 8000-5000 years B.P. (6050-3050 B.C.), and the Late Archaic dating from 5000-2500 years B.P. (3050-550 B.C.). The chronological ages and dates in this article are the uncalibrated calendar ages in years B.P.

The temporal ordering of Paleoindian and Archaic projectile points in East Texas draws upon the few available absolute dates from East Texas on Archaic sites, as well as the known temporal sequences of projectile points in surrounding regions, such as Southwest Arkansas (Schambach 1998; Trubitt 2009), Northwest and Northern Louisiana (Girard 2000; Girard et al. 2011; Anderson and Smith 2003; Rees 2010; Saunders 2010), the Missouri Ozarks (Ray et al. 2009), and Central Texas (Bousman and Oksanen 2012; Collins 1998; Collins et al. 2011; see also Turner et al. 2011), typically supported with series of radiocarbon dates from features and buried archaeological deposits. The age of the earliest well-established Paleoindian projectile point, the Clovis type, has been refined by Waters and Stafford (2007; see also Waters et al. 2011). This provisional ordering of projectile points also relied upon a recent cladistics study (see O'Brien and Lyman [2003] and Lipo et al. [2006] for considerations of cladistics and archaeological studies) of 93 Texas dart point types that has plotted the statistical affinities among the various types (Carpenter and Paquin 2010:158 and Figures 2 and 3). From these relationships, Carpenter and Paquin (2010:Figure 4) proposed hypothetical relationships between dart point types "based on overlap in temporal, spatial, and formal attributes."

In creating Figure 2, then, beginning in the Late Paleoindian period at ca. 10,500 years B.P., I employed the hypothetical relationships between types detected in the Carpenter and Paquin (2010) cladistics study, focusing only on those dart point types known to have been made and used at various times in the East Texas Paleoindian and Archaic (even if they were not included in Carpenter and Paquin [2010]), regardless of whether the spatial distributions of certain points (i.e., Evans, Pontchartrain, Epps, Rice Lobed, or Jakie Stemmed) suggested some types were common in the archeological record in one or more surrounding states. Known temporal ages of these additional project point types were used to place them in their best approximate age on Figure 2.

Based on these various lines of evidence, as well as the earlier suggested chronological sequences for East Texas dart points proposed by Story (1990:Figure 32) and Thurmond (1990:Table 8), the Paleoindian dart point sequence begins with the Clovis point (ca. 11,500 years B.P.), while the Early Archaic dart point sequence begins with Dalton and San Patrice points, although both point types were first made sometime prior to 10,000 years B.P. (Koldehoff and Walthall 2009; Ray et al. 2009) and are often considered to also be diagnostic of the Late Paleoindian period in the broader region. Recent radiocarbon dates from the Big Eddy site in southwest Missouri indicates both points were made and used until ca. 9800 years B.P. (Ray et al. 2009:160), in the early years of the Late Paleoindian-Early Archaic technological, subsistence, and settlement/mobility transition (cf. Bousman et al. 2002:989; Bousman and Oksanen 2012). Later Early Archaic points (ca. 9800-9000 years B.P.) include the Breckenridge, Scottsbluff, and Keithville types (Webb 2000:4), as well as later Pelican, Graham Cave, and Rice Lobed points (ca. 8500-8000 years B.P.).

Proposed early Middle Archaic points in East Texas include the Hidden Valley and Kirk types, as well as the Palmer type, although these are points that are not particularly common in East Texas dart point assemblages (e.g., Jones 1957; Rogers and Perttula 2004; Furman and Amick 2006; Turner 2006:Table 7). Between 6500-5000 years B.P., Middle Archaic points are suggested to include the Cossatot, Johnson, Jakie Stemmed, White River side-notched points (sometimes referred to as Big Sandy points, see Ray and Lopinot 2003), Morrill, Bell and Andice (or Calf Creek), and the distinctive blade-notched Evans point (see Figure 2).

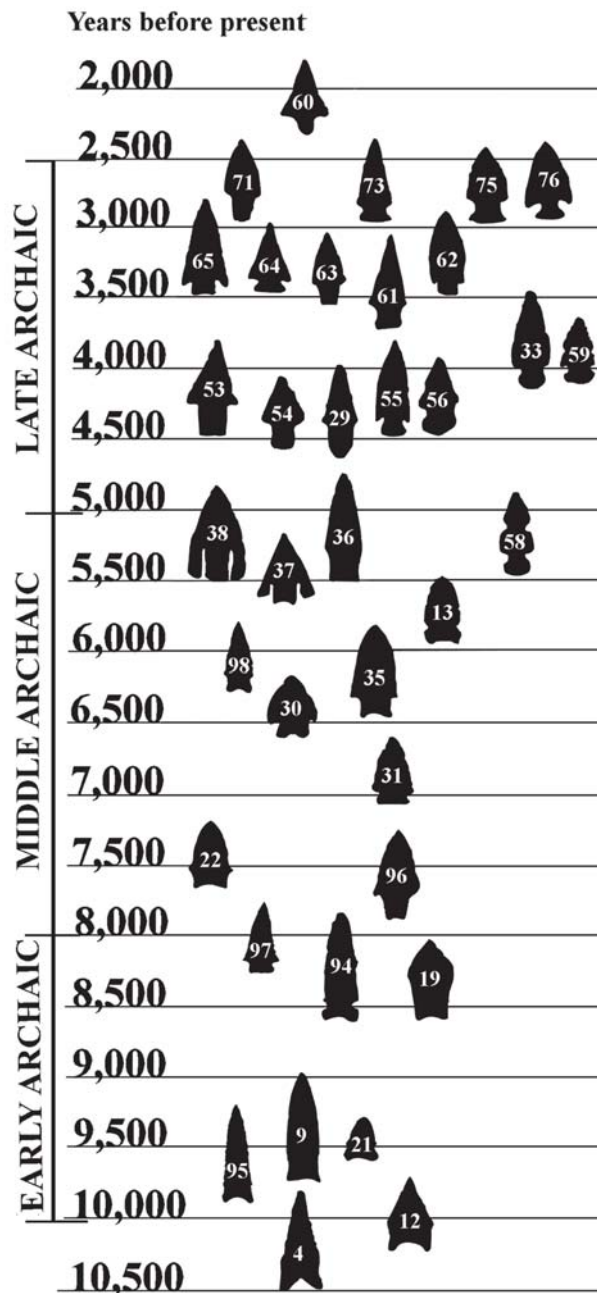


Figure 2. Proposed temporal ordering of dart points in the East Texas Archaic, ca. 10,000-2500 years B.P. (after Carpenter and Paquin 2010). Key to Projectile Point Types on Figure 2: 4. Dalton; 9. Scottsbluff; 12. San Patrice; 13. White River; 19. Pelican; 21. Keithville; 22. Kirk; 29. Wells; 30. Cossatot; 31. Palmer; 33. Palmillas; 35. Johnson; 36. Morrill; 37. Bell; 38. Andice; 53. Bulverde; 54. Carrollton; 55. Williams; 56. Trinity; 58. Evans; 59. Neches River; 60. Gary; 61. Yarbrough; 62. Pontchartrain; 63. Kent; 64. Ellis; 65. Marshall; 71. Dawson; 73. Godley; 75. Epps; 76. Motley; 94. Graham Cave; 95. Breckenridge; 96. Hidden Valley; 97. Rice Lobed; 98. Jakie. Figure drawn by Lance Trask, based in part on Carpenter and Paquin (2010).

## POINT TYPES

This sample ( $n=41$ ) of Paleoindian to Middle Archaic projectile points in the Buddy Jones collection includes examples from 10 different defined projectile point types, that have been found on sites in the region that have dated occupations that span the interval from ca. 11,500 years B.P. to 6000 years B.P. The most abundant projectile point is the Dalton type ( $n=8$ ), found on sites in eastern and east central Texas (Bousman and Oksanen 2012:Figure 9.20), the Trans-Mississippi South, including the Ozarks (Kay 2012), and much of the Mississippi River valley (Koldehoff and Walthall 2009:Figure 6.1), and side-notched Keithville points ( $n=4$ ); Anderson and Smith (2003:Figure 5.10) and Rees (2010:Figure 3.1) refer to them as San Patrice, *var. Keithville*. These points occur in association with San Patrice points (Webb et al. 1971). There are also many ( $n=12$ ) unidentified lanceolate basal fragments in the point sample.

## Clovis

The three Clovis points are made from cherts that are not local to East Texas. This includes a gray chert (Figure 3a), possibly from a Central Texas Edwards Formation source (see Waters et al. 2011:Figure 99), a lustrous gray chert with reddish-brown inclusions (Figure 4b), also possibly from a Central Texas source, and a dark gray chert (Figure 3b) that may have its source in the Johns Valley Formation in the Ouachita Mountains of Southeast Oklahoma (see Banks 1990); this material may also be found in Red River gravels. These points date from cal 13,100-12,800 years B.P. (Waters and Stafford 2007), and they are found on sites and localities across almost all parts of Texas, including East Texas (Bousman and Oksanen 2012:Figure 9.16).

The Clovis points have lateral and basal grinding and concave bases (Table 1), with flute scars on both faces. The flute scars range from 12-23 mm in length and 10-15 mm in width. Two of the three points have resharpened blades.

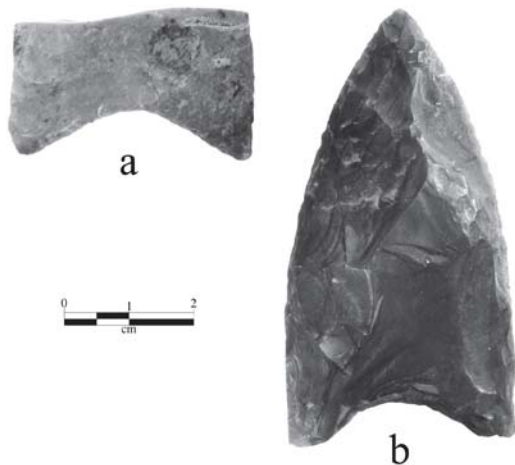


Figure 3. Clovis points: a, No. 1; b, No. 2003.08.162.

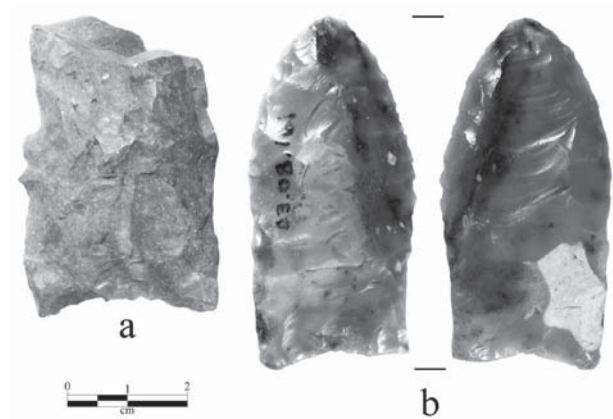


Figure 4. Unidentified lanceolate point and a Clovis point: a, unidentified lanceolate (No. 14); b, Clovis (No. 2003.08.161).

**Table 1. Projectile Point Attributes.**

No.	Type	RM	L (mm)	W (mm)	Th (mm)	SW (mm)	Base Shape	GR	RS
03.08.161	Clovis	g chert	54.9	35.0	7.1	-	concave	lt/ba	+
03.08.162	Clovis	Johns Valley chert	63.9	32.0	9.1	-	concave	lt/ba	+
1	Clovis	g chert	-	33.7	5.8	-	concave	lt/ba	?
5	Dalton	lg chert	-	29.5	6.7	-	concave	lt/ba	?
8	Dalton	lg chert	42.0	23.1	6.9	-	concave	lt/ba	+
13	Dalton	g chert	57.0	20.0+	6.2	-	concave	lt/ba	+ / beveled and impact fracture
15	Dalton	cg QTZ	30.8	20.9	6.5	-	concave	ba	+
16	Dalton	cg QTZ	-	23.9	6.3	-	concave	lt/ba	?
17	Dalton	lg chert	42.5	23.1	7.1	-	concave	lt	+
20	Dalton	dg-blu chert	37.9	22.0	7.9	-	concave	lt/ba	+ / serrated
25	Dalton	g-br chert	-	25.9	7.1	-	concave	lt/ba	?
24	cf. San Patrice	g chert	35.9	19.8	5.8	-	concave	ba	+
26	San Patrice	r jasper	26.9	25.1	4.5	17.9	concave	-	+
21	Keithville	b-y chert	32.0	28.0	6.7	-	concave	ba	+ / serrated
23	Keithville	br chert	32.9	26.1	7.2	20.2	concave	ba	+
27	Keithville	br jasper	26.9	19.1	5.1	16.2	concave	-	+
28	Keithville	PW	30.9	20.3	4.8	14.0	concave	ba	+

**Table 1. Projectile Point Attributes, cont.**

No.	Type	RM	L (mm)	W (mm)	Th (mm)	SW (mm)	Base Shape	GR	RS
22	Scottsbluff, Red River knife	br chert	41.5	24.2	6.6	21.1	straight- concave	ba	+/beveled
2	UID lanceolate	w chert	-	25.8	5.6	-	concave	lt	?
3	UID lanceolate	g-y chert	-	28.6	6.3	-	concave	lt/ba	?
4	UID lanceolate	lg NOV	-	23.3	7.1	-	concave	lt/ba	?
6	UID lanceolate	banded	-	29.9	6.9	-	concave	lt/ba	?
		g-br-lg chert							
7	UID lanceolate	w NOV	-	23.0	6.0	-	concave	lt/ba	?
9	UID lanceolate	lg chert	-	32.1	6.2	-	concave	lt	?
10	UID lanceolate	dg chert	-	28.9	4.7	-	straight	-	?
11	UID lanceolate	dg QTZ	-	26.7	5.0	-	concave	ba	?
18	UID lanceolate	g-dg	-	27.8	6.0	-	concave	ba	?
		chert							
18B	UID lanceolate preform	g chert	-	25.4	6.7	-	concave	-	?
19	UID lanceolate	g chert	-	19.3	5.1	-	concave	lt/ba	?
14	UID lanceolate (cf. Scottsbluff)	dg chert	-	29.0	11.2	-	concave	lt	?
12	Pelican	g chert	-	24.0	8.1	-	concave	la	?
29	Palmer	PW	27.3	22.0	6.1	16.1	concave	-	+
1B	Johnson	g NOV	19.8	26.8	7.0	21.0	concave	-	+
15B	Johnson	br chert	27.1	20.9	6.1	13.0	concave	ba	+
16B	Johnson	y NOV	28.9	20.9	8.7	17.5	concave	-	+
4B	Jakie	br jasper	15.1	24.3	6.6	15.9	concave	-	+
5B	Jakie	br jasper	24.0	19.0	6.9	16.0	concave	ba	+
8B	Jakie	dgb	16.9	19.2+	5.5	12.4	concave	-	+
		chert							
2B	White River	br chert	19.9	27.0	7.5	18.2	straight	-	+
3B	White River	br jasper	21.9	23.9	5.4	16.6	straight	-	+
13B	White River	bl chert	15.7	24.7	7.8	18.0	straight	ba	+

No.: Gregg County Historical Museum number; UID=unidentified; RM=raw material; cg=coarse-grained; r=red; w=white; g=gray; y=yellow; dg=dark gray; dgb=dark grayish-brown; lg=light gray; bl=black; blu=blue; br=brown; NOV=novaculite; QTZ=quartzite; PW=petrified wood; L=length; W=width; Th=thickness; SW=stem width; GR=grinding; lt=lateral; ba=basal; RS=resharpened; +=present; -=absent; ?=unknown



**Dalton**

There are eight Dalton lanceolate points in this sample of points (see Table 1). They have concave bases, with lateral and/or basal grinding, basal ears, and extensive blade resharpening and/or beveling (Figures 5-6, 7a; see also Figure 10j, below). One of the examples has very pronounced ears and shoulders (Figure 7a), similar to what has been named the Breckenridge Dalton (Kay 2012:Figure 10.3).

Six of the Dalton points are made from chert, primarily a gray chert, but one point is made from a dark grayish-blue chert of unknown source area (see Figure 5b); both kinds of cherts are non-local resources in East Texas. Two other Dalton points (see Figure 5a and Figure 6a) are made from a coarse-grained light gray quartzite that closely resembles a quartzite found in the Glover Sandstone Formation in the Neches River basin in East Texas (Pertulla and Nelson 2006). Dalton points occur widely in East Texas and in the Trinity, upper Brazos, and Colorado River basin in East Central and Central Texas (Bousman and Oksanen 2012:Figure 9.20). Dalton and San Patrice points are generally considered contemporaneous in sites on the Southern Plains and in the Trans-Mississippi South, dating from ca. 10,500-9800 years B.P. (Ray et al. 2009; Bousman and Oksanen 2012), at the end of the Late Paleoindian period and the beginning of the Early Archaic period.

**San Patrice**

The two probable San Patrice points in this collection resemble the *var. St. Johns* defined by Webb et al. (1971:13-14 and Figure 4). They have concave bases, one is basally ground, and both have resharpened blades (Figure 7b-c). One of the points is made from a red jasper (Figure 7b), while the other is made from a light gray chert (Figure 7c).

San Patrice points date from ca. 10,500-9800 years B.P., at the end of the Paleoindian period and the beginning of the early Archaic period (Ray et al. 2009; Bousman and Oksanen 2012), broadly contemporaneous with the Dalton lanceolate points. They occur widely across East Texas (Bousman and Oksanen 2012:Figure 9.19). At Horn Shelter, San Patrice and Scottsbluff points were found in layer 5F to layer 7 (Bousman and

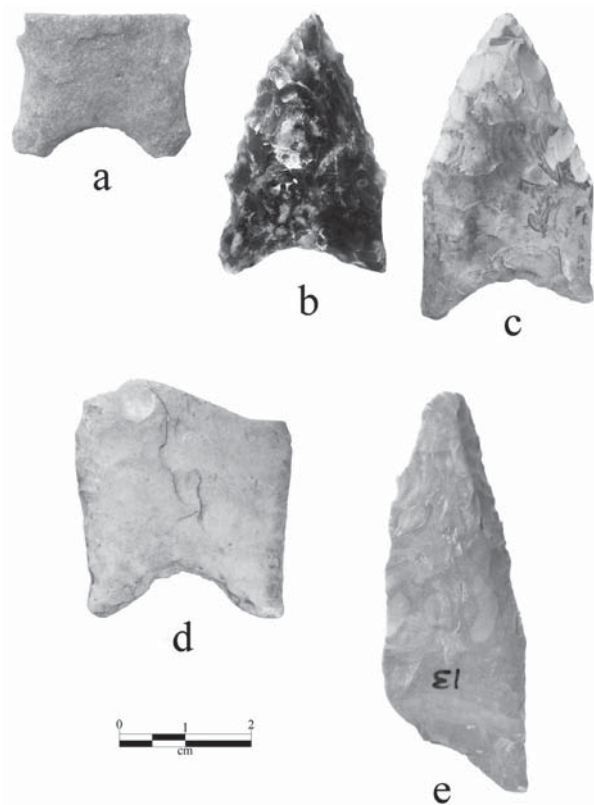


Figure 5. Dalton points: a, No. 16; b, No. 20; c, No. 17; d, No. 5; e, No. 13.

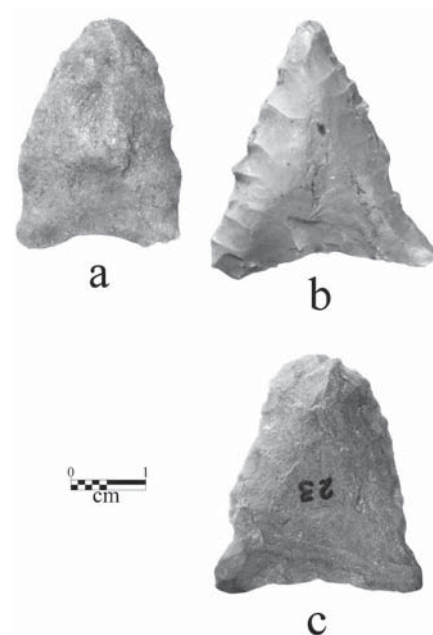


Figure 6. Dalton and Keithville points: a, Dalton (No. 15); b, Keithville (No. 21); c, Keithville (No. 23).



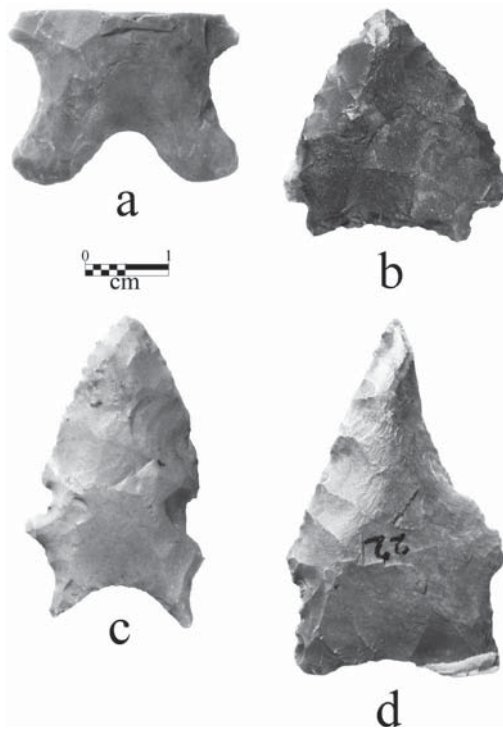


Figure 7. Dalton, San Patrice, and Scottsbluff points: a, Dalton (No. 25); b, San Patrice, var. *St. Johns* (No. 26); c, cf. San Patrice, var. *St. Johns* (No. 24); d, Scottsbluff/Red River Knife (No. 22).

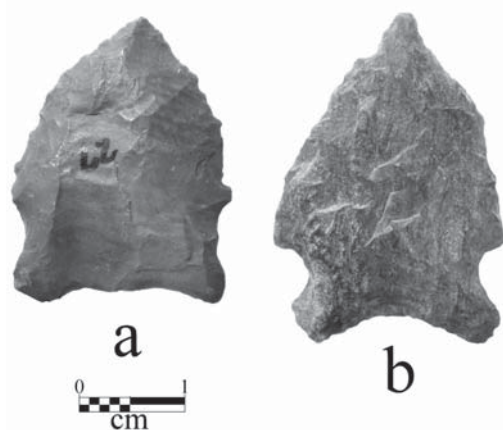


Figure 8. Keithville points: a, No. 27; b, No. 28.

Oksanen 2012:Figure 9.4); layer 5G has an uncalibrated radiocarbon age range of 9980-9500 years B.P. (Bousman and Oksanen 2012:204).

San Patrice projectile points and associated tools are typically manufactured on local raw materials (Saunders and Allen 1997:3; Webb et al. 1971), at least in sites thought to be situated in the woodlands (See Jennings 2008a, 2008b). In plains San Patrice sites, about 21% of the San Patrice points are made from exotic raw material sources compared to only 6% of the San Patrice points from woodland contexts (Jennings 2008a:Table 7). There is a marked preference for the use of non-local lithic raw materials in other Late Paleoindian-Early Archaic chipped stone tools.

### *Keithville*

The four Keithville, or San Patrice, var. *Keithville* points have shallow side notches, concave bases with basal grinding, and resharpened and serrated blades (Figure 8a-b, see also Figure 6b-c and Table 1). One of the points has a bifacial scraper edge along its resharpened blade (see Figure 6c). The points are made from local lithic raw materials, including petrified wood, a brown chert, and a brownish-yellow chert, as well as a brown jasper (Figure 8a), found in Red River gravel sources.

Keithville points are associated with San Patrice points (see Webb et al. 1971:Figure 6). As such, they are considered Late Paleoindian-Early Archaic (ca. 10,500-9800 years B.P., Ray et al. 2009; Bousman and Oksanen 2012) diagnostic chipped stone tools.

### *Scottsbluff*

One brown chert lanceolate point is a Late Paleoindian Scottsbluff (see Figure 7d). It has been unifacially resharpened and beveled, and conforms in form and apparent function (i.e., cutting, scraping and sawing, Turner et al. 2011:160) to the Red River knife defined by Johnson (1989). The point has a straight stem and a concave base, with basal grinding (see Table 1).

### *Late Paleoindian lanceolates*

There are 12 Late Paleoindian lanceolate point fragments (ca. 10,500-10,000 years B.P.) in this sample of points from the Buddy Jones collection (Figures 9a-b and 10a-i); one of these is a preform (Figure 10i). These lanceolate point fragments have concave and thinned (but not fluted) bases as well as lateral and/or basal grinding (see Table 1). These points may be fragments from completed Dalton, Meserve, and/or Golondrina points, but these basal fragments also resemble lanceolates from the Scottsbluff site (Knudson 2013:Figure 11.4c) as well as Plainview points (Knudson 2002:Figure 7.12).

The lanceolate point fragments are made primarily from a variety of non-local cherts (n=9), ranging in color from white, to gray, to dark gray, probably from Central Texas and Ouachita Mountains source areas. There are also lanceolate point fragments that are dark greenish-gray Southeast Oklahoma Ouachita Mountains quartzite (n=1, see Figure 9a) and white (see Figure 10b) and light gray (see Figure 10c) Ouachita Mountains novaculite.

One unidentified lanceolate point (see Figure 4a) may be a fragment of a Scottsbluff point as it has a broad and square and relatively thick stem, slightly concave, with lateral grinding (see Table 1). The point was broken by an impact fracture. It is made from a non-local dark gray chert with white flecks.

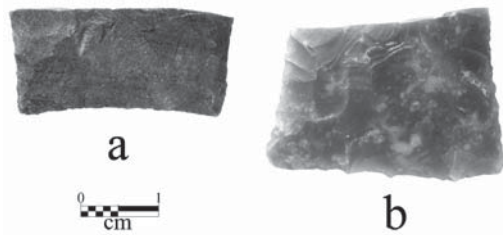


Figure 9. Late Paleoindian lanceolate point fragments: a, No. 11; b, No. 10.

### *Pelican*

A broad and expanding lanceolate base fragment is identified as a Pelican point (Figure 11). The base is slightly concave, with lateral grinding (see Table 1). The point is made from a non-local gray chert probably from a Central Texas source area. Anderson and Smith (2003:277-278) suggest that the Pelican point is a Late Paleoindian form dating from ca. 10,800-10,000 years B.P., related to and/or found in association with San Patrice (see Webb et al. 1971:Figure 7a-b) and Dalton points.

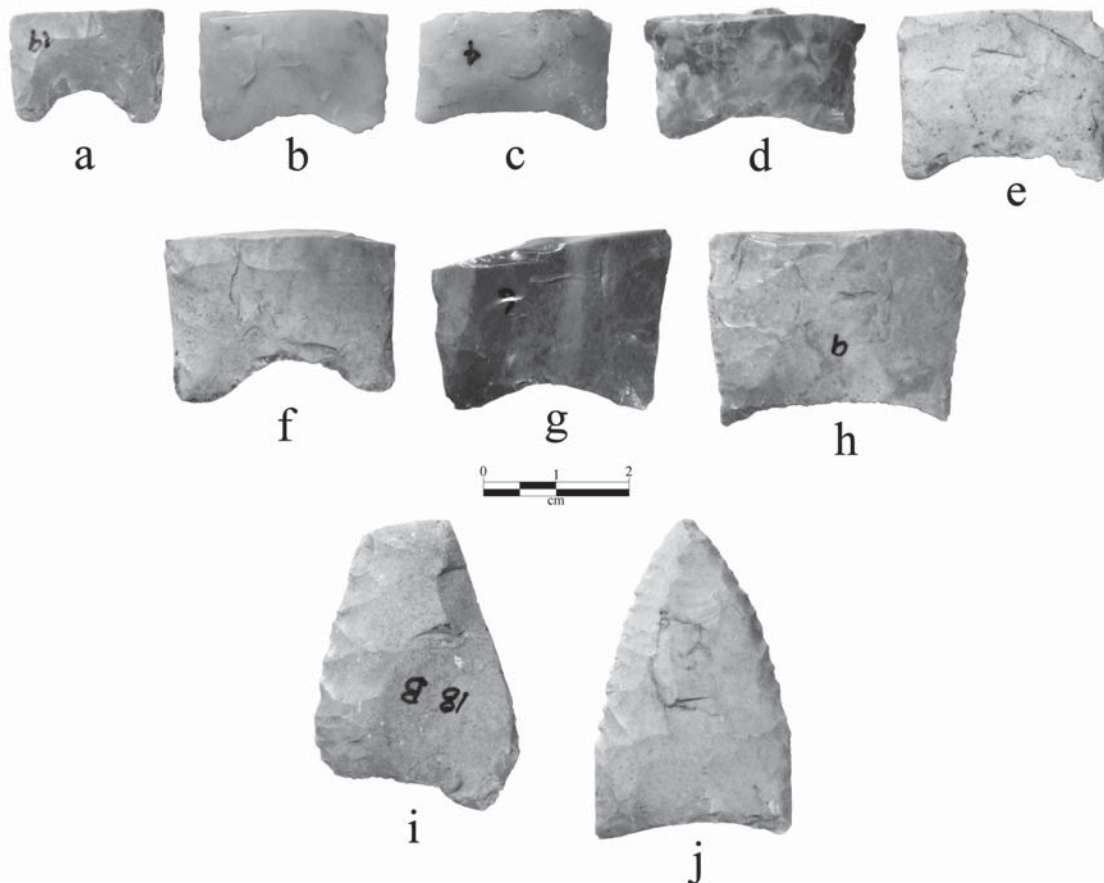


Figure 10. More Late Paleoindian lanceolate point fragments and a Dalton point: a, No. 19; b, No. 7; c, No. 4; d, No. 18; e, No. 2; f, No. 3; g, No. 6; h, No. 9; i, No. 18B (preform); and j, Dalton (No. 8).



Figure 11. Pelican projectile point (No. 12).

### Palmer

The one Palmer point (Figure 12), dating from perhaps ca. 7000 years B.P., is made from a local petrified wood. Anderson and Smith (2003:276) include Palmer and Kirk Corner-Notched together as basically the same type, and they place the forms in an early corner-notched horizon that dates from 9500-8000 years B.P., in the Early Archaic. Bousman and Oksanen (2012:Figure 9.5) provide calibrated dates on Kirk points from Dust Cave, with two different summed probability distributions (calculated using OxCal 4.1.7) that range from ca. 10,200-9800 calibrated years B.P. and 8000-7600 calibrated years B.P.

The Palmer point has shallow corner notches and small barbs, and a shallow concave base. There is no grinding on the stem (see Table 1).

### Jakie

The three Jakie points, corner-notched with an expanding stem and shallow concave bases, are made from raw materials whose sources lie in the Ouachita Mountains in Southeast Oklahoma and that are also found in stream gravels along the Red River: a dark grayish-brown chert probably from the Johns Valley Formation (Figure 13a) and brown jasper (Figure 13b-c). Each of the three points has a blade that has been extensively resharpened into a unifacial scraper edge (see Table 1).

Ray et al. (2009:172-173) suggest that the Jakie point dates to the early part of the Middle Archaic period (in the western Ozark Highlands), from ca. 8000-7000 years B.P.



Figure 12. Palmer point (No. 29).

### Johnson

Two of the three Johnson points in this collection are made from Ouachita Mountains novaculite, either gray (Figure 14a) or yellow (Figure 14c). The other Johnson point is made from a local brown chert (Figure 14b). These Johnson points have broad but short stems, concave bases, and short barbs (if they have not been removed through resharpening), and the blades have been resharpened into unifacial (Figure 14c) or bifacial scraper edges (Figure 14a-b) (see Table 1).

Trubitt (2009:78 and Table 4) reports that Johnson points in Southwest Arkansas and Northwest Louisiana have been recovered in components that may date from ca. 7140-6640 years B.P. (or 8050-7450 cal. years B.P.) This includes radiocarbon dates from the Conly site in Northwest Louisiana that range from  $7140 \pm 160$  and  $6650 \pm 40$  years B.P.; two possible Johnson points made from novaculite were found at the site (Girard et al. 2011). An OCR date of  $7039 \pm 211$  B.P. from 3MN496 has also been obtained from a soil associated with a Johnson point (Trubitt 2009:78).

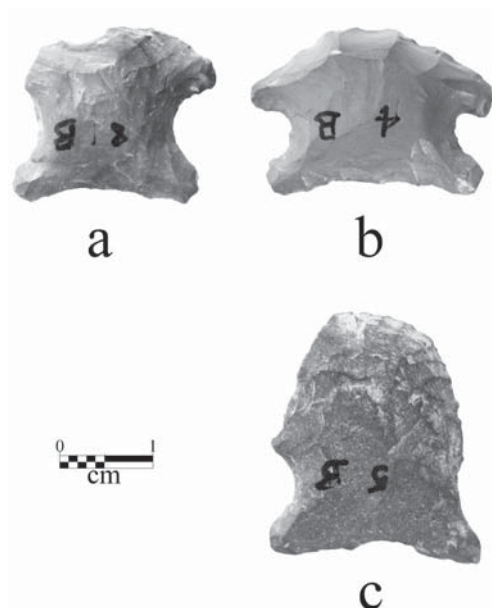


Figure 13. Jakie points: a, No. 8B; b, No. 4B; c, No. 5B.

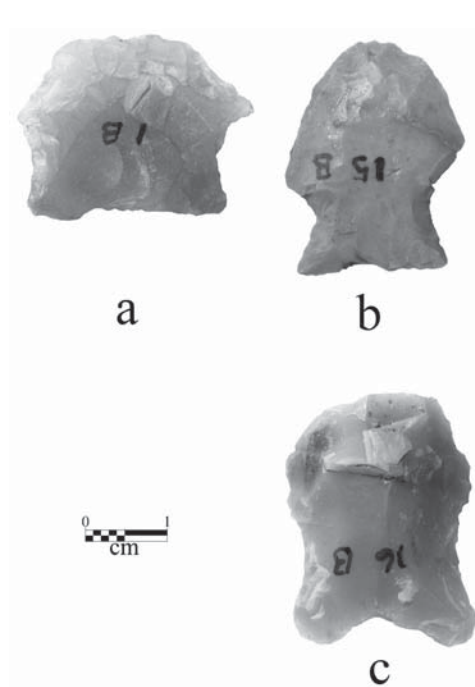


Figure 14. Johnson points: a, No. 1B; b, No. 15B; c, No. 16B.

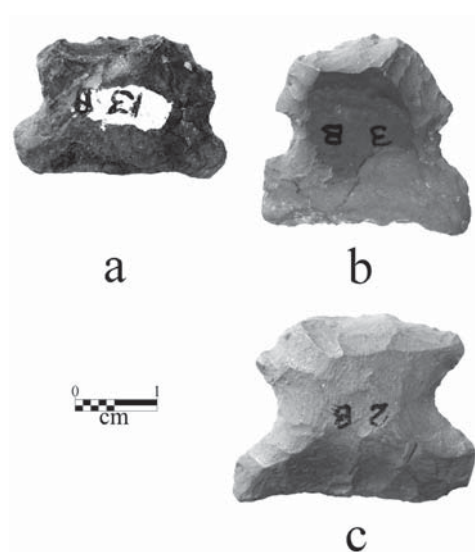


Figure 15. White River points: a, No. 13B; b, No. 3B; c, No. 2B.

relatively sparse Early and Middle Archaic archaeological record, in conjunction with the dispersion of artifacts on many landforms and different settings within the region, seems to indicate that the aboriginal groups at this time were very mobile hunters and gatherers consuming a diversity of plant and animal foods rather than specialized hunters of extinct megafauna or bison herds. Johnson (1989) also suggested that some of the early Archaic archaeological remains (Plainview and Scottsbluff projectile points, and Cody knives) from the region are a result of Plains Early Archaic (ca. 10,000-9,000 years ago) groups that moved into

### White River

The three White River points have wide side notches, with squared barbs, and straight to slightly concave bases (Figure 15a-c; see Table 1). The blades have been extensively resharpened to form unifacial scraper edges. One of the White River points is made on a Ouachita Mountains black chert with a brownish cortex (Figure 15a), probably Big Fork chert, another is on a brown jasper (Figure 15b), and the third is made from a local brown chert (Figure 15c).

White River points have been found in radiocarbon-dated contexts in the Southwest Missouri Ozark Highlands that range from 6100-6190 years B.P. (Ray et al. 2009:174). In Southwest Arkansas, Trubitt (2009:78) reports that White River points have been found on sites with radiocarbon dates that range from 5750-6010 years B.P. OCR dates from 3HS195 with side-notched dart points range from 5674-6051 B.P. (Trubitt 2009:78).

### CONCLUSIONS

The projectile points discussed herein are evidence of the long-term aboriginal use of East Texas from ca. 11,500-6000 years B.P., in the Paleoindian to Middle Archaic periods. This period of time is not well known in the region, primarily because of a dearth of intact buried archaeological sites or single component sites as well as the lack of development of a chronology based on well-controlled absolute dating of features or buried occupation zones in single component or multi-component stratified sites. The earliest points in this sample from the Buddy Jones collection, the Clovis lanceolates, date from ca. 13,100-12,800 cal. years B.P. (Waters and Stafford 2007), while the latest, the side-notched White River dart point, ca. 6800-7100 cal. years B.P. (Ray et al. 2009:174).

Although not well understood in the East Texas archaeological record, this was a lengthy period of cultural change for the series of hunter-gather forager groups that occupied this and surrounding regions. The most intensive Paleoindian settlement of the Southeast U.S. took place in the resource-rich valleys of the Mississippi River and its principal tributaries (such as the Red River) (Anderson 1996a, 1996b). From there, groups settled throughout the wooded Southeast and East, with concentrations at 250-400 km intervals, indicating the scale of movement of these highly mobile foragers. The



parts of East Texas, during periods when grassland habitat spread eastward, to exploit the plains resources (such as bison) found there. However, the wide distribution of Scottsbluff projectile points in East Texas (see Bousman and Oksanen 2012:Figure 9.19) and adjoining parts of the Trans-Mississippi South cast doubt on the Plains origins of the aboriginal peoples that made this style of lanceolate point.

Much of the period between ca. 8000-5000 years ago was drier than today (Bousman and Oksanen 2012:Figure 9.2), with apparent rapid and punctuated reductions in biomass as well as the local expansion of prairie habitats along the western margins of the region. Nevertheless, drier conditions and changing vegetation conditions did not preclude occupations during these periods. While the archaeological data are still rather limited in the Middle Archaic, it appears that group mobility remained high for these hunting-gathering foragers (who utilized hardwood nuts, deer, shellfish, turtles, and small mammals) during the Middle Archaic. At the Conley site (16BI19) in northwestern Louisiana, a cal. 7100-8300 year old occupation, the Middle Archaic groups there “focused on deer and slack water aquatic species, but a wide range of resources, from varied microenvironments, was exploited” (Girard 2000:63; see also Girard et al. 2011). Hickory nuts and acorns were also common in the archaeological deposits.

Group territories were large and poorly defined, with most sites the product of repeated and recurrent occupations by small groups. Anderson (1996a) suggests that such Middle Archaic groups had highly mobile foraging adaptations along the Red River, the central Sabine River, and in interior uplands away from major drainages, with expedient lithic technologies. Most sites of this age were briefly used, but tended to concentrate in the larger drainages within the region. Sometime during the Middle Archaic period, fairly substantial and extensive occupations are recognized within the major basins in the region, with a rather limited use of smaller tributaries and headwater areas. Components of this period are open camps dominated by hunting tools and generalized cutting/scraping tools, debris, ground stone tools, and cores.

Burned rock features (possible hearths, ovens, and cooking pits?) and burned rock concentrations are present in dated late Middle Archaic contexts at a few sites in the Sulphur River drainage, suggesting that an important activity was the cooking and processing of plant foods, but mainly by small groups for short-term use (Fields et al. 1997:90). A single burned rock feature at the Unionville site (41CS151) has a calibrated age range of 6217-5924 B.P., during the latter part of the Middle Archaic period (Cliff et al. 1996).

Mound complexes of late Middle Archaic age in northern Louisiana at this time also suggest the development of more complex hunter-gatherer societies in certain parts of the Trans-Mississippi South (see Saunders 2010; Saunders et al. 1997; Saunders and Allen 1997). Such cultural developments apparently did not occur in East Texas.

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