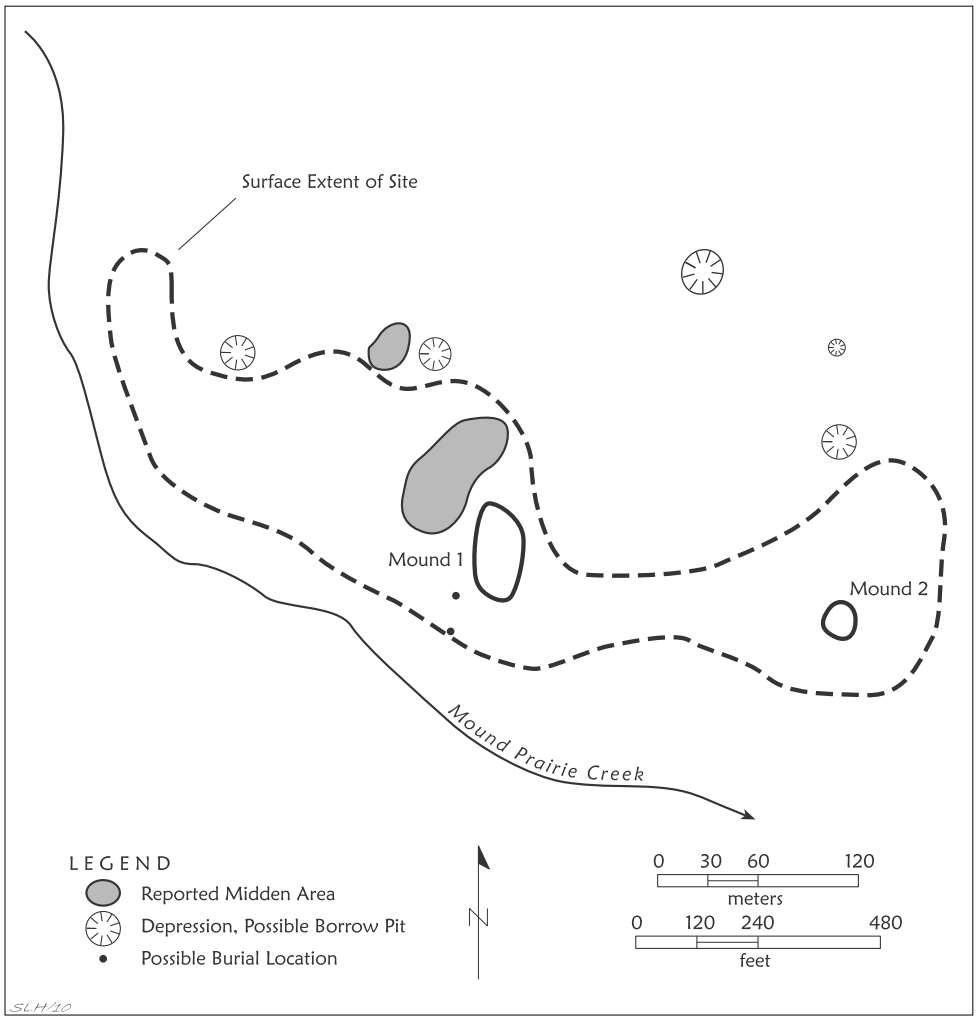
Journal of Northeast Texas Archaeology



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Cover art: Map of the Pace McDonald site (41AN51), based on a 1978 sketch map by Ulrich Kleinschmidt and Pete Thurmond, and other information in the Texas Archeological Research Laboratory, The University of Texas at Austin files.

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The Marcus Kolb Site (41CE438), Cherokee County, Texas

Timothy K. Perttula

INTRODUCTION

In 2001, Claude McCrocklin conducted metal detecting and test excavations at an historic 19th century site in the upper Neches River basin of East Texas. Based on the findings from that work, unreported until now, McCrocklin believed that this site was occupied by the East Texas Cherokee (see Everett 1990). This site, the Marcus Kolb site (41CE438) (officially recorded in 2009 by Mark Walters), "was confirmed by the artifacts identical with those found on Lost Prairie in Arkansas" (June 8, 2009 personal communication from Claude McCrocklin to Mark Walters). The Lost Prairie sites referred to by McCrocklin are the early 19th century Lost Prairie Cherokee sites along the Red River in southwestern Arkansas investigated by McCrocklin (1992:32-41). The Marcus Kolb site is within the limits of the proposed 1836 treaty land grant between the Texas Cherokee and the Republic of Texas (Figure 1).

SITE SETTING AND INVESTIGATIONS

The Marcus Kolb site is primarily situated on an upland ridge (500-510 feet amsl) overlooking an unnamed and intermittent tributary that drains west to Gum Creek, about 2 km away; there are archaeological deposits along the northern slope of the ridge (490 feet amsl). Gum Creek drains southward into Tails Creek, which is a southward-flowing tributary to the Neches River. The confluence of Tails Creek with the Neches River is about 20 km south of the site.

Through both metal detecting and hand excavations of an unknown size (nor is their precise location known with any accuracy on the landform, though they were primarily on the upland ridge landform), McCrocklin identified on the upland ridge a "main garbage site" and "second digging site" to the west (at the western tip of the ridge), as well as an area of ceramics east of the main garbage site, along with artifact finds in a barn area at the eastern end of the ridge. At the base of the ridge, down slope from the "main garbage" area, was a third area of archaeological deposits, identified by McCrocklin as a "potential kitchen site."

19TH CENTURY ARTIFACTS FROM THE MARCUS KOLB SITE

A total of 64 19th century artifacts are in the landowner's collection from the Marcus Kolb site, including pearlware, porcelain, whiteware, and stoneware sherds (n=33), comprising 52% of the small collection, a few snuff and bottle glass sherds (n=12, 19%), and an assortment of iron, brass, and copper-based artifacts (n=19, 30%). The relative proportion as well as the overall quantity of metal artifacts in the assemblage is biased to an unknown extent because of the intensity of the metal detecting work compared to the amount of controlled hand excavations across the site. Without information on the size and depth of the hand excavations or whether any of the archaeological deposits in those areas were screened, it is currently impossible to determine the density of artifacts across the Marcus Kolb site, or to estimate the intensity of the 19th century occupation. No information is available on the provenience of these artifacts within the site (with one exception, Table 1), unfortunately, nor which kinds of artifacts may have been found together at the site.

The range of both kitchen/domestic (i.e., ceramic artifacts and bottle glass sherds, as well as iron forks and scissor fragments and part of a clothes' iron), personal (brass and iron buttons), and architectural (cut nails) artifacts collected in metal detecting and limited hand excavations suggest that the occupation of the Marcus Kolb site was domestic in character, perhaps a farmstead with wood framed structures or a log cabin, occupied by a family or

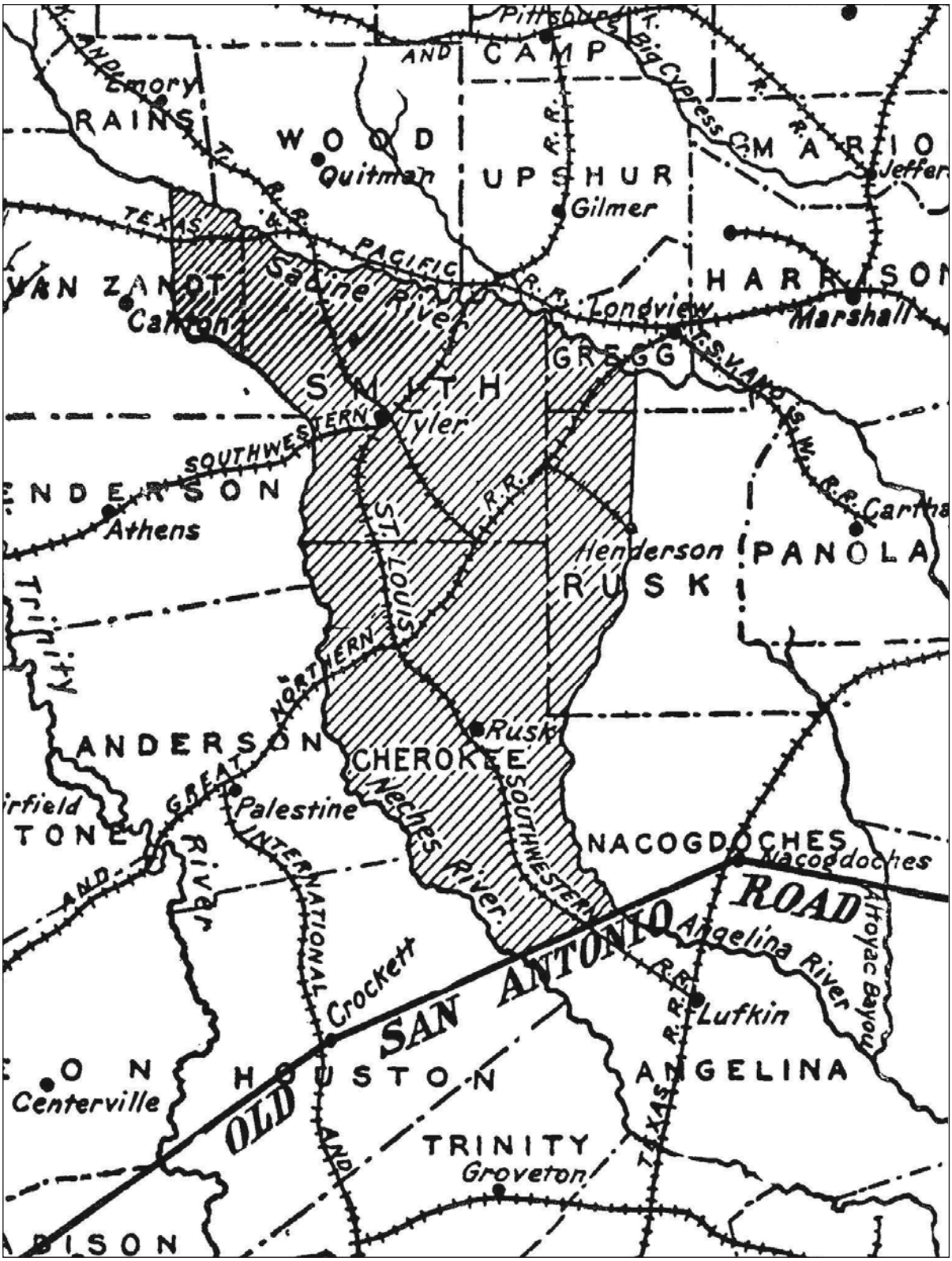


Figure 1. 1836 Cherokee land grant proposed in treaty with the Republic of Texas.

small group of people. The metal artifacts from the site indicate that its occupants had a wagon, horses, guns, and at least one axe for timber harvesting.

The ceramic artifacts from the Marcus Kolb site are dominated by refined earthenware sherds, including blue-tinted plain and decorated pearlware (n=8), plain and decorated whiteware (n=17), plain porcelain (n=1), and a post-1850s plain ironstone sherd (n=1) (Table 1). There are also several stoneware sherds, a yellowware sherd, and a sherd from a molded and glazed stoneware pipe.

Pearlware was introduced in England by Josiah Wedgwood in 1779, whereby he covered the earlier creamware ceramic fabric with a blue-tinged glaze, giving it a whiter fabric color (Sussman 2000a:37). Pearlware became remarkably popular over the approximately 50 years (ca. 1780-1830s) in which it was made. Whiteware ceramics, a harder and even lighter-colored ware, began to be made in the 1820s, but came to dominate the English ceramic market by the 1830s (Sussman 2000b:51; Miller 2000:90). At the Marcus Kolb site, pearlware comprises almost 30% of the refined earthenwares, and the remainder are from what appear to be lighter-colored whiteware plates and cups (see Table 1).

Table 1. Ceramic Artifacts from the Marcus Kolb site.

Artifact Category	No.
plain pearlware rim and body sherds	6
black transfer-printed pearlware sherd	1
hand-painted pearlware sherd	1
plain whiteware sherds	4
purple transfer-printed whiteware sherd	1
black transfer-printed whiteware sherds	4
green transfer-printed whiteware sherd	1
blue shell-edged whiteware sherd, impressed lines and non-scalloped lip	1
annular ware, whiteware sherds	6
porcelain sherds, plain	1
plain ironstone rim sherd*	1
yellowware sherds	1
salt-glazed stoneware sherds	2
salt-glazed ink bottle sherd	1
black stoneware sherd with clear ext. glaze, black paste	1
brown glazed molded stoneware pipe sherd	1
Totals	33

*found in the area down the hill from the "garbage" site

The significant proportion of pearlware sherds in the refined earthenware assemblage (see Table 1) may be compelling evidence that the Marcus Kolb site was occupied sometime before the 1830s. The decorated pearlware includes a black transfer-printed plate with a central romantic/landscape element (Figure 2, bottom row, left) and a hand-painted rim with a green petal and a thin black lip line (Figure 2, top row, left). Black transfer-printed pearlware has a production date range of 1785-1830s, with mean beginning and end production dates of 1825-1838 (Sanford 2000:Table 5). This style of hand-painted pearlware began to be made in England as early as 1810 (Majewski and O'Brien 1987:157).

The decorated whiteware sherds (n=13) include purple transfer-printed, black transfer-printed (see Figure 2, top row, far right), and green transfer-printed sherds (see Figure 2, top row, 3rd from left), a blue shell-edged rim sherd with impressed lines and a non-scalloped lip (see Figure 2, top row, 2nd from left), as well as annular ware (see Figure 2, bottom row, 2nd-4th from left) with narrow blue and black bands as well as larger gray and blue zones. The annular sherds comprise 46% of the sample of decorated whiteware sherds at the Marcus Kolb site (see Table 1).

The date ranges of production of the different colors of transfer-printed ceramics found at the site are: green (1818-1859); black (1785-1864); and purple (1814-1867) (Samford 2000:Table 5). Because these transfer-printed sherds are whitewares, and based strictly on the production date ranges, the occupation at the Marcus Kolb site could have ranged from ca. 1830s-1867. Mean beginning and end production dates for the most common black transfer printed wares suggest these sherds are from

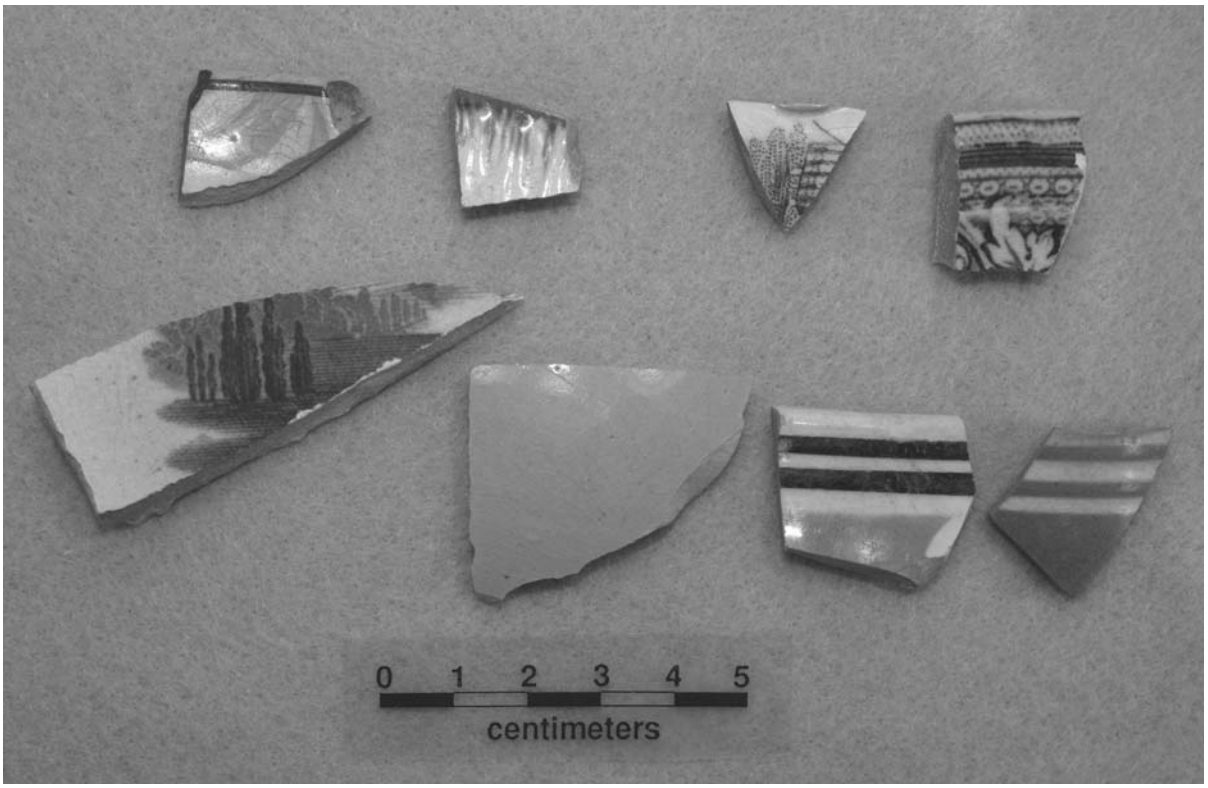


Figure 2. Decorated refined earthenware sherds from the Marcus Kolb site: top row, left to right: hand-painted (pearlware); blue shell-edged (whiteware); green transfer-printed (whiteware); black transfer-printed rim (whiteware); bottom row, left to right: black transfer-printed (pearlware); gray annular ware (whiteware); white, blue, and black annular ware (whiteware); gray, blue, and white annular ware (whiteware).

vessels that were most likely manufactured between ca. 1830-1838 (Samford 2000:Table 5). The earthy tones of the annular wares from the site—white, black, gray, and white bands—suggest these sherds are from early (ca. 1840s) annular ware (Majewski and O'Brien 1987:163).

The shell-edged whiteware from the Marcus Kolb site has a blue painted edge, impressed lines, and a non-scalloped lip. Blue shell-edged plates and platters with unscalloped rims and impressed lines were being made by the 1840s, while the earlier symmetrical scalloped shell-edged ware continued to be made into the 1830s (Hunter and Miller 1994, 2009:13); this earlier form is absent in the Marcus Kolb site artifact sample.

The stoneware sherds are from a minimum of four vessels, if the yellowware sherd is included amongst the stoneware assemblage (see Table 1). Salt-glazed sherds are the most common utility wares here (Figure 3), as they are at other pre-1860 sites in northeastern Texas (e.g., Cliff et al. 2005); they first began to be made at local kilns in the 1830s (Greer 1981). One of the salt-glazed sherds is from an ink bottle (Figure 3, middle sherd). Another distinctive stoneware sherd has a black paste, a clear glaze on the exterior surface, and readily apparent throw lines on both interior and exterior surfaces (Figure 3, sherd on the left). This may be an example of an early to mid-19th century non-locally produced stoneware vessel (Missi Green, March 2010 personal communication).

One of the salt-glazed stoneware sherds from the Marcus Kolb site, a rim sherd, appears to have been deliberately flaked or chipped along both edges of the piece (Figures 4a-b). This chipping was likely done to shape the piece into an expedient tool, probably as a scraper used "to scrape the hair off animal hides. The chipped edges caught the hair and pulled it off" (McCrocklin 1993:12). McCrocklin (1993:13) has documented both chipped glass and ceramic artifacts at Historic Indian sites in Louisiana and Texas that had been occupied by Coushatta, Cherokee, Delaware, and Caddo groups; these tools have also been found on Anglo-American

Figure 3. Stoneware sherds: left to right: black paste stoneware sherd; salt-glazed ink bottle sherd; salt-glazed sherd.

sites, but apparently not with the frequency noted on Historic Indian sites.

The one pipe sherd from the Marcus Kolb site is a mid-19th century stoneware form with a reddish-brown paste and a clear glaze. The elbow-shaped stoneware pipe is a reed stem pipe with a replaceable reed stem, and is mold-made, with a 21 cm orifice diameter ribbed bowl (Figure 5). These sorts of pipes were made at several pottery kilns in the region, including the J. S. Nash factory in operation in Marion County, Texas, between 1850-1880 (Lebo 1988:282). Similar styles of molded elbow pipes have been recovered in earlier contexts from 1837-1846 and 1852-1857 Anglo-American farmsteads in northeastern Texas as well as the 1840s-1860s port of Monterey (Nelson and Perttula 2003; Perttula 1989:99; Perttula and Nelson 2010).

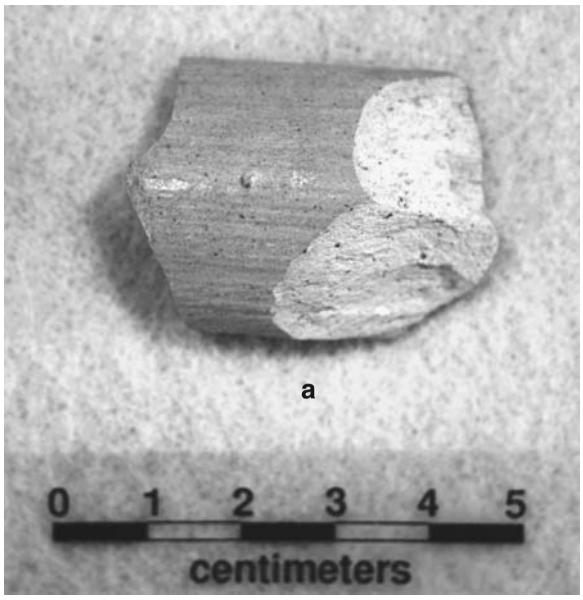
Yellowware began to be produced in the 1820s in England, but by the 1840s it was also being manufactured in the United States, especially in the Midwest (Leibowitz 1985:4). The peak production of yellowware vessels was in the 1860s and 1870s, although it was still being made in the early 1900s (Leibowitz 1985:14).

The bottle glass from the Marcus Kolb site are from hand-blown bottles and snuff bottles of several different colors, including aqua, colorless, and brown (Table 2). They have applied lips (Figure 6, second through fourth from the left), suggesting they were made in the early to mid-19th century. These vessels or containers would have held medicinal liquids, liquor (beer and wine), and snuff. One of the aqua bottle glass sherds has unidentifiable embossed lettering on the base, a technique which began to be used about 1850 (Newman 1970:74).

The metal artifacts found at the Marcus Kolb site represent a diverse assortment of horse and stable gear, tools, cutlery, and gun parts (Table 3). More specifically they range from horse and wagon parts to buttons, cut nails (1820-1891, Wells 1998), iron forks, gun parts, and an iron axe.

The two cut nails (1820-1891) indicate that a wood framed structure may have been present at the site. There are also two hand-forged clamp type nails (Figure 7).

In addition to a plain iron button (20.3 mm in diameter) in the collection, there is also a slightly smaller (19.0 mm in diameter) brass button with a



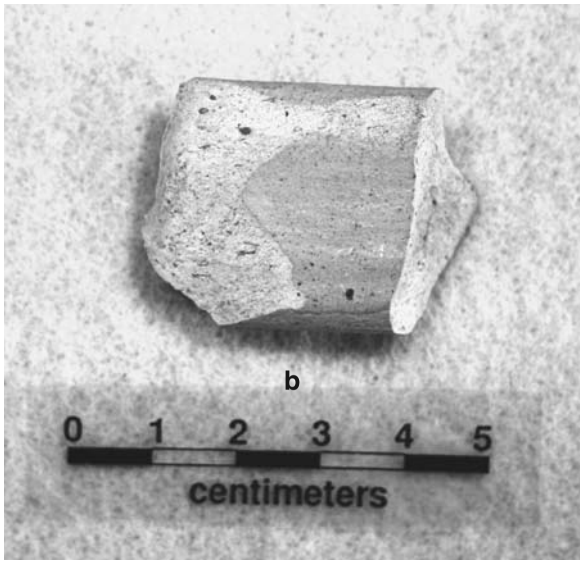


Figure 4. Two views of possible worked salt-glazed stoneware sherd: a, exterior view; b, interior view.

single interior stay or attachment (Figure 8, left). It has raised lettering in a narrow band encircling the button stay: the lettering is "Benedict Burnham Extra."

There is also a cut and crimped rectangular piece (possibly a piece cut from a thin kettle sheet) of a thin copper-based material in the metal artifacts from the Marcus Kolb site (see Figure 8, right). There are two stays or attachments on the apparent back side of the piece, and the crimping is along one corner. The purpose or function of this artifact is not known; McCrocklin identified it as an "ornament."

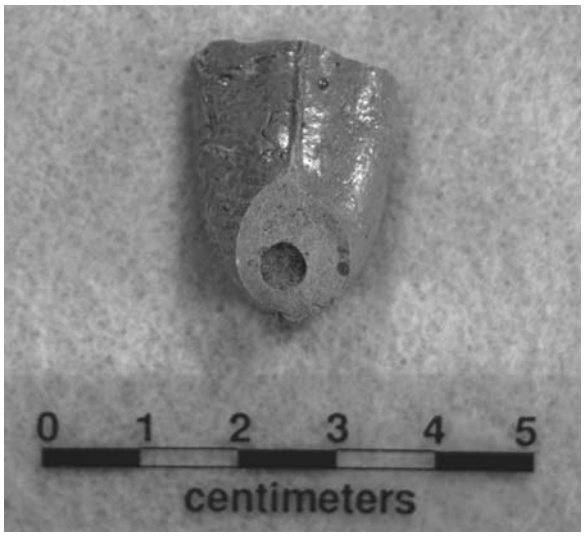


Figure 5. Stoneware molded elbow pipe.

Table 2. Glass Artifacts.

Artifact Category	No.
Brown snuff glass sherds	1
Brown bottle glass sherds	2
Aqua bottle glass sherds	7
Colorless bottle glass sherds	2
Totals	12

A roughly oblong mass of lead (weighing 260 g) was recovered from the site, most likely during the metal detecting work (Figure 9). The lead mass (73 x 52 mm in length and width) may have been the raw material used for the on-site manufacture of lead balls for use in a rifle or musket.

Another artifact that apparently provides tangible evidence of the use of weaponry on the Marcus Kolb site is a possible iron gun worm (Figure 10, top). The broken and poorly preserved piece is 87 mm in length.

A forged piece to a 19th century wagon (see Spivey 1979), possibly a tongue pin or a linch pin, is in the collection of metal artifacts (see Figure 10, bottom)

There are also portions of two iron horse ring bits from the site (Figure 11). The two rings of the bit range from 42-59 mm in diameter, while the attached mouthpieces are 88-90 mm in length.

Iron artifacts used for domestic purposes include forks and portions of a pair of scissors. The

Figure 6. Bottle glass sherds: left to right: aqua base; aqua lip; aqua lip; brown lip sherd.

Table 3. Metal Artifacts.

Artifact Category	No.
Iron horse bits	2
Iron wagon part, tongue pin?	1
Iron forged nail or bolt	1
Iron sawmill part?	1
Hand-held iron clothes handle	1
Iron axe	1
Plain iron button	1
Brass button	1
2-tine Iron fork	2
Iron scissors handle/finger hold fragment	1
Cut nails	2
Hand-forged clamp type nails	2
Iron gun worm	1
Lead mass for manufacture of lead balls	1
Copper-base "ornament" with crimped edges	1
Totals	19

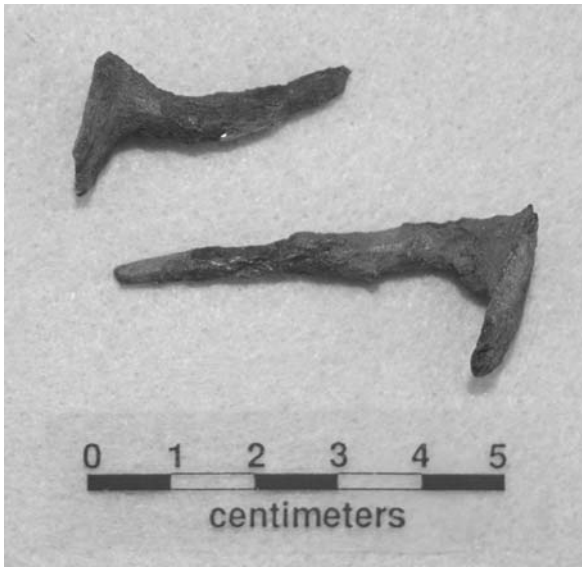


Figure 7. Nails, hand-forged clamp type.

2-tined iron forks from the Marcus Kolb site would have originally had bone handles (Figure 12, top and middle), but those have long since been eroded or decayed. The scissor fragment consists of a 39 cm diameter finger hold and a 65 cm portion of one broken scissor blade (Figure 12, bottom).

The complete "Kentucky pattern" iron axe (Russell 1967:272 and Figure 70c) from the Marcus Kolb site is 180 mm in length, 104 mm in width at the bit and 82 mm wide at the poll end, and 28 mm thick at the poll end (Figure 13). The bit end is only

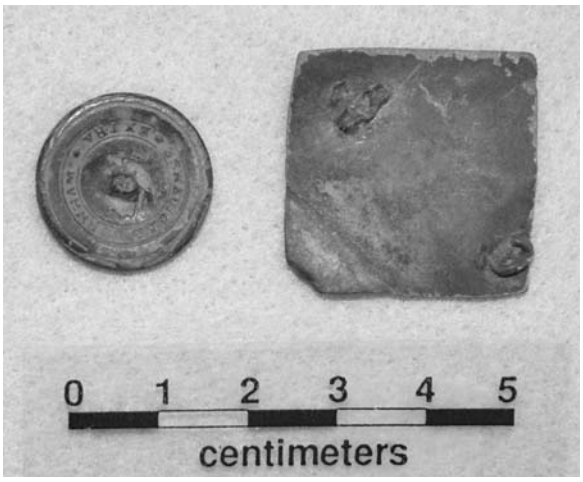


Figure 8. Brass button and copper-based crimped artifact: left to right: brass button; copper-based artifact.

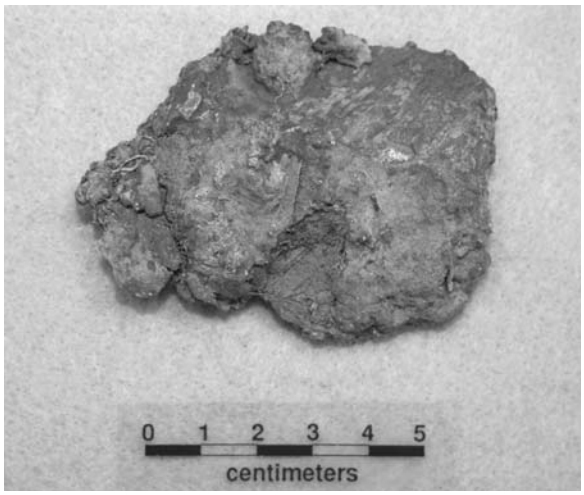


Figure 9. Lead mass.

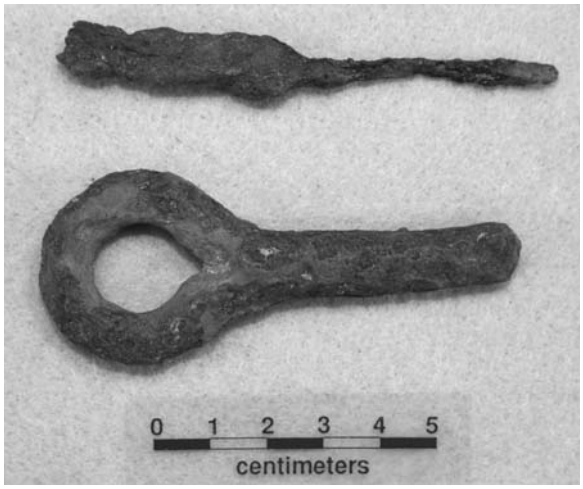


Figure 10. Gun part and wagon part: top to bottom: iron gun worm; iron wagon part.

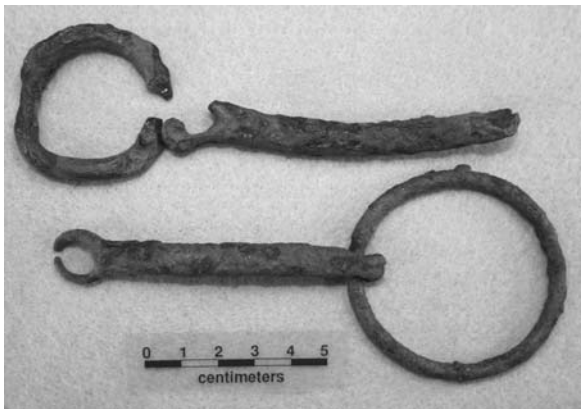


Figure 11. Iron horse bits.

Figure 12. Scissors and 2-tined forks: top to bottom: 2-tined iron fork; 2-tined iron fork; iron scissors handle.

13 mm thick. The opening slot or eye for the wood handle is 58 mm in length, while the lateral extension on the other side of the eye is 59 mm in width. This type of axe probably dates to the early part of the 19th century, ca. 1830s (Russell 1967; O'Shea and Ludwickson 1992:171).

A single piece of unburned animal bone, probably from a cow, is also in the collection from the Marcus Kolb site.

Possible Late 19th-Early 20th Century Artifacts

Late 19th to early 20th century artifacts were found in the barn area at the Marcus Kolb site. These include brown, purple, and amber bottle glass sherds (n=3), one plain whiteware body sherd, and two green or blue 1930s-era Fiesta ware sherds (see Majewski and O'Brien 1987:164). The green Fiesta

Figure 13. Iron axe.

ware sherd has a green glaze on the interior surface of a vessel and a brown lead glaze on the exterior vessel surface. Another piece of purple (1880-1918) bottle glass is in the collection, along with a 20th century plow part, but their recovery locations within the site are not known.

PREHISTORIC ARTIFACTS FROM THE MARCUS KOLB SITE

The sole prehistoric artifact collected from the Marcus Kolb site is a Late Archaic (ca. 5000-3000 years B.P.) style dart point stem fragment made from a non-local and heat-pocked black chert. The stem is square or parallel-sided, with a flat base and small barbs. It is 5.5 mm thick, and has a 17.8 mm stem width.

CONCLUSIONS

Although archaeological investigations at the Marcus Kolb site have been limited to date, nevertheless the recovered artifacts (especially the black transfer-printed pearlware sherds and the worked stoneware sherd, and possibly the cut and crimped copper-based artifact) suggest that the site could have been occupied as early as the 1820s-early 1830s, during the time when this part of northeastern Texas was occupied by the Cherokee. This tantalizing possibility of a Cherokee Indian occupation is negated to some extent by the chronological evidence that can be drawn from the decorated whiteware sherds. The preponderance of that evidence is more consistent with a ca. 1840-1860 occupation, one that postdated the Cherokee occupation of East Texas. That would mean that the historic occupation of the Marcus Kolb site is most likely the product of an Anglo-American settlement.

To further evaluate the possibility that the Marcus Kolb site may have been occupied by a group of Cherokee Indians between ca. 1820-1839, when they settled in the region, more intensive archaeological investigations—including shovel testing and systematic metal detecting at a minimum—are called for to gather a larger assemblage of 19th century artifacts

from controlled subsurface contexts and establish if distinctive cultural features are preserved at the site. A larger assemblage of artifacts would likely contain more chronologically-specific specimens that could refine or refute the findings suggested here. Particular kinds of artifacts may also be found—such as glass beads, silver artifacts or evidence of its workmanship, metal arrow points or other tools made from barrel or kettle scrap, or perhaps even sherds of Cherokee ceramics—that would lend much-needed support to the notion that the Marcus Kolb site was occupied by the Cherokee Indian peoples in the early part of the 19th century.

ACKNOWLEDGEMENTS

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Analysis of the 19th Century Historic Archaeological Material Culture Remains from the Browning Site in Smith County, Texas

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SITE SETTING AND EXCAVATIONS

The Browning site (41SM195A) is located on a 3800 m^2 alluvial terrace that overlooks the Auburn Creek floodplain in eastern Smith County, Texas. This setting is near the headwaters of a stream system in the Harris Creek drainage; Harris Creek meets the Sabine River ca. 34 km to the north. In the vicinity of the Browning site, the valley, being narrow with steep valley walls, offers few locations suitable for either prehistoric or historic occupations. Soils here are Entisols; they vary in depth from 30-70 cm across the landform, terminating at a sandstone C-horizon. These are soils that formed mostly under forest vegetation and are dominantly sandy or loamy (Hatherly 1993). The Browning site falls within the Pineywoods vegetation area and represents the western extent of the pine and deciduous forests of the Southeastern U.S. coastal plain (Diggs et al. 2006).

Archaeological investigations at the Browning site have been carried out intermittingly for several years by the junior author (Figure 1). That work has led to the recognition that it is a stratified site with two very distinct occupations, an early to mid-19th century assemblage of historic artifacts primarily in an upper zone (0-20 cm bs) overlying a buried (20-50 cm bs) Late Woodland period occupation (Walters 2004a, 2004b, 2009; Shafer and Walters 2010). The historic occupation is in the center of the terrace, covering approximately 500 m^2. The historic artifacts are found primarily in the upper sediments, but due probably to pedoturbations, they have been found as deep as 50 cm in the underlying prehistoric archaeological deposits.

Excavations at the Browning site have consisted of 41 1 x 1 m units (with a total excavated volume of 20.4 m^3) and 22 shovel tests (see Figure 1). Surface collections were obtained from the site in 1996 and 2002.

The 22 shovel tests excavated at the site were conducted first to better ascertain the limits of the site and identify areas of concentrated cultural activity; ST 4, 8-9, 12, and 19 contained 19th century historic artifacts (see Figure 1). Once a buried prehistoric occupation zone was identified, units were placed primarily in cardinal directions to better define the occupation zone's boundaries and levels of occupational intensity, and also sample the overlying 19th century component. The 1 x 1 m units were excavated in arbitrary 10 cm levels and the soil was dry-screened for artifacts through 1/4-inch hardware cloth except for a fine screen sample from Unit 1 that was water-screened through 1/32-inch mesh. A level sheet was completed at the end of each level. Profiles were drawn of one wall of each unit or a common wall when several units were joined. The shovel tests followed the same procedures, except they were excavated in arbitrary 20 cm levels.

One feature (Feature 2) had four refined earthenware sherds (as well as two prehistoric artifacts) and 15 small pieces of animal bone. This was a shallow pit with a very dark grayish-brown sandy loam fill (with charcoal flecks) and a rounded bottom that was 63 cm in diameter and extended from 22-29 cm bs.

19TH CENTURY HISTORIC ARTIFACTS FROM THE BROWNING SITE

The excavations at the Browning site have recovered a total of 360 19th century artifacts from surface collections (n=17), shovel testing (n=7, 1.4 artifacts per positive shovel test, or ca. 11.2 artifacts per m^2), and the 1 x 1 m unit excavations (n=336, or 8.2 artifacts per m^2) (Table 1). Most of the recovered historic artifacts are sherds from refined earthenware (i.e., whiteware and porcelain) plates and cups (81.3%), followed by artifacts of iron (mainly cut nails) (11.4%), stoneware, stoneware pipes and yellowware sherds (3.9%), and bottle glass (3.6%).

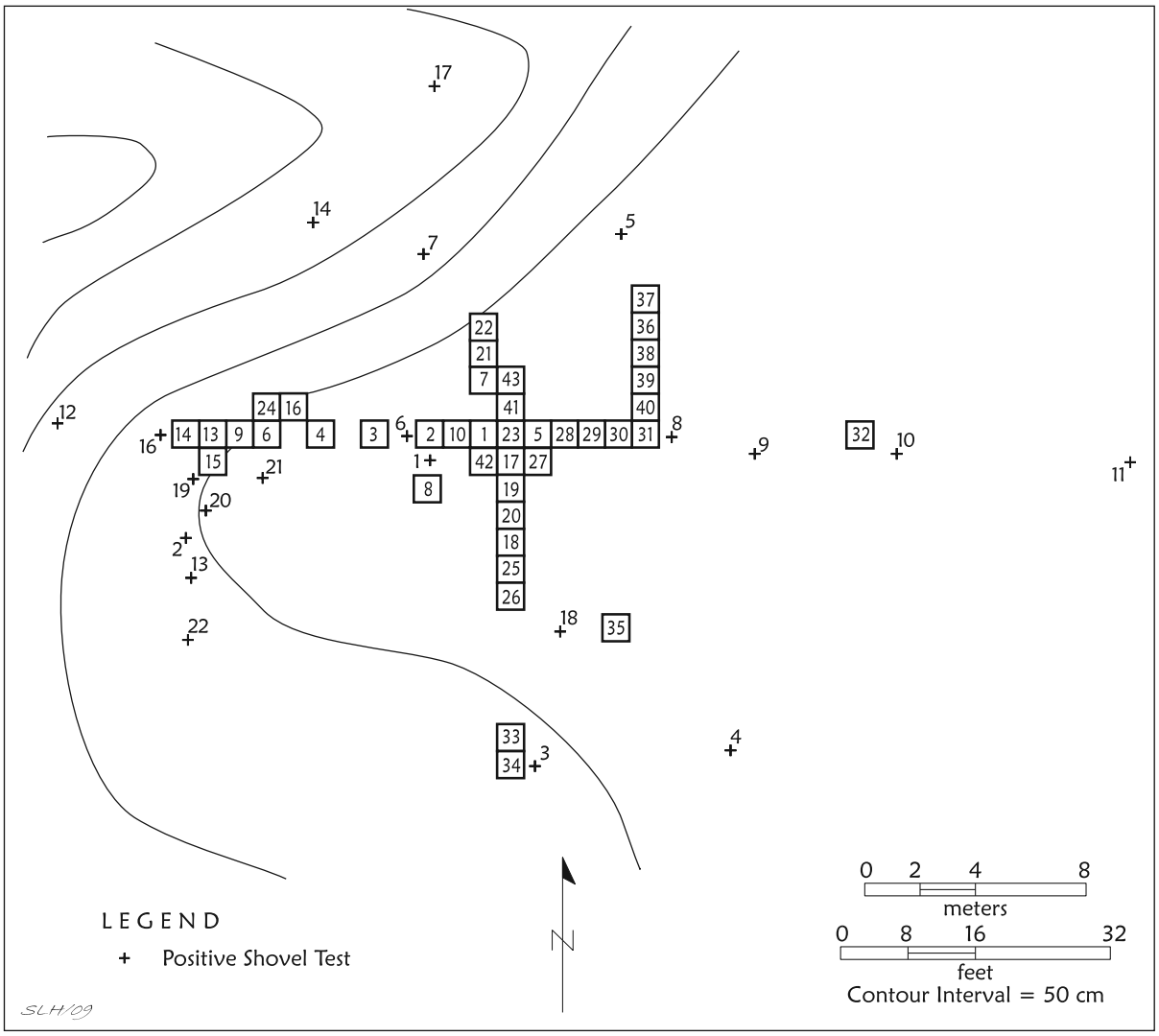

Figure 1. Map of the Browning site archaeological investigations.

By depth, 86% of the 19th century artifacts from the shovel tests were found between 0-20 cm bs, with one artifact recovered from 20-40 cm bs. In the hand-excavated units, the preponderance of the historic artifacts is also from 0-20 cm bs (64.2%), but there are significant amounts of historic artifacts in the 20-30 cm (24.8%), 30-40 cm (8.3%), and 40-50 cm bs (1.5%) levels; 1.2% of the historic artifacts from the Browning site are from Feature 2 (22-29 cm bs).

The spatial density of 19th century artifacts from the site indicates that there are three small clusters of units that have higher densities of artifacts in the excavation area (Figure 2). The first is at the western edge of the terrace, in Units 6, 13-15, and 24 (12-18 artifacts per m^2); the second cluster is in the central part of the terrace (Units 17, 21, 22, 28-31, 40, and 42, with 9-13 artifacts per m^2); and a third cluster at the southern edge of the terrace (Units 33-34, 14-21 artifacts per m^2). At the present time, it is not known if these higher density spatial clusters of artifacts correspond to functionally different parts of the 19th century occupation, or if they simply represent discrete trash disposal areas.

Refined earthenwares—including whiteware and porcelain—are abundant in the Browning site 19th century artifact assemblage (Table 2). The whitewares, both plain and decorated sherds (about 22% of the whiteware sherds have a decorative element) from vessels that were likely made by English potteries beginning in the 1830s (Majewski and O'Brien 1987), account for about 98% of the refined

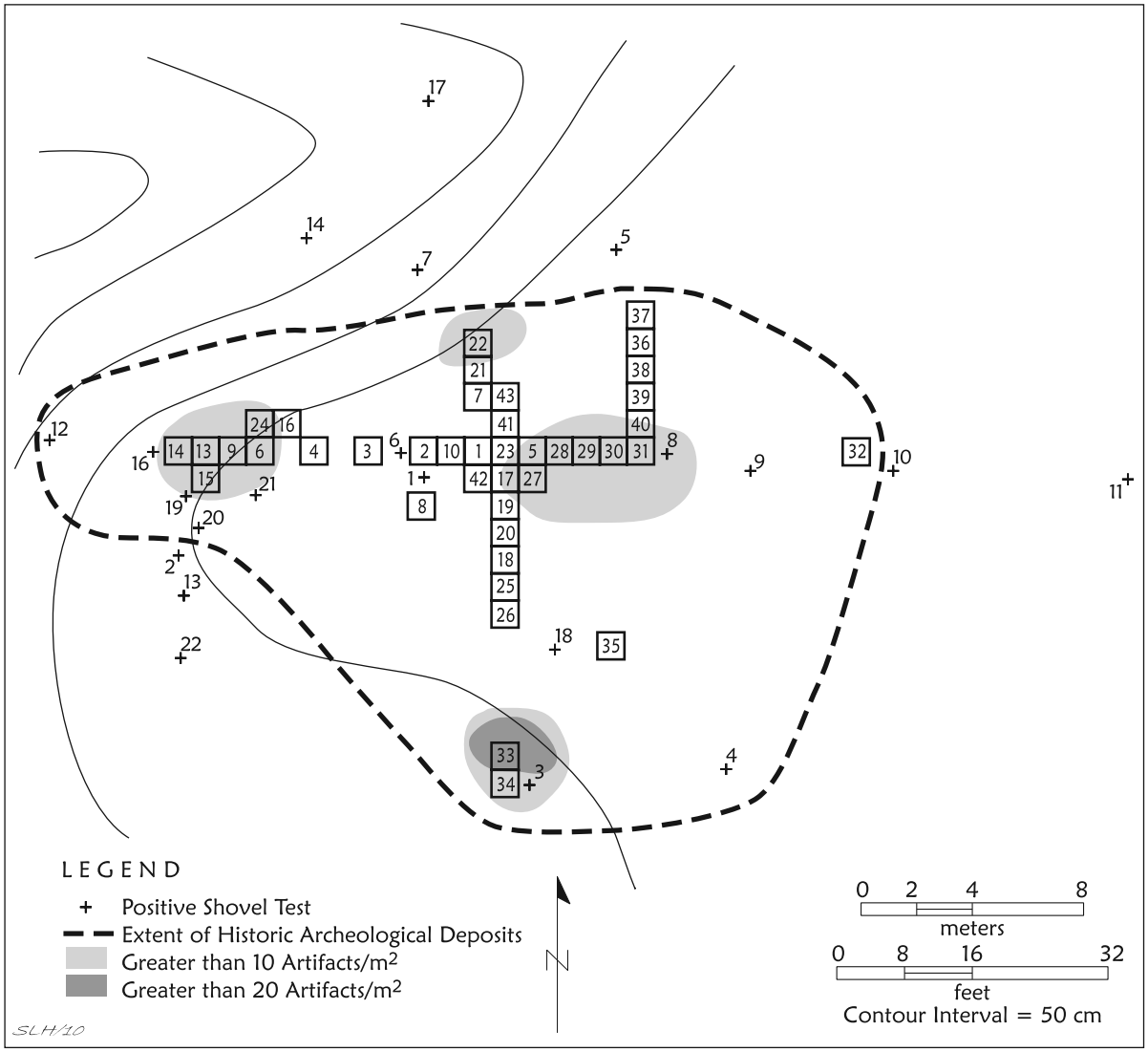

Figure 2. The distribution of historic 19th century artifacts from the Browning site.

earthenwares, and the remaining 2% are sherds from porcelain or bone-china vessels.

The decorated whitewares are divided into eight different categories based on the kind of decoration (i.e., hand-painted, transfer-printed, annular ware, shell-edged, etc.) found on individual sherds in the assemblage (Table 3). Sherds from annular ware vessels are the most common, comprising 39% of the decorated sherds, followed by hand-painted sherds (28%), blue shell-edged sherds (23%), and transfer-printed (4.7%). Sponge ware and flown blue sherds account for the remaining 4.7% of the decorated sherds from the Browning site.

In general, the decorated whiteware from the Browning site would seem to have been made and used between the 1830s and 1860 (cf. Price 1979; Majewski and O'Brien 1984, 1987). All of these decorated ceramic sherds are from vessels probably of English manufacture, and they likely were obtained through shipments of goods from New Orleans brought up the Red River and Caddo Lake to Jefferson, and then carried overland to distributors and stores.

Annular wares (Figure 3) at the site have earthy color tones. These include brown, black, and yellow bands of varying widths as well as gray, yellow, white, and blue zones, as well as cat's eye dots (Majewski and O'Brien 1987:163), suggesting these sherds are from early (ca. 1840s) annular ware.

The hand-painted sherds from the site are from cups primarily decorated with fine line polychrome and monochrome floral motifs (including petals and

Table 1. Historic Artifacts from the Browning site.

Provenience	Metal	Bottle Glass	Refined Earthenware	Stoneware*
Surface	–	–	17	–
ST 4	–	1	–	–
ST 8	–	1	1	–
ST 9	–	–	1	–
ST 12	–	–	1	1
ST 19	–	–	–	1
Unit 1	–	–	8	–
Unit 2	–	–	3	–
Unit 3	–	–	3	–
Unit 4	–	–	3	–
Unit 5	1	–	3	–
Unit 6	2	1	8	1
Unit 7	–	–	5	–
Unit 8	–	–	2	1
Unit 9	–	–	7	–
Unit 10	–	–	5	–
Unit 13	3	2	13	–
Unit 14	–	1	14	–
Unit 15	1	4	9	2
Unit 16	–	–	7	2
Unit 17	1	–	12	–
Unit 18	–	–	7	–
Unit 19	1	–	3	–
Unit 20	2	–	4	–
Unit 21	2	–	7	–
Unit 22**	1	–	10	–
Unit 23	–	1	6	–
Unit 24	2	–	11	1
Unit 25	–	–	1	–
Unit 26	–	–	3	–
Unit 27	–	–	4	–
Unit 28	1	–	10	–
Unit 29	–	–	11	1
Unit 30	1	–	11	1
Unit 31	2	–	9	1
Unit 32	–	–	2	2
Unit 33	2	–	19	–
Unit 34	6	1	7	–
Unit 35	2	–	6	–
Unit 36	2+	–	4	–
Unit 37	3	–	1	–

Table 1. Historic Artifacts from the Browning site, cont.

Provenience	Metal	Bottle Glass	Refined Earthenware	Stoneware*
Unit 38	2	–	5	–
Unit 39	1	–	5	–
Unit 40	–	–	9	–
Unit 41	1	1	3	–
Unit 42	1	–	8	–
Unit 43	1	–	4	–
Totals	41	13	292	14

*including pipe sherds and yellowware sherds; ** includes four refined earthenware sherds from Feature 2 (22-29 cm bs)
+late 19th-early 20th century shotgun shell not included in the tabulation

Table 2. Refined Earthenwares from the Browning site.

Provenience (cm bs)	Plain Whiteware	Decorated Whiteware	Plain Porcelain	N
Surface	14	2	1	17
ST 8, 20-40	1	–	–	1
ST 9, 0-20	1	–	–	1
ST 12, 0-20	1	–	–	1
Unit 1, 0-10	1	1	–	2
Unit 1, 10-20	5*	–	1	6
Unit 2, 0-10	2	–	–	2
Unit 2, 40-50	1	–	–	1
Unit 3, 0-10	1	1	–	2
Unit 3, 10-20	1	–	–	1
Unit 4, 0-10	2	1	–	3
Unit 5, 0-10	1	–	–	1
Unit 5, 10-20	1	1	–	2
Unit 6, 10-20	6	1	–	7
Unit 6, 20-30	1	–	–	1
Unit 7, 0-10	–	3	–	3
Unit 7, 10-20	–	1	1	2
Unit 8, 0-10	2	–	–	2

Table 2. Refined Earthenwares from the Browning site, cont.

Provenience (cm bs)	Plain Whiteware	Decorated Whiteware	Plain Porcelain	N
Unit 9, 0-10	1	–	–	1
Unit 9, 10-20	3	2	–	5
Unit 9, 20-30	1	–	–	1
Unit 10, 0-10	2	–	–	2
Unit 10, 10-20	2	–	–	2
Unit 10, 20-30	1	–	–	1
Unit 13, 0-10	2	1	–	3
Unit 13, 10-20	4	3	–	7
Unit 13, 20-30	3	–	–	3
Unit 14, 0-10	5	1	–	6
Unit 14, 10-20	4	–	–	4
Unit 14, 20-25	4	–	–	4
Unit 15, 0-10	–	1	–	1
Unit 15, 10-20	5	3	–	8
Unit 16, 0-10	3	2	–	5
Unit 16, 10-20	–	1	–	1
Unit 16, 20-30	1	–	–	1
Unit 17, 0-10	6	1	–	3
Unit 17, 10-20	2	–	–	2
Unit 17, 20-30	3	–	–	3
Unit 18, 10-20	6	–	–	6
Unit 18, 20-30	1	–	–	1
Unit 19, 20-30	–	2	–	2
Unit 19, 40-50	1	–	–	1
Unit 20, 10-20	–	1	–	1
Unit 20, 20-30	2	1	–	3
Unit 21, 10-20	1	–	1	2
Unit 21, 20-30	1	1	–	2
Unit 21, 30-40	2	1	–	3
Unit 22, 0-10	1	–	–	1
Unit 22, 10-20	3	–	–	3
Unit 22, 20-30	2	–	–	2
Unit 22, F. 2	4	–	–	4

Table 2. Refined Earthenwares from the Browning site, cont.

Provenience (cm bs)	Plain Whiteware	Decorated Whiteware	Plain Porcelain	N
Unit 23, 10-20	5	1	–	6
Unit 24, 0-10	2	2	–	4
Unit 24, 10-20	5	2	–	7
Unit 25, 10-20	1	–	–	1
Unit 26, 10-20	2	–	–	2
Unit 26, 20-30	1	–	–	1
Unit 27, 10-20	2	–	–	2
Unit 27, 20-30	1*	1	–	2
Unit 28, 10-20	4*	1	–	5
Unit 28, 30-40	3	1	–	4
Unit 28, 40-50	1	–	–	1
Unit 29, 10-20	4	–	–	4
Unit 29, 20-30	6	–	–	6
Unit 29, 30-40	1	–	–	1
Unit 30, 0-10	1	–	–	1
Unit 30, 10-20	1	–	–	1
Unit 30, 20-30	6	1	–	7
Unit 30, 30-40	–	1	–	1
Unit 30, 40-50	1	–	–	1
Unit 31, 0-10	3	–	–	3
Unit 31, 10-20	1	–	–	1
Unit 31, 20-30	1	2	–	3
Unit 31, 30-40	–	1	–	1
Unit 31, 40-50	1	–	–	1
Unit 32, 0-10	1	–	–	1
Unit 32, 20-30	1	–	–	1
Unit 33, 0-10	1	1	–	2
Unit 33, 10-20	1	1	–	2
Unit 33, 20-30	3	2	–	5
Unit 33, 30-40	10	–	–	10
Unit 34, 10-20	–	–	1	1
Unit 34, 20-30	4	–	–	4
Unit 34, 30-40	2	–	–	2

Table 2. Refined Earthenwares from the Browning site, cont.

Provenience (cm bs)	Plain Whiteware	Decorated Whiteware	Plain Porcelain	N
Unit 35, 0-10	3	2	–	5
Unit 35, 30-40	1	–	–	1
Unit 36, 10-20	1	1	–	2
Unit 36, 20-30	–	2	–	2
Unit 37, 10-20	1	–	–	1
Unit 38, 10-20	2	1	–	3
Unit 38, 20-30	1	–	–	1
Unit 38, 30-40	1	–	–	1
Unit 39, 10-20	2	–	–	2
Unit 39, 20-30	2	1	–	3
Unit 40, 10-20	1	2	1	4
Unit 40, 20-30	3	1	–	4
Unit 40, 30-40	1	–	–	1
Unit 41, 0-10	–	1	–	1
Unit 41, 10-20	2*	–	–	2
Unit 42, 0-10	2	2	–	4
Unit 42, 10-20	1*	1	–	2
Unit 42, 20-30	2	–	–	2
Unit 43, 0-10	1	–	–	1
Unit 43, 10-20	2	1	–	3
Totals	222	64	6	292

*includes plain rims (n=5) with non-scalloped lips and impressed lines

Table 3. Decorated Whiteware Sherds.

Provenience (cm bs)	HP-P	HP-FL	AW-CE	AW-B	TP-F	BSE	SP	FB
Surface	–	–	–	–	–	2*	–	–
Unit 1, 0-10	–	–	–	–	1 (blue)	–	–	–
Unit 3, 0-10	–	–	–	–	–	1*	–	–
Unit 4, 0-10	–	1	–	–	–	–	–	–

Table 3. Decorated Whiteware Sherds, cont.

Provenience (cm bs)	HP-P	HP-FL	AW-CE	AW-B	TP-F	BSE	SP	FB
Unit 5, 10-20	–	–	–	1	–	–	–	–
Unit 6, 10-20	–	1	–	–	–	–	–	–
Unit 7, 0-10	–	–	–	3	–	–	–	–
Unit 7, 10-20	–	–	–	–	1 (blue)	–	–	–
Unit 9, 10-20	1	–	1	–	–	–	–	–
Unit 13, 0-10	–	1	–	–	–	–	–	–
Unit 13, 10-20	–	2	–	–	–	–	–	1
Unit 14, 0-10	–	–	–	1	–	–	–	–
Unit 15, 0-10	–	1	–	–	–	–	–	–
Unit 15, 10-20	–	3	–	–	–	–	–	–
Unit 16, 0-10	–	–	–	–	–	2/1*	–	–
Unit 16, 10-20	–	–	–	–	–	–	1	–
Unit 17, 0-10	–	–	–	–	1+ (blue)			
Unit 19, 20-30	–	–	–	1	–	1*	–	–
Unit 20, 10-20	–	–	–	1	–	–	–	–
Unit 20, 20-30	–	–	–	1	–	–	–	–
Unit 21, 20-30	–	1	–	–	–	–	–	–
Unit 21, 30-40	–	–	–	1	–	–	–	–
Unit 23, 10-20	–	–	–	–	–	1*	–	–
Unit 24, 0-10	–	2	–	–	–	–	–	–
Unit 24, 10-20	–	1	–	1	–	–	–	–
Unit 27, 20-30	–	–	–	1	–	–	–	–
Unit 28, 10-20	–	–	–	1	–	–	–	–
Unit 28, 30-40	–	1	–	–	–	–	–	–
Unit 30, 20-30	–	–	–	1	–	–	–	–
Unit 30, 30-40	–	–	–	1	–	–	–	–
Unit 31, 20-30	–	1	–	1	–	–	–	–
Unit 31, 30-40	–	–	–	1	–	–	–	–
Unit 33, 0-10	–	–	–	1	–	–	–	–
Unit 33, 10-20	–	–	–	–	–	1	–	–
Unit 33, 20-30	–	–	–	1	–	1*	–	–
Unit 35, 0-10	–	–	–	1	–	1	–	–
Unit 36, 10-20	–	–	–	–	–	1*	–	–
Unit 36, 20-30	–	–	–	2	–	–	–	–
Unit 38, 10-20	–	–	–	–	–	1*	–	–
Unit 39, 20-30	–	–	–	–	–	1*	–	–
Unit 40, 10-20	–	1	–	–	–	1*	–	–
Unit 40, 20-30	–	–	–	–	–	–	1	–
Unit 41, 0-10	–	–	–	1	–	–	–	–

Table 3. Decorated Whiteware Sherds, cont.

Provenience (cm bs)	HP-P	HP-FL	AW-CE	AW-B	TP-F	BSE	SP	FB
Unit 42, 0-10	–	–	–	1	–	1*	–	–
Unit 42, 10-20	–	–	–	1	–	–	–	–
Unit 43, 10-20	1	–	–	–	–	–	–	–
Totals	2	16	1	24	3	15	2	1

HP-P=hand-painted, polychrome; HP-fine-line and/or monochrome; AW-CE=annular ware, cat's eye; AW-B, annular ware, banded in brown, black, and yellow and with gray, yellow, and blue zones; TP-F=transfer-printed-floral; BSE=blue shell-edged; SP=sponged; FB=flown blue
*non-scalloped lip with impressed lines on the rim
+oriental motif

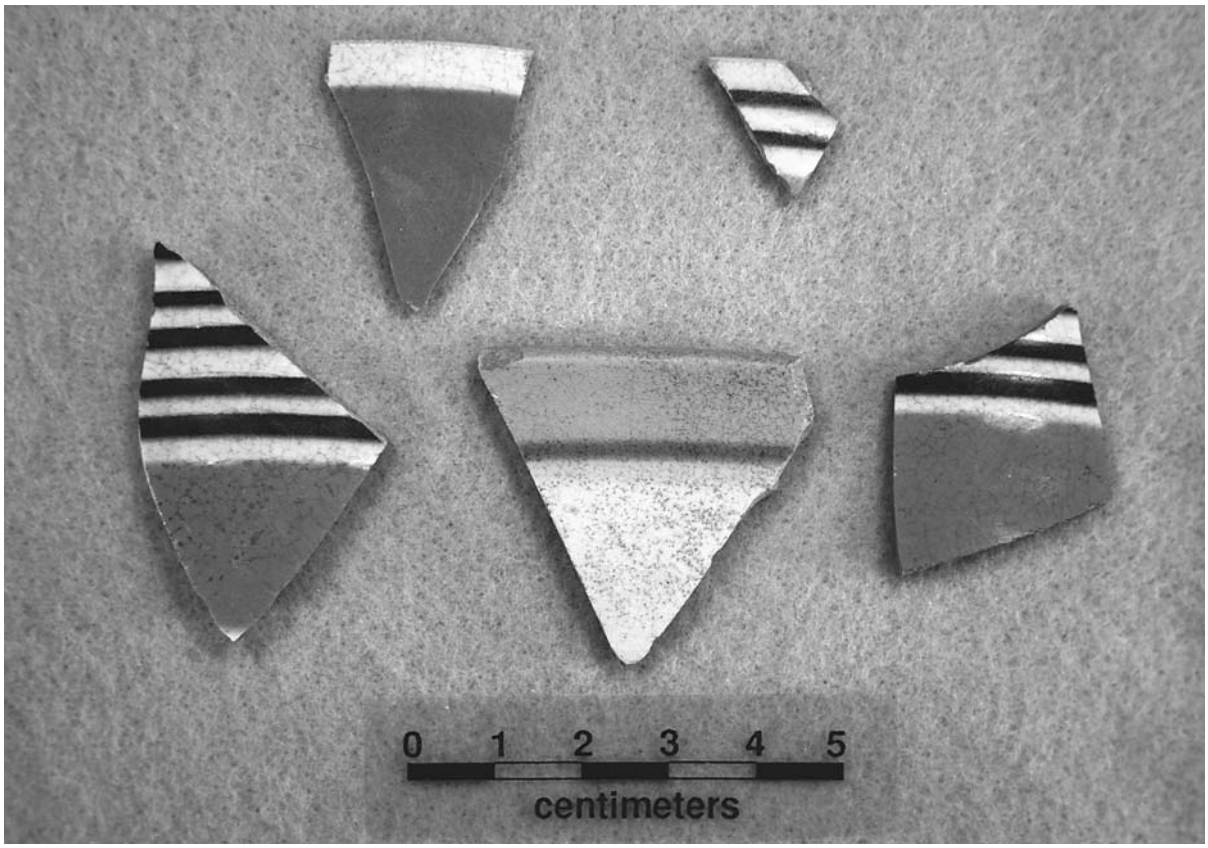

Figure 3. Annular wares with earth-toned bands and zones. Provenience: top row, left to right: Unit 28, 10-20 cm; Unit 31, 20-30 cm; bottom row, left to right: Unit 42, 10-20 cm; Unit 8, 0-10 cm; Unit 33, 0-10 cm.

branches) (Figure 4). The rim sherds have blue or black hand-painted rim lines on both the exterior and interior cup surfaces. These decorative elements are consistent with ca. 1840-1860 hand-painted whitewares (Majewski and O'Brien 1987:157).

The shell-edged whiteware from the Browning site has a blue painted edge, impressed lines, and a non-scalloped lip (Figure 5); on three sherds, the lip form could not be determined because of breakage of the sherd. The absence of green shell-edged

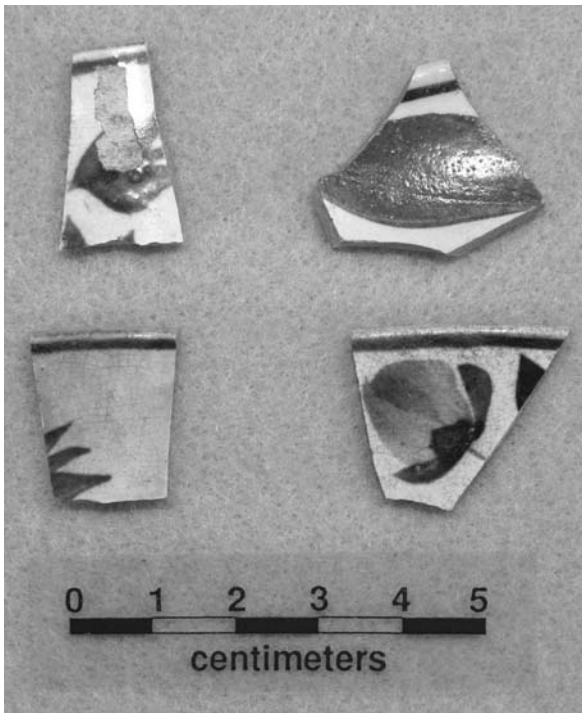

Figure 4. Hand-painted rim sherds. Provenience: top row, left to right: Unit 15, 10-20 cm; Unit 9, 10-20 cm; bottom row, left to right: Unit 6, 10-20 cm; Unit 24, 0-10 cm.

refined earthenware from the site is notable because green shell-edged plates began to diminish in frequency after 1800 relative to blue shell-edged plates (Sussman 2000:51).

The rim form of shell-edged ceramics is chronologically sensitive (cf. Hunter and Miller 1994, 2009). Plates and platters with unscalloped rims and impressed lines, like all the blue shell-edged whiteware from the Browning site, were being made by the 1840s, while the earlier symmetrical scalloped shell-edged ware continued to be made into the 1830s (Hunter and Miller 2009:13); this earlier form is absent in the Browning site artifact sample. There are five plain rims with unscalloped edges and impressed lines (see Table 2) that were likely made at the same time.

All three of the transfer-printed sherds have medium blue colors, and either floral (Figure 6, right) or oriental (Figure 6, left) motifs. The date ranges of production of medium blue (1784-1859) transfer-printed refined earthenware (Samford 2000:Table 5), and the fact that these transfer-printed sherds from the Browning site are whitewares, would seem to indicate that the occupation could have ranged from ca. 1830-1859. Central designs on transfer-printed refined earthenwares that featured Chinese elements were popular primarily before 1840, while floral central designs (as well as border elements on plates) were popular "throughout the course of the 19th century (Samford 2000:73 and Figure 17). Peak periods of production of transfer-printed wares with floral designs was in the late 1840s.

Flown blue vessels became popular in the United States in the 1840s-1850s, especially those with landscape motifs (Samford 2000:79 and Table 7). There are two sherds with blue sponged (or spattered, see Majewski and O'Brien 1987:161) decorations. This type of decorated whiteware was "produced in great quantities by British potteries throughout the nineteenth century, primarily for export, and in the United States after about 1850" (Majewski and O'Brien 1987:161).

Other ceramic sherds from the Browning site include several stoneware jug or crock sherds (n=4), yellowware sherds from bowls and crocks (n=8), and sherds from glazed stoneware elbow pipes (Table 4). The stoneware sherds, from a minimum of two vessels, are from excavations only in the central part of the site, while the yellowware sherds (also from a minimum of two vessels, Figure 7, right) are distributed principally in the western part of the Browning site. The pipe sherds are also from excavations in the western part of the site (see Figure 1).

The stoneware sherds found in the archaeological deposits at the Browning site include salt-glazed sherds (n=3), a brown-glazed ink bottle (n=1) sherd, and yellowware (n=8) (see Table 4). These particular kinds of stoneware would have been manufactured and used between the 1830s and ca. 1875. Salt glazing was one of the more commonly employed glazes in the manufacture of utilitarian stoneware (Greer 1981:180). The absence of salt-glazed stoneware sherds with a natural clay slipped interior surface suggests that these particular sherds are from stoneware vessels that were made before ca. 1870 (Lebo 1987:140).

The ink bottle basal sherd (see Figure 7, left) has a reddish-brown exterior glaze that extends near the base of the bottle, and it has a pinkish-paste. This particular stoneware vessel was probably made in England in the mid-19th century (ca. 1850s), would have had a paper label, and been stoppered with a cork (see Switzer 1974).

Yellowware began to produced in the 1820s in England, but by the 1840s it was also being manufactured in the United States, especially in the Midwest (Leibowitz 1985:4). The peak production of yellowware vessels was in the 1860s and 1870s,

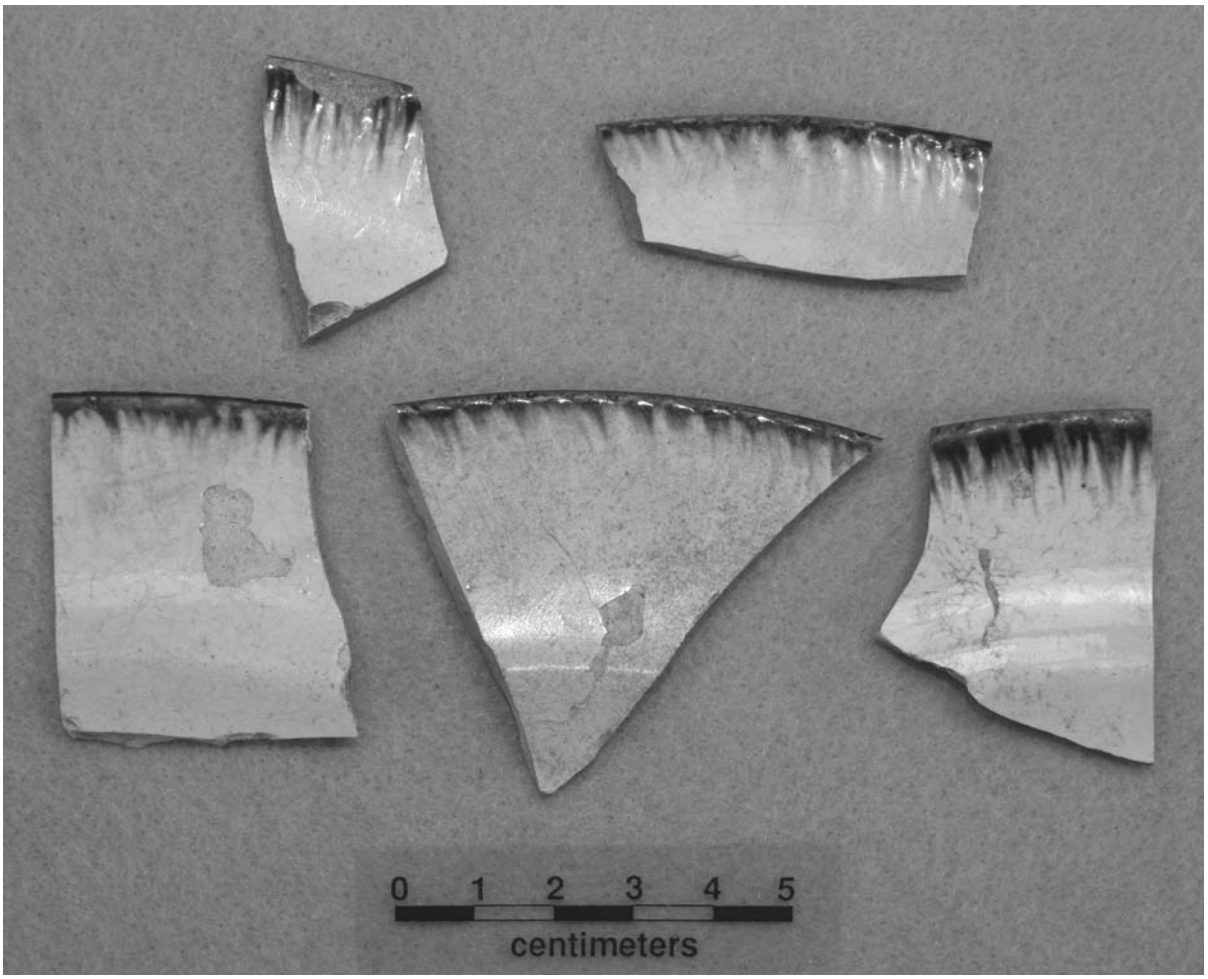

Figure 5. Blue Shell-edged plate or platter rims, non-scalloped, impressed lines. Provenience: top row, left to right: Surface; Unit 3, 0-10 cm; bottom row, left to right: Unit 40, 10-20 cm; Unit 42, 0-10 cm; Unit 19, 20-30 cm.

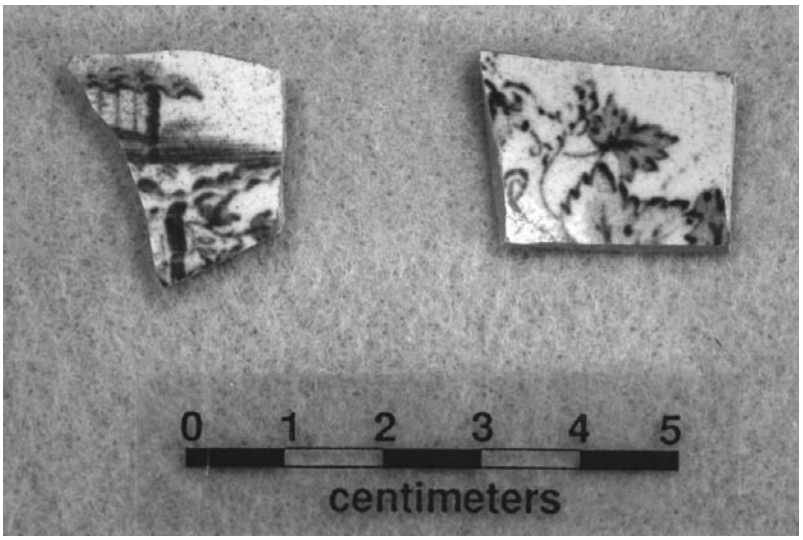

Figure 6. Blue transfer-printed body sherds. Provenience: left to right: Unit 17, 0-10 cm; Unit 1, 0-10 cm.

Table 4. Stoneware, Yellowware, and Ceramic Pipe Sherds from the Browning site.

Provenience	Stoneware	Yellow ware	Stoneware Pipe
ST 12, 0-20	–	–	1 (body)
ST 19, 0-17	–	1	–
Unit 6, 0-10	–	1	–
Unit 8, 0-10	–	1+	–
Unit 15, 0-10	–	1	–
Unit 15, 10-20	–	1	–
Unit 16, 10-20	–	1	1 (rim, elbow pipe)
Unit 24, 0-10	–	1	–
Unit 29, 10-20	1 (ink bottle)	–	–
Unit 30, 20-30	1 (salt glazed)	–	–
Unit 31, 0-10	–	1	–
Unit 32, 0-10	1 (salt glazed)	–	–
Unit 32, 20-30	1 (salt glazed)	–	–
Totals	4	8	2

+with blue and white bands

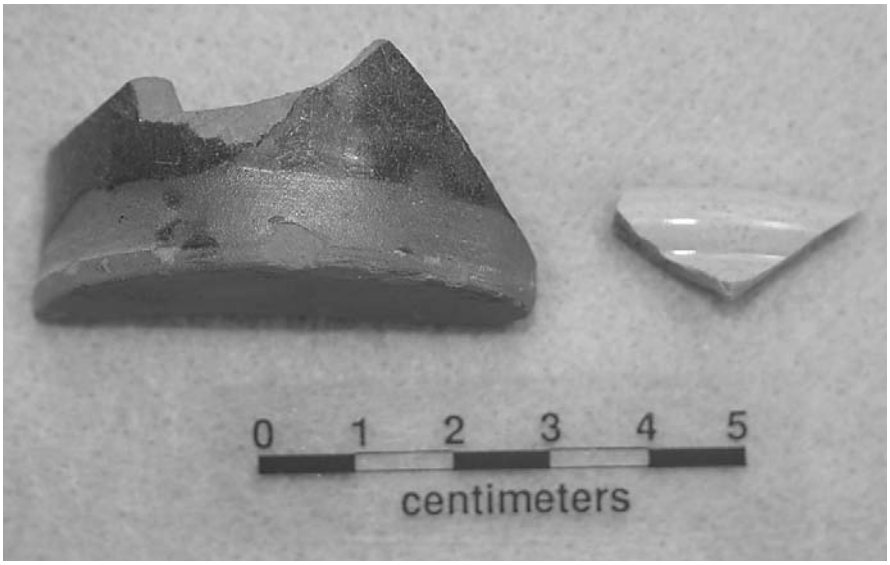

Figure 7. Stoneware sherd and yellowware sherd from the Browning site. Provenience: left to right: Unit 29, 10-20 cm; Unit 31, 0-10 cm.

although it was still being made in the early 1900s (Leibowitz 1985:14).

The pipe sherds from the Browning site are from early to mid-19th century stoneware forms. The elbow-shaped stoneware pipe is a reed stem pipe with a replaceable reed stem, and is mold-made, with a ribbed bowl. These sorts of pipes were made at several pottery kilns in the region, including the J. S. Nash factory in operation in Marion County, Texas, between 1850-1880 (Lebo 1988:282). Similar styles of molded elbow pipes have been recovered from 1837-1846 and 1852-1857 Anglo-American farmsteads in northeastern Texas as well as the 1840s-1860s port of Monterey

Table 5. Bottle Glass.

Provenience (cm bs)	Aqua-colored sherd	Aqua-colored medicine vial sherd
ST 4, 0-20	1	–
ST 8, surface	1	–
Unit 6, 10-20	1	–
Unit 13, 20-30	2	–
Unit 14, 10-20	–	1
Unit 15, 0-10	2	–
Unit 15, 10-20	2	–
Unit 23, 30-40	1	–
Unit 34, 20-30	1	–
Unit 41, 0-10	1	–
Totals	12	1

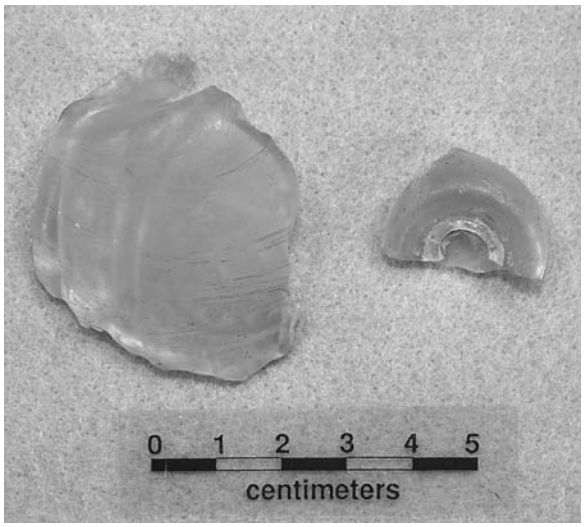

Figure 8. Aqua-colored bottle glass sherds. Provenience: left to right: Unit 41, 0-10 cm; Unit 14, 10-20 cm.

(Nelson and Perttula 2003; Perttula 1989:99; Perttula and Nelson 2010).

All of the bottle glass from the Browning site is aqua-colored (Table 5). One is from a small medicinal vial (Figure 8, right) with an iron-tipped pontil mark on its base (cf. Jones 2000:158-159), marking a method of holding the bottle during the finishing process that was used from the early 19th century until the 1870s. These bottles appear to have been hand-blown and likely held medicines and liquor.

The principal metal artifacts (Table 6) from the Browning site are cut nails (1820-1891, see Wells 2000). Although they are not common, their occurrence suggests that the area of excavations at the site was in the vicinity of a wood-framed building, or a log structure (or in the vicinity of an area where structural/architectural artifacts were discarded), that may have had a mud cat chimney (see Jordan 1978). These nails occur in three small clusters in the western, central, and southern parts of the site (see Figure 1).

Horse and stable artifacts include two horseshoe nails and an iron buckle (Figure 9, bottom row, left). There are also kitchen/domestic artifacts, such as an iron spoon handle (Figure 9, left), and a possible iron shaft/handle pull to a piece of wood furniture or a cabinet (Figure 9, bottom row, right). One plain 2-holed iron button is indicative of clothing/adornment (Figure 9, top row, left).

The two small and thin pieces of tin (see Figure 9, top row, right) may be from a cup, or various sorts of pans. Finally, there are several pieces of unidentifiable strips and fragments of iron that may be evidence of working/fabricating iron tools.

CONCLUSIONS

The Browning site has well-preserved archaeological evidence of a 19th century occupation along

Table 6. Metal Artifacts.

Provenience	Cut Nail	Horseshoe nail/horse tackle/buckle	Utensils	Iron strap frag./UID frag,	Iron button	Tin frag.	Iron shaft/ handle pull
Unit 5, 0-10	–	1 (buckle)	–	–	–	–	–
Unit 6, 0-10	–	–	1 (spoon)	–	–	–	–
Unit 6, 20-30	1	–	–	–	–	–	–
Unit 13, 10-20	–	–	–	–	–	1	–
Unit 13, 20-30	2	–	–	–	–	–	–
Unit 15, 10-20	–	–	–	1	–	–	–
Unit 17, 0-10	1	–	–	–	–	–	–
Unit 19, 10-20	–	–	–	–	–	1	–
Unit 20, 10-20	–	–	–	2	–	–	–
Unit 21, 0-10	–	–	–	2	–	–	–
Unit 22, 10-20	–	–	–	–	1	–	–
Unit 24, 0-10	1	–	–	–	–	–	–
Unit 24, 10-20	–	–	–	1	–	–	–
Unit 28, 30-40	–	–	–	1	–	–	–
Unit 30, 10-20	1	–	–	–	–	–	–
Unit 31, 10-20	–	–	–	2	–	–	–
Unit 33, 20-30	1	–	–	–	–	–	–
Unit 33, 30-40	1	–	–	–	–	–	–
Unit 34, 20-30	4	–	–	2	–	–	–
Unit 35, 10-20	–	1 (nail)	–	1	–	–	–
Unit 36, 10-20	1	–	–	–	–	–	–
Unit 36, 20-30	1	–	–	–	–	–	–
Unit 37, 10-20	2	–	–	1	–	–	–
Unit 38, 10-20	–	–	–	–	–	–	1
Unit 38, 20-30	–	1 (nail)	–	–	–	–	–
Unit 39, 10-20	–	–	1	–	–	–	
Unit 42, 0-10	1	–	–	–	–	–	–
Unit 43, 20-30	–	–	–	1	–	–	–
Totals	17	3	1	15	1	2	1

* This does not include a REM-UMC No. 12 NITRO CLUB shotgun shell from Unit 36 (20-30 cm)

a tributary to the Sabine River, in northern Smith County, Texas. Although no habitation features have been identified in the excavations conducted to date at the site, and the recovery of cut nails and an assortment of kitchen/domestic artifacts (refined earthenware plates and cups, stoneware vessel sherds, and bottle glass sherds) personal items (an iron button), and horse gear (horseshoe nails and an iron buckle), it seems clear that there was a structure built on the site that was lived in by at least one family, probably a farming family. The low density of artifacts across the site, as well as the relatively ephemeral nature of the archaeological deposits (ca. 20 cm thick, covering only ca. 500 m, and little evidence of features such as foundations, pier stones, wells, or privies), suggest this probable farmstead may have been occupied for no more than a generation (ca. 20 years).

The best available evidence that speaks to the chronological age of the Browning site occupation is the decorated refined earthenware. The

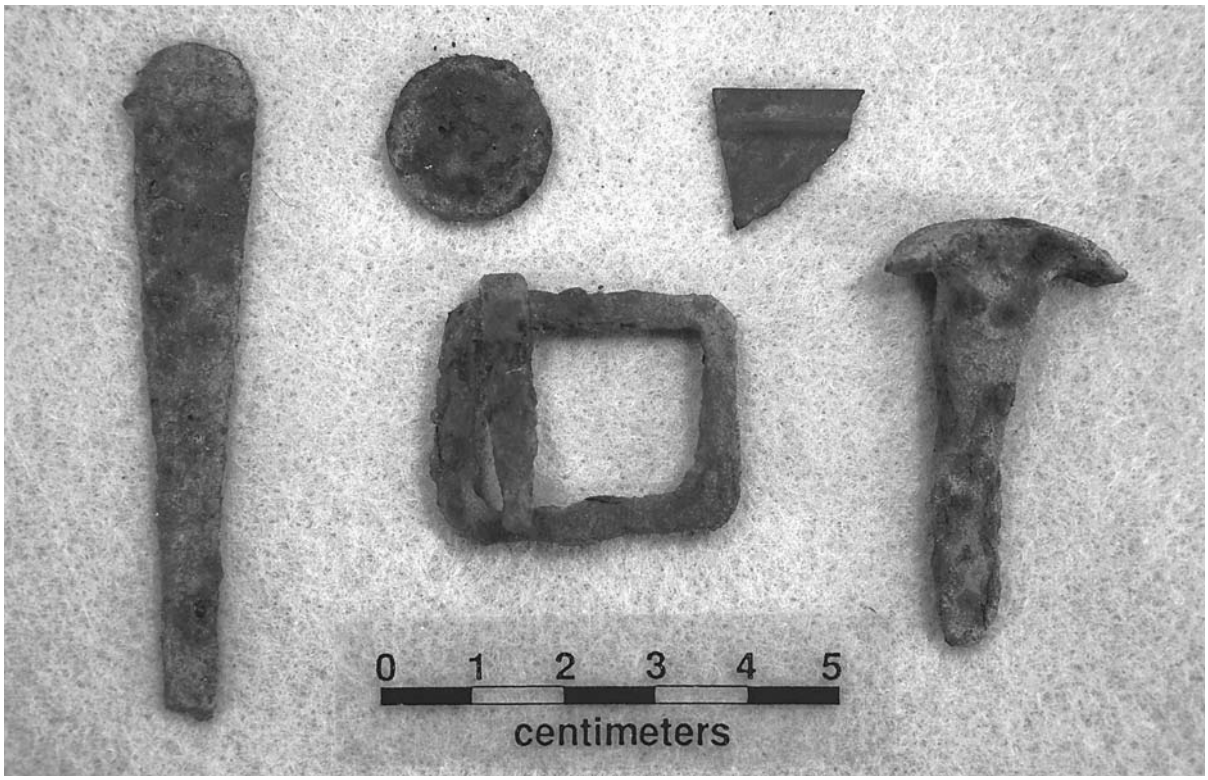

Figure 9. Metal artifacts from the Browning site: left: iron spoon handle; top row, left to right: 2-holed iron button; thin piece of tin (?); bottom row, left to right: metal buckle (horse tack); shaft/handle pull or large forged nail. Provenience: left, Unit 6, 0-10 cm; top row, left to right, Unit 22, 10-20 cm; Unit 13, 10-20 cm; bottom row, left to right: Unit 5, 0-10 cm; Unit 38, 10-20 cm.

preponderance of the evidence (see Table 3) is consistent with a ca. 1840-1860 occupation, one that postdated the Cherokee occupation of East Texas. The historic occupation of the Browning site is most likely the product of an Anglo-American settlement in the Sabine River basin.

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Early to Mid-19th Century Occupation at the Dead Cow Site (41SM324), Smith County, Texas

Timothy K. Perttula

INTRODUCTION

The Dead Cow site is an early to mid-19th century archaeological site located within the northern part (Sabine River basin) of the proposed Republic of Texas 1836 Cherokee Indians land grant in East Texas (Figure 1), generally east of the downtown area of the modern city of Tyler. Cherokee Indians had moved into East Texas by the early 1820s, and "most of the Cherokees cleared land and carved out farms in the uninhabited region directly north of Nacogdoches, on the upper branches of the Neches, Angelina, and Sabine rivers. By 1822 their population had grown to nearly three hundred" (Everett 1990:24).

To date, historic archaeological sites identified as being occupied by the Cherokee during their ca. 1820-1839 settlement of East Texas remain illusive, and to my knowledge no such sites have been documented to date in the region. This article considers, from an examination of the historic artifact assemblage found here, the possibility that the Dead Cow site is a Cherokee habitation site.

BACKGROUND AND SITE SETTING

Mark Walters recorded the site in January 2005 as a scatter of both prehistoric (lithic debris and a single ferruginous sandstone pitted stone) and 19th century artifacts covering a 30 x 50 m area. The Dead Cow site was found after the land had been cleared for use as a pasture by the landowner; the area has also been mined for sand.

The site is on a lower ridge slope (390 feet amsl), with Cuthbert fine sandy loam sediments, overlooking the floodplain of Ray Creek at its junction with Five Mile Branch. Ray Creek is in turn a tributary of Harris Creek, one of the principal tributaries of the Sabine River in this part of East Texas.

19TH CENTURY ARTIFACTS

The small collection of 19th century artifacts from the surface of the Dead Cow site includes 29 stoneware and whiteware rim, body, and base sherds (Table 1) and four bottle glass sherds (Table 2). The most common artifacts in the assemblage are plain whiteware sherds, probably from plates, bowls, and cups.

Salt-glazed stoneware was one of the more commonly employed glazes in the manufacture of utilitarian stoneware (Greer 1981:180). The absence of salt-glazed stoneware sherds with a natural clay slipped interior surface from the Dead Cow site (but taking into account the small size of the artifact assemblage) suggests that this particular stoneware sherd came from a vessel that was made between the 1830s and ca. 1870 (Lebo 1987:140).

The other ceramics from the site are whitewares, and this type of ware was the predominant type of refined earthenware made after the 1830s (Majewski and O'Brien 1987). About 60% of the whiteware sherds are from the undecorated portions of plates and cups. The earthy tones of the annular wares and mocha ware from the site—white, black, gray, and blue bands—suggest these sherds are from early (ca. 1840s) annular ware. The hand-painted sherds have fine-line polychrome floral motifs, including red dots and green petals as well as black branches, consistent with 1840-1860 hand-painted whitewares (Majewski and O'Brien 1987:157).

The one transfer-printed sherd from the Dead Cow site has a purple geometric pattern. The date range of production of this color of transfer-printed ceramics is 1814-1867 (Samford 2000:Table 5). However, the fact that this transfer-printed sherd is from a whiteware plate would seem to indicate that the occupation of the site could have ranged from ca. 1830-1867.

Both shell-edged plate rims are blue in color (see Table 1). With respect to the rim form of the Dead Cow site shell-edged ceramics, which is

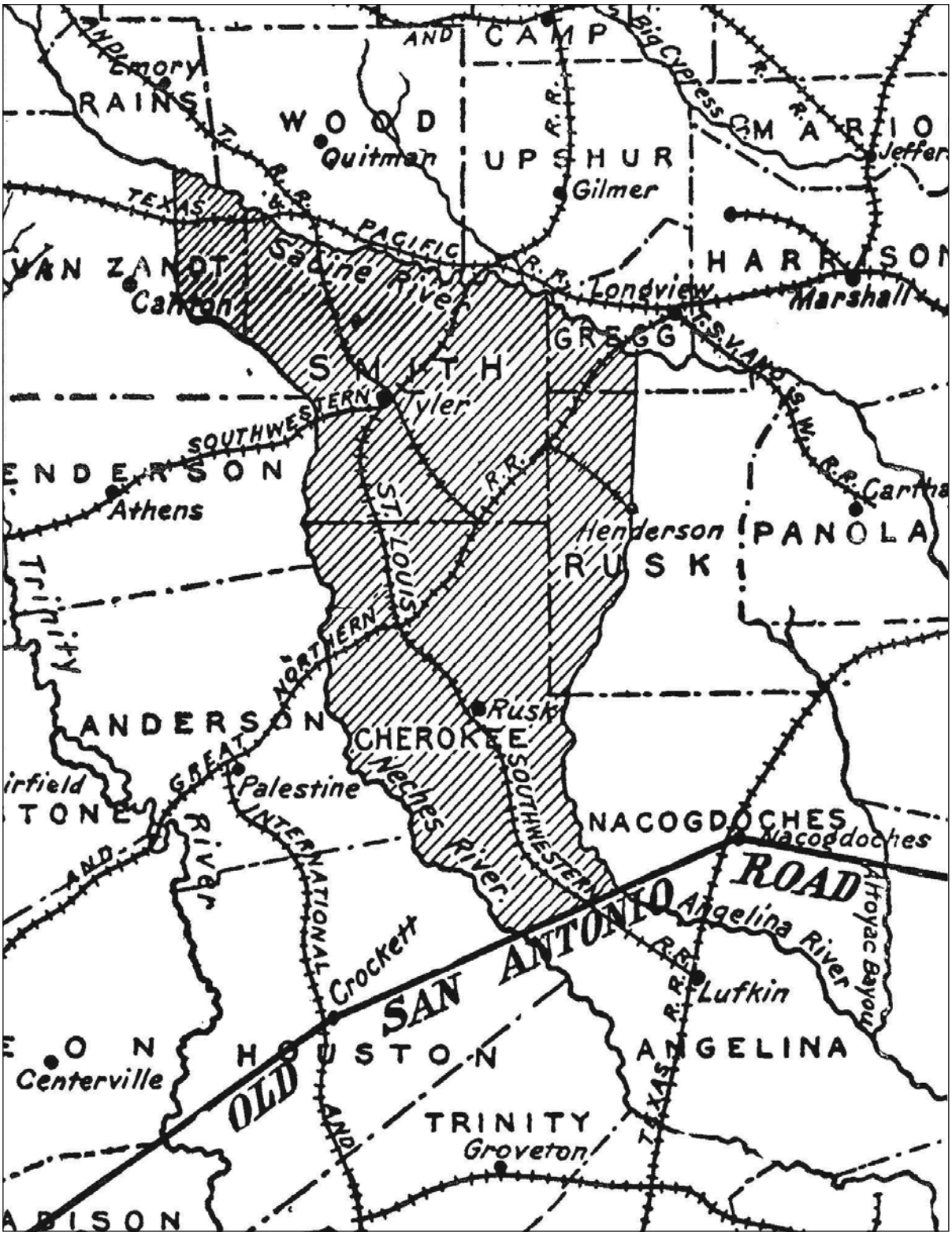

Figure 1. 1836 Cherokee land grant in East Texas.

Table 1. Ceramic Sherds from the Dead Cow site.

Artifact category	No.
Salt-glazed stoneware sherd	1
Annular ware sherds, whiteware	3
Mocha ware sherd, whiteware	1
Hand-painted sherds, whiteware	3
Transfer-printed sherd, whiteware	1
Blue shell-edged sherds with impressed lines, non-scalloped lip, whiteware	2
Plain whiteware sherds	17
Plain whiteware rim sherd with impressed lines, non-scalloped lip	1
Totals	29

chronologically sensitive (cf. Hunter and Miller 1994, 2009), both have unscalloped rims and impressed lines (ca. 1830-1860). Hunter and Miller (2009:13) have more recently suggested that this form of rim on shell-edged plates was being made by the 1840s, while the earlier symmetrical scalloped shell-edged ware continued to be made into the 1830s; this earlier form is absent in this small artifact sample.

The few pieces of bottle glass from the Dead Cow site are from hand-blown bottles of several different colors: aqua, colorless, and olive green (Table 2). These are likely from bottles that contained liquor (beer and wine) or patent medicines. None of the bottle glass sherds have embossed lettering, suggesting they predate 1850, when that technique began to be used (Newman 1970:74).

Table 2. Bottle Glass from the Dead Cow site.

Artifact category	No.
colorless bottle glass, patinated	1
olive green bottle glass	2
aqua bottle glass	1
Totals	4

CONCLUSIONS

A small assortment of 19th century artifacts, stoneware sherds, refined earthenware sherds, and bottle glass have been recovered from the Dead Cow site in northern Smith County, and within the boundaries of the proposed 1836 Cherokee land grant. Could this be an archaeological site occupied by the Cherokee Indians during their short stay (ca. 1820-1839) in East Texas?

On the basis of the kinds of artifacts found at the site, no determination of ethnic affiliation can be made. The same types of goods found at the site would have been available to both Cherokee (or other Native American groups in East Texas, including the Caddo) and Anglo-American settlers living in this same area in the 1830s, and no archaeological or historical information is available that suggests that one group or the other had a particular preference for a specific kind of stoneware or refined earthenware. The site also does not contain any historic Cherokee ceramics (of the late Qualla series, made until at least the late 19th century, see Riggs and Rodning 2002). The best available evidence that speaks to the possible ethnic affiliation of the site is the decorated refined earthenware. The preponderance of the evidence regarding the chronological age of these sherds would be consistent with a ca. 1840-1860 occupation, one that would have postdated the Cherokee occupation of East Texas. If the site postdated the Cherokee occupation, it is almost certainly the product of an Anglo-American settlement in the Sabine River basin.

Further archaeological investigations—including shovel testing and systematic metal detecting—seem warranted to gather a larger assemblage of 19th century artifacts from controlled subsurface contexts. A larger assemblage of artifacts would likely contain more chronologically-specific specimens that could refine or refute the findings suggested here. Particular kinds of artifacts may also be found—such as glass beads, silver artifacts or evidence of its workmanship, metal arrow points or other tools made from barrel or kettle scrap, or perhaps even sherds of Cherokee ceramics—that would lend much-needed support to the notion that the Dead Cow site was occupied by the Cherokee Indian peoples in the early part of the 19th century.

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Analysis of the Prehistoric Artifacts from the Pace McDonald Site (41AN51), Anderson County, Texas

Timothy K. Perttula

INTRODUCTION

The Pace McDonald site (41AN51) is a poorly known prehistoric Caddo mound center on Mound Prairie Creek in Anderson County, Texas, in the upper Neches River Basin (Pearce and Jackson 1933; Newell and Krieger 1949; Story 2000; Thurmond 1978). With the permission of one of the landowners, Mr. Johnny Sanford, the Friends of Northeast Texas Archaeology are planning on initiating an archaeological research effort at the site in 2010. The ultimate purpose of this work is to learn more about the native history of this mound center—when it was occupied and used, and by which prehistoric Caddo group—its intra-site spatial organization, and ultimately obtain site-specific archaeological information that can help understand the site's place and role in the Caddo prehistory of this part of East Texas.

It will be a long-term effort to accomplish these tasks. We intend to rely upon both archaeological (i.e., survey, surface collections, systematic shovel testing, and focused hand excavations) and archaeogeophysical disciplines (especially to complete a magnetometer survey of as much as the site as possible, as this has become an important aspect of Caddo archaeological investigations, see Lockhart [2007], Walker and Perttula [2008], Walker [2009], and McKinnon [2010]), to gather relevant archaeological information on the location and character of Caddo house features and outdoor activity areas, as well as the associated material culture remains and preserved plant and animal remains.

One key aspect of our work is to understand the characteristics of the Caddo material culture from the Pace McDonald site, since this will have a large bearing on the age of the Caddo occupation, which has been a matter of dispute for some years. In this article I summarize the results and findings of a recent examination of the site's prehistoric artifacts (especially its prehistoric Caddo artifacts) in the collections of the Texas Archeological Research Laboratory at the University of Texas at Austin (TARL).

SITE SETTING

The Pace McDonald site is situated on a large and relatively flat upland landform (420-430 feet amsl) immediately north of Mound Prairie Creek, in central Anderson County, Texas, in the East Texas Pineywoods (Diggs et al. 2006). Mound Prairie Creek is a southward- and eastward-flowing tributary to the Neches River; the confluence of these two streams lies about 20 km to the east of the site. When the site was first visited and recorded in the 1930s, it was in a large cotton field (Pearce and Jackson 1933:2). In more recent years, it is in an improved pasture, and the site is apparently owned by several landowners, including the Texas Historical Commission (see below).

The site is on an expanse of Elrose fine sandy loam, 1-3 percent slopes (Coffee 1975:17 and Sheet 34). This is a relatively fertile upland soil that "formed under a pine-hardwood forest in stratified marine and alluvial sediment high in glauconitic sandstone" (Coffee 1975:17 and Table 2). A typical profile of the Elrose fine sandy loam is a 25 cm thick A-horizon that ranges from reddish-brown to yellowish-red fine sandy loam developed atop a thick (ca. 165 cm) Bt horizon composed of red, dark red, yellowish-red, or strong brown sandy clay loam and sandy loam. The underlying C horizon is a massive red loamy fine sand with an occasional fragment of glauconitic sandstone.

PREVIOUS INVESTIGATIONS AT THE PACE MCDONALD SITE

Limited archaeological investigations at the Pace McDonald site since the 1930s indicates that the site covers ca. 11 acres (45,000 m^2) of the upland landform adjacent to Mound Prairie Creek. The site has two deliberately constructed prehistoric Caddo earthen mounds, a large and associated habitation area (including several midden areas) and surface scatters of ceramic and lithic artifacts, and probably at least one associated cemetery area (Figure 1). There are also a number of small depressions, with an average depth of 30-60 cm, visible on the landform that may represent borrow pits for sediments used by the Caddo to build the two earthen mounds. In 1978, the depressions ranged from 6.1-25 m in diameter (Thurmond 1978).

Archaeologists from the Department of Anthro-

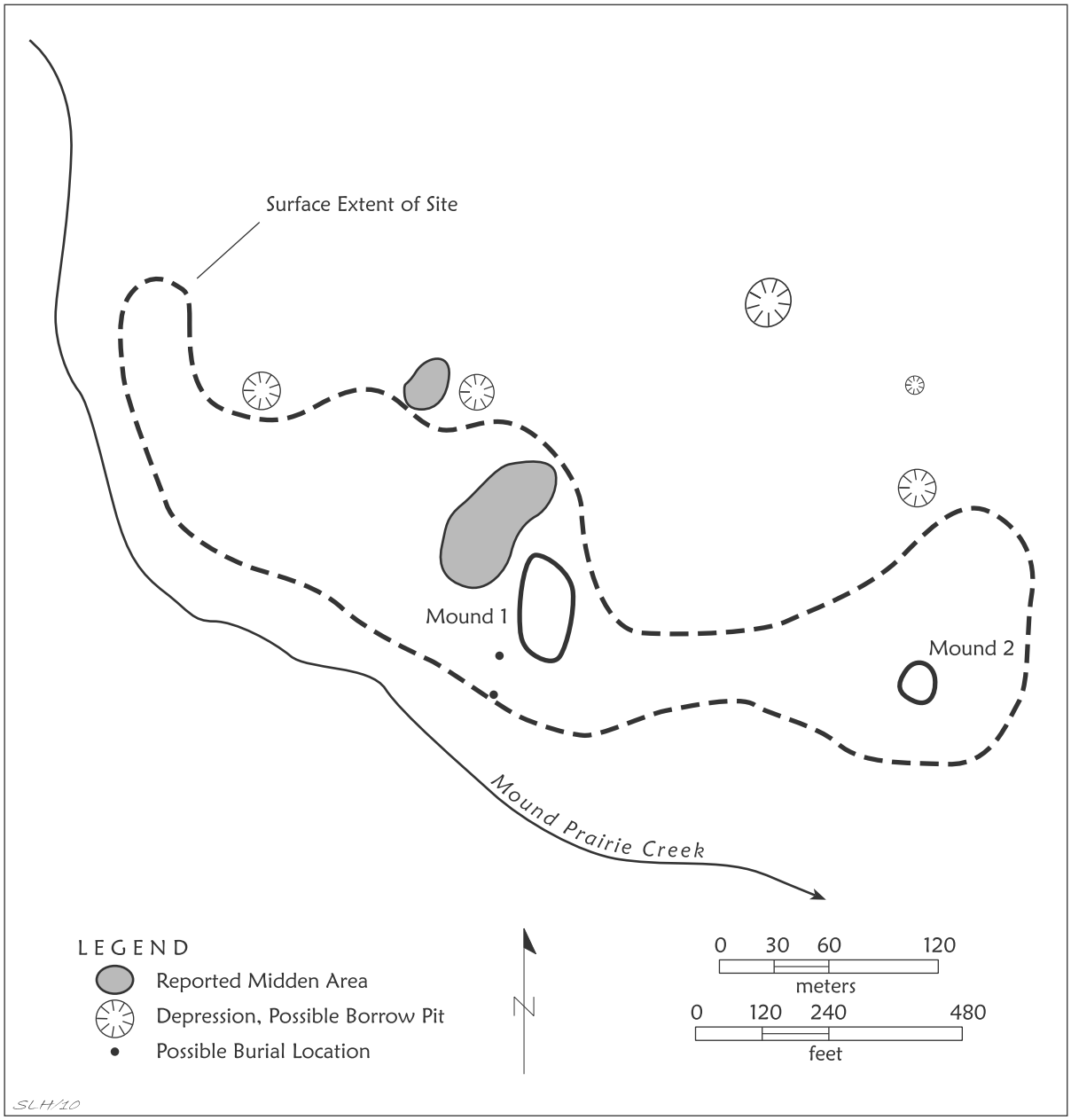

Figure 1. Map of the Pace McDonald site (41AN51), based on a 1978 sketch map by Ulrich Kleinschmidt and Pete Thurmond, and other information in the Texas Archeological Research Laboratory, The University of Texas at Austin files.

pology at The University of Texas at Austin (UT) conducted surface collections and test excavations at the Pace McDonald (or Royal Place) site in September 1933 (Pearce and Jackson 1933). They noted two mounds, Mound No. 1 and Mound No. 2, spaced about 280 m apart, in the field, as well as a surface scatter of ceramic and lithic artifacts, especially in an area ca. 130-280 m northwest of Mound No. 1 (Pearce and Jackson 1933:6). Mound No. 1 measured 58.2 m in length (north-south) and 37.5 m in width, and stood approximately 3 m in height. Mound No. 2 was 18.3 m in diameter and stood 1.5 m in height.

UT archaeologists obtained a collection of chipped and ground stone tools as well as a ceramic pipe from Mr. George W. McIntyre, who was then living on the site and cultivating cotton on the place; he had found most of his artifacts in the area northwest of Mound No. 1. They also collected a ground stone celt ca. 46 m southeast of Mound No. 1, and a small conch shell ca. 91 m south of this same mound (Pearce and Jackson 1933:6-7).

Jackson led the excavations of both mounds. In Mound No. 1, a circular shaft ca. 2.5 m in diameter was excavated by shovel to a depth of 3.28 m below the mound surface (bs). From Jackson's descriptions, there were several mound fill zones and perhaps two Caddo house archaeological deposits in the mound. From 0-147 cm bs, there were red (0-102 cm bs) sandy clay loam and yellow (102-147 cm bs) clay mound fill or capping zones, with few artifacts; these soils appear to be Bt-horizon sediments that were collected and used to finish the earthen mound. These redistributed sediments capped a 2.5 cm thick (147.3-149.9 cm bs) sandy red clay, that was described as "fairly hard. Seemed to be a floor level as it extended at the same thickness over the entire dug area. No midden material" (Pearce and Jackson 1933:6). If this was a floor level, the structure associated with it was not used for a lengthy period of time—given the absence of midden deposits—nor was it burned down—given the apparent absence of charcoal on the floor or in the yellow clay above it—before being dismantled and covered over with 147 cm of mound deposits.

This apparent clay floor to a structure was capped above a reddish-brown sandy loam mound fill zone deposit that extended from 149.9-213 cm bs. This fill zone capped a 49 cm thick deposit (213-262 cm bs) of ash, "with charcoal, lumps of red clay and some sand. Potsherd at top of the ashes; no other midden material" (Pearce and Jackson 1933:6). This ash deposit may represent a deliberate accumulation of ash within a confined space, as with the ash mound at the A. C. Saunders site (41AN19, see Jackson 1936; Kleinschmidt 1982), or an accumulation of ash inside a structure that was burned down, as with the ash temple at the Crenshaw site (Schambach 1996). The available archaeological information from these early excavations is equivocal, but I suspect this deposit represents ash built up within a structure, along with the dismantled and burned remnants of that structure, mixed in with relatively clean earth.

The ashy deposits rested on a red sandy clay and red clay that extended from 262-328 cm bs in the excavations. These deposits likely represent the buried Bt horizon of the Elrose fine sandy loam soil under Mound No. 1. If that is the case, then apparently the immediately overlying ash accumulation rested on a prepared surface wherein the A-horizon was scraped away first (a common Caddo practice in and under locations where earthen mounds are to be built), as there are no buried A-horizon (a fine sandy loam) underlying the ash deposit.

A "test hole" of unknown size was excavated by Jackson in Mound No. 2 (Pearce and Jackson 1933:10). These explorations encountered a thick layer of hard-packed ash between 15-56 cm bs, with gravels and lumps of red clay, but no apparent midden materials. The deposits above that (0-15 cm bs) appear to represent the plowed portion of the ash deposit. As with the concentrated ash deposit encountered in Mound No. 1 between 213-262 cm bs, the Mound No. 2 ash zone probably also represents a deliberate accumulation of ash within a confined space, such as a building, or an accumulation of ash inside a structure that was likely dismantled, abandoned, and destroyed. This deposit may represent ash built up within a structure, along with the dismantled (but not burned) remnants of that structure, mixed in with relatively clean earth.

The ash deposit rested atop a 43 cm thick (56-99 cm bs) zone of thin lenses (1-8 cm) of red and yellow clay and sandy soil, probably mound fill zones. Immediately below the ash, however, Pearce and Jackson (1933:10) noted there was a 20 cm thick (56-76 cm bs) red clay zone; this may represent the initial mound platform of Mound No. 2, or the initial mound platform included both the red clay as well as the underlying red sandy lens (76-99 cm bs) if the latter does not represent a buried A-horizon underneath the mound. Excavations continued to 152 cm bs, and the sediments encountered there

were described by Pearce and Jackson (1933:10) as a "bluish mixture bearing streaks of yellow, red and gray. The bluish-gray clay-like composition is sticky and has a greasy feel." This deposit under the mound may represent undisturbed C-horizon deposits.

The next archaeological investigations at the Pace McDonald site did not take place until the late 1970s when Pete Thurmond and Ulrich Kleinschmidt examined the site and took a surface collection, made a pace map of the surface distribution of prehistoric artifacts, the two earthen mounds, and the locations of several possible small borrow pits (see Thurmond 1978). They noted that the site appeared to be well-preserved, with little evidence of looting at that time. This work led to the placement of the Pace McDonald site on the National Register of Historic Places a few years later, and the purchase of one acre containing Mound No. 1 by the Texas Historic Commission in the early 1980s.

Despite the absence of professional archaeological work at the site between 1933-1978, the Pace McDonald site had not been forgotten by East Texas Caddo archaeologists. Alex D. Krieger, University of Texas archaeologist, had examined the collections obtained by A. T. Jackson from the site as part of his renowned study of the early Caddo mound center at the George C. Davis site (41CE19; Newell and Krieger 1949:196). According to Story (2000:22), Krieger "believed that both the Alto and Frankston foci were represented at the site, but also recognized that it had not been adequately explored."

Following the 1978 surface investigations by Thurmond and Kleinschmidt at the Pace McDonald site, these archaeologists returned to the site in March 1981 to investigate the reported erosion on the back slope of Mound No. 1. While they were there, they obtained a surface collection of artifacts from Mound No. 1 and an area to the northwest of the mound.

In March 1984, Kleinschmidt and Susan Lisk of The University of Texas at Austin inspected the site, noting that there were three pot holes (ca. 0.9 m in depth) in Mound No. 1, and also noting that a one lane oil top road had been built that crossed the site. This road had cut through a 10 cm thick midden area ca. 250 m north of Mound No. 1, in the vicinity of possible borrow pit depression 5 (see Figure 1). A second midden area had been encountered by local collectors and landowner who were building a fence just west of Mound No. 1 (see Figure 1). Finally, Kleinschmidt and Lisk were told by local collectors that several prehistoric Caddo burials had been reportedly discovered and excavated at the site.

More information on the reported burials was provided in 1985 and 1986 by another local amateur archaeologist who was familiar with the Pace McDonald site and other archaeological sites along Mound Prairie Creek (TARL files). This amateur archaeologist obtained information that three prehistoric Caddo burials (Burials 1-3) had been excavated not far to the west and south of Mound No. 1 (see Figure 1). These burials were in grave pits approximately 75-90 cm deep that were oriented east-west or north-south; the human remains were reported to be in a poor preservation condition. The Caddo burials had funerary offerings, including plain and decorated ceramic jars, bowls, and bottles (n=9, 1 to 4 vessels per burial) and stone artifacts: a celt, a hammerstone, a pitted stone, and nine round stones (possible polishing stones?). Jan Guy of TARL identified three of the vessels from Burials 1 and 2 as a Hickory Engraved bottle, a cf. Bowles Creek Plain bowl, and a cf. Weches Fingernail Impressed, *var. Alto* bowl (see Stokes and Woodring 1981:185-186 and Figures 22m and 23b-c); there were no photographs available of the vessels from Burial 3. Jan Guy (TARL Pace McDonald files, 3/86) suggested that the vessels "date to either the early or Middle Caddoan periods." None of these funerary objects have been properly documented, and it is currently unknown who has control of these artifacts from the Pace McDonald site.

Finally, the last mention in the records at TARL of a professional investigation of the Pace McDonald site was a visit by personnel from the Office of the State Archeologist at the Texas Historical Commission in March 1996. They noted that Mound No. 1, owned by the Texas Historical Commission, was badly overgrown.

COLLECTIONS AT THE TEXAS ARCHEOLOGICAL RESEARCH LABORATORY

The prehistoric artifacts from the Pace McDonald site in the Texas Archeological Research Laboratory collections consists of a variety of ceramic and lithic artifacts. The ceramics include plain and decorated ceramic vessels sherds (n=975) and a ceramic pipe. There are also chipped stone tools in the collection, including dart points (n=44), arrow points (n=31), two bifaces, and a single flake tool, as well as ground stone tools (n=6), and lithic debris

(n=11). The collection also contains animal bone (n=5) and a single unmodified marine conch shell.

Ceramic Vessel Sherds

Combining the various TARL collections obtained from the Pace McDonald site from the early 1930s to the mid-1980s, including surface collections, the 1933 excavations, and donated collections, the collections from the site amount to a total of 975 ceramic vessel sherds. Approximately 77% of the vessel sherds are from undecorated vessels or the undecorated portions of decorated vessels; 22.6% of the sherds, including both fine wares (engraved and red-slipped sherds) and utility wares (wet paste decorations), are decorated (Table 1).

Plain to decorated sherd ratios (P/DR) from numerous Caddo sites in East Texas appear to hold considerable promise as an independent means of establishing the age of Caddo ceramic-bearing components (provided samples of plain and decorated sherds are larger than about 200-300 sherds per site; the Pace McDonald site meets this data threshold). When P/DR ratios from different ceramic assemblages can be linked with absolute ages as established by radiocarbon dating from those assemblages, this should allow further refinements in how P/DR ratios change through time in East Texas Caddo sites. Looking at Early Caddo to Historic Caddo ceramic assemblages in the region through time, ceramic assemblages have lower proportions of undecorated sherds through time and thus a lower P/DR ratio (Perttula 2008a:9, 315-317). Analyzed pre-A.D. 1200 sites (n=3 assemblages) have plain/decorated sherd ratios that range between 2.97-4.80. Middle Caddo sites (ca. A.D. 1200-1450, n=7) have ratios that range between 1.30-2.65. In known Late Caddo sites (n=11) in the Neches, Angelina, and Sabine river basins, by contrast, the P/DR ranges from only 1.30-0.47. Finally, post-A.D. 1680 Caddo occupations in the Neches-Angelina river basin have P/DR ratios that range from 0.20-0.30. The plain to decorated sherd ratio (P/DR) is a relatively high 3.43 at Pace McDonald, suggesting the ceramic assemblage may date from pre-A.D. 1200 times; the decorated sherd assemblage, however, suggests a post-A.D. 1200 age (see below).

There are 39 rim sherds in the vessel sherd collection. More than 51% are from decorated utility ware vessels (n=20); another 38.5% are from plain vessels (n=15), and only 10.3% are from fine ware vessels (n=4, from both engraved and red-slipped vessels). One bowl or carinated bowl with interior and exterior red-slipped surfaces has a distinctive Redwine mode rim treatment (see Walters 2010:78).

The fine ware sherds from the Pace McDonald site have both red-slipped (40% of the fine ware sherds), red-slipped and engraved (2%), and engraved (58%) decorative elements (Table 2). The proportion of red-slipped sherds (from bottles and bowls/carinated bowls, especially the latter) is considerable for an upper Neches River basin Caddo site (Perttula 2008b). In East Texas generally, the manufacture and use of red-slipped pottery unembellished with engraved decorations is most commonly seen in Middle Caddo ceramic traditions, whether it be in Caddo sites on the Red River or in parts of the upper Sulphur, Big Cypress, and Sabine River basins. Seventy percent of the red-slipped sherds are slipped on both the exterior and interior surfaces, while 25% are slipped only on the exterior surfaces; these latter sherds are from bottles. Sherds from vessels slipped only on the interior vessel surface (probably bowls) are not common (5%).

There are a wide variety of engraved decorative elements in the Pace McDonald fine ware ceramics (Table 3). Of those that have more than just straight or parallel lines of uncertain orientation, this includes cross-hatched engraved lines; sherds with various kinds of hatched (Figure 2b, d, f-g, i, k-l) or cross-hatched (Figure 2a, h) elements. One distinctive bottle sherd has excised pendant triangles and hatched zones and hatched triangles (Figure 2e). Other distinctive engraved sherds in the assemblage include a body sherd with panels filled with opposed diagonal engraved lines (Figure 2c) and a rim with vertical and opposed diagonal engraved lines (Figure 2j).

Notably absent in the engraved fine wares at the site are types such as Holly Fine Engraved, Spiro Engraved, or Hickory Engraved (Suhm and Jelks 1962). These fine ware engraved types are considered material culture hallmarks of the Early Caddo period (as well as various decorated utility wares, and the Alto phase (e.g., Story 2000:14) in East Texas. Their absence at the Pace McDonald site certainly would be indicative of the fact that the Caddo occupation here postdates the Early Caddo period.

Among the Pace McDonald utility ware sherds are several different kinds of decorative methods represented, as well as distinctive decorative elements within each of the larger decorative methods classes (Table 4). These principally include sherds from vessels decorated with incised lines (43.5% of

Table 1. Ceramic Vessel Sherds.

Sherd Type	No.	Percent
Plain rim	15	1.5
Plain body	679	69.6
Plain base	61	6.2
Subtotal, Plain sherds	755	77.4
Decorated fine ware	50	5.1
Decorated utility ware	170	17.5
Subtotal, Decorated sherds	220	22.6
Totals	975	100.0

the utility wares), sherds with punctated elements (42.9%), and sherds from vessels decorated with incised-punctated elements (7.1%). Minor decorative methods documented in the site's utility wares are brushed (2.9%), pinched (2.4%), and appliqued (1.2%) categories (Table 4).

Among the incised utility wares, the most popular decorative elements include widely-spaced cross-hatched lines (likely either from Canton Incised or Dunkin Incised vessels), opposed incised lines (Figure 3h, also probably from Canton Incised or Dunkin Incised vessels), parallel or straight incised lines of uncertain orientation (possibly body decorative treatments), and diagonal or horizontal incised lines on the vessel rim. These incised sherds may be from Davis Incised, Dunkin Incised, or Canton Incised vessels, or from other Caddo ceramic types with incised elements that have not been identified to date in the region. Most of the incised rim sherds in the assemblage are from cross-hatched incised vessels (see Table 4).

The punctated sherds from the site are comprised of a mixture of tool (55% of the punctated sherds, including tool punctations arranged in linear rows), fingernail (33%), large and small circular (11%), and cane (1%) punctated elements (see Table 4). The only punctated rim sherds (n=3) have rows of tool punctations on them. The majority of punctated sherds are body sherds, indicating that the bodies of many utility ware vessels are decorated with punctations; the decoration on the rims of these vessels was probably not punctated, but more likely had incised decorative elements (cf. Dunkin Incised or Weches Fingernail Impressed), typical of Caddo utility wares that have different rim and body decorations.

The incised-punctated sherds at the Pace McDonald site, including all of the incised-punctated rim sherds and the one vessel section (see Table 4), have diagonal or opposed diagonal incised lines with associated triangular zones filled with tool punctations or cane punctations (see Figure 3a-b, d). These utility wares are likely from Canton Incised and Pennington Punctated-Incised vessels. Other sherds have a zone of punctations adjacent to simple geometric incised elements (see Figure 3e-f), with the punctated elements apparently limited to the body of the vessel and the incised elements restricted to the rim. One sherd has a narrow incised zone or band filled with cane punctations (see Figure 3c); this decorative element has been documented on Pennington Punctated-Incised vessels (see Suhm and Jelks 1962:Plate 61d-e).

Table 2. Decorated sherds from the Pace McDonald site.

Decorative Method	No.	Percent
Fine Ware		
Engraved	29	13.2
Engraved-red slipped	1	0.5
Red-slipped	20	9.1
Utility Ware		
Incised	74	33.6
Tool punctated	37	16.8
Fingernail punctated	24	10.9
Incised-punctated	12	5.5*
Circular punctated	8	3.6
Brushed	5	2.3
Pinched	4	1.8
Linear punctated	3	1.3
Cane punctated	1	0.5
Appliqued	1	0.5
Appliqued-punctated	1	0.5
Totals	220	100.0

*There is also one vessel section comprised of 12 body sherds and one rim sherd; it is not included in the total number of decorated sherds.

Table 3. Decorative elements in the fine ware sherds.

Decorative elements	No.	Percent
Interior red slip	1	2.0
Interior/exterior red slip*	14	28.0
Exterior red slip**	5	10.0
Straight engraved line	5	10.0
Straight engraved line and hatched pendant triangle	1	2.0
Parallel engraved lines, widely-spaced	1	2.0
Parallel engraved lines, excised pendant triangles, hatched band, and hatched triangle**	1	2.0
Horizontal and diagonal lines	1	2.0
Horizontal line and diagonal hatched triangle	1	2.0
Horizontal line and cross-hatched engraved pendant triangle+	1	2.0
Opposed engraved lines	1	2.0
Vertical and diagonal opposed lines+	1	2.0
Hatched curvilinear zone	1	2.0
Hatched oval++	1	2.0
Hatched straight zone	1	2.0
Hatched triangular zone	2	4.0
Engraved panel with diagonal and widely-spaced lines**	1	2.0
Opposed engraved panels**	1	2.0
Cross-hatched engraved lines	4	8.0
Cross-hatched engraved triangles**	1	2.0
Curvilinear engraved line	1	2.0
Curvilinear engraved lines and hatched triangles**	1	2.0
Curvilinear engraved line and ext. red slip**	1	2.0
Curvilinear and parallel engraved lines	1	2.0
Oval engraved lines	1	2.0
Total	50	100.0

*includes one Redwine mode rim; **bottle sherds; +=rim sherd; ++=lip notched rim

There is one Weches Fingernail Impressed, var. *Weches* body sherd (see Stokes and Woodring 1981) in the assemblage. This particular sherd has crescent-shaped punctated elements above or adjacent to a single straight incised line.

A distinctive characteristic of the Pace McDonald utility wares is the occurrence of sherds from brushed, pinched, and appliqued jars, but only in low frequencies (see Table 4). These three categories of decorated utility wares together comprise only 6.5% of the assemblage. They apparently represent different means of rim and/or body decoration on jars, with parallel (likely vertical) brushing on jar bodies; vertical appliqued fillets on jar bodies; and vertical pinched rows on both the rim and body of jars. The typological identification of the brushed and appliqued wares is currently uncertain. The pinched jars may be from Killough Pinched vessels (see Suhm and Jelks 1962:Plate 46f).

The very low frequency of brushed pottery at the Pace McDonald site would seem to be indicative of the fact that the site was not used in the Frankston phase (ca. A.D. 1400-1650), since brushed utility wares like Bullard Brushed account for at least 50-80% of all the decorated sherds in upper Neches River basin Frankston phase assemblages (Perttula 2008b:Table 6-38). By comparison to the Pace McDonald site, and its less than 3% brushed sherds in the decorated sherd

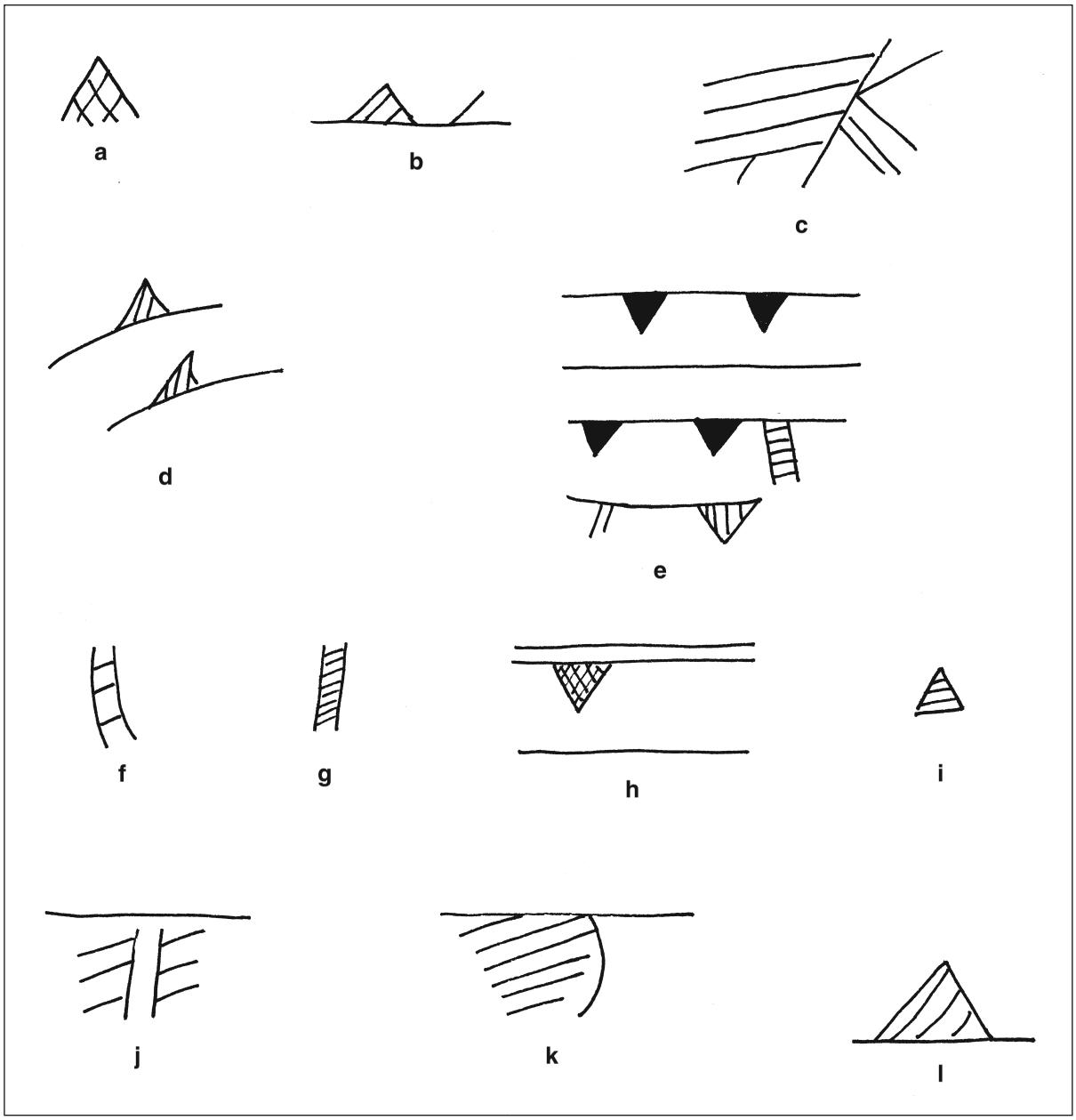

Figure 2. Selected decorative elements on engraved fine ware sherds from the Pace McDonald site: a, cross-hatched triangle; b, straight line and hatched pendant triangle; c, panels with opposed diagonal lines; d, curvilinear line with hatched triangles; e, parallel lines, excised triangles, hatched band, and hatched triangles; f, hatched curvilinear zone; g, hatched straight zone; h, horizontal lines and cross-hatched pendant triangle; i, hatched triangle; j, vertical and diagonal opposed; k, hatched oval; l, horizontal line and diagonal hatched triangle.

assemblage, the well-dated A.D. 1320-1400 Middle Caddo component at the Lang Pasture site (41AN38), brushed sherds comprise 26% of the utility wares, but by the early 15th century A.D., "Caddo potters in the upper Neches River basin began to manufacture considerable numbers of jars with brushed vessel bodies and rims" (Perttula 2008b:6-247).

There are also three perforated body and base sherds in the Pace McDonald collection. These likely represent spindle whorls, are disk-shaped sherds (usually base sherds) that have a central perforation or hole drilled in them. The spindle whorl would have been affixed on a spindle to help maintain its rotary motion during spinning activities. The

Table 4. Decorative elements in the utility ware sherds.

Decorative methods and elements	No.	Percent
Appliqued fillets	1	0.6
Appliqued fillets and tool punctated rows	1	0.6
Subtotal, appliqued	2	1.2
Brushed, parallel	5	2.9
Subtotal, brushed	5	2.9
Cross-hatched incised lines+++	22	12.9
Diagonal incised lines*	4	2.4
Dunkin Incised	1	0.6
Horizontal incised lines*	2	1.2
Incised zone	2	1.2
Opposed incised lines	15	8.8
Parallel incised lines	19	11.2
Straight incised line	9	5.3
Subtotal, incised	74	43.5
Vertical pinched ridges+	4	2.4
Subtotal, pinched	4	2.4
Cane punctated	1	0.6
Circular punctated, large	6	3.5
Circular punctated, small	2	1.2
Fingernail punctated rows	24	14.1
Linear punctated rows	3	1.8
Tool punctated rows++	36	21.2
Tool punctated, single	1	0.6
Subtotal, punctated	73	42.9
Diagonal incised lines and cane punctated* filled triangles	2	1.2
Diagonal incised line above tool	1	0.6
Horizontal incised line above tool punctated zone	1	0.6
Horizontal incised line above fingernail punctates (on body)	1	0.6
Incised zone filled with cane punctates	1	0.6
Opposed incised lines and tool punctated zone	1	0.6
Opposed diagonal incised lines and tool punctated-filled triangles	2**	1.2
Straight incised line adjacent to zone of small circular punctates	2	1.2
Weches Fingernail Impressed, *var. Weches*	1	0.6
Subtotal, incised-punctated	12	7.1
Totals	170	100.0

*all rim sherds; **one rim sherd, also includes a vessel section of 13 conjoined rim and body sherds; +includes one rim sherd; ++includes three rims; +++includes six rims

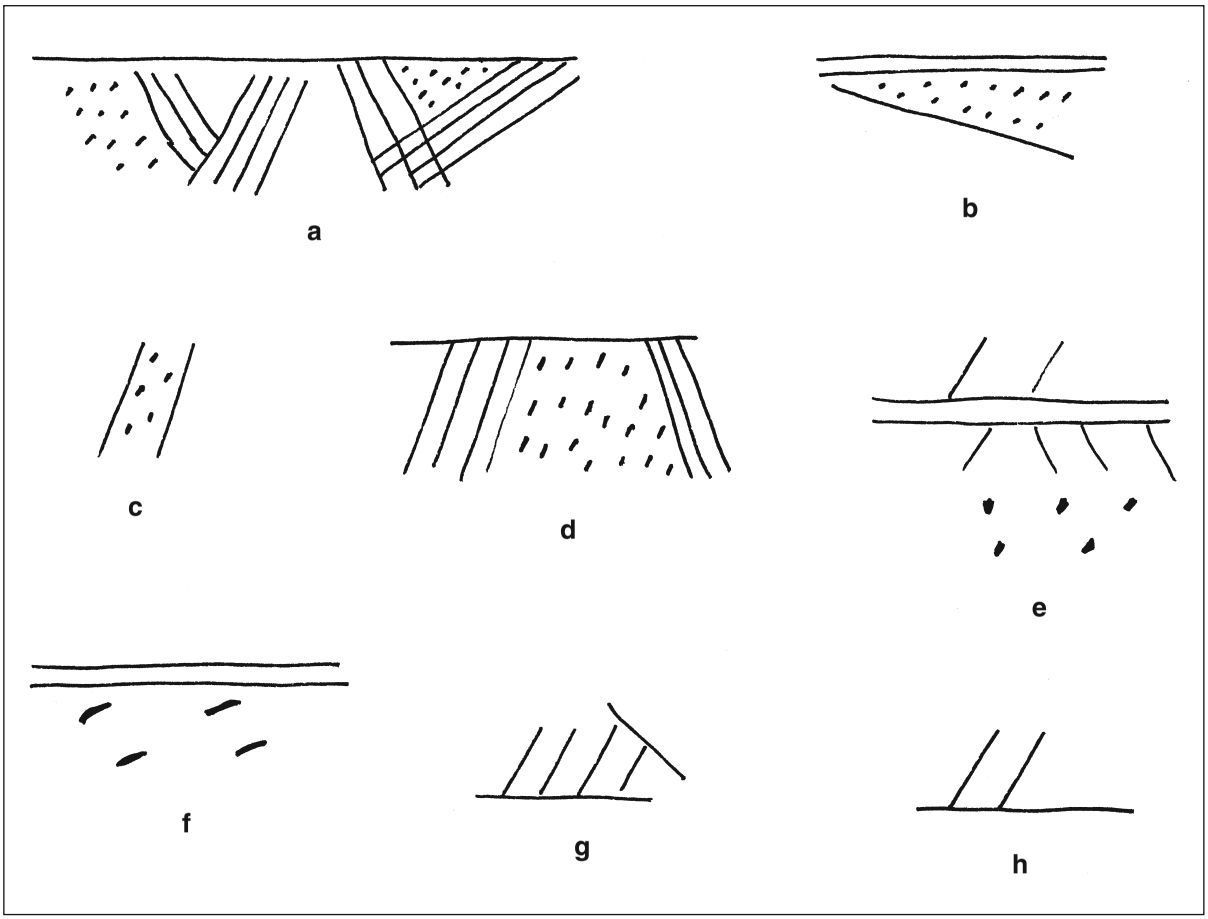

Figure 3. Selected decorative elements on utility ware sherds from the Pace McDonald site: a, opposed diagonal incised lines and tool punctated-filled triangles (Vessel Section); b, horizontal and diagonal incised lines and cane punctated-filled triangles; c, incised zone filled with cane punctates; d, opposed diagonal incised lines and tool punctated-filled triangles; e, opposed incised lines above a tool punctated zone; f, horizontal incised lines above fingernail punctates (on the vessel body); g, opposed incised (hatched triangle); h, opposed incised.

presence of spindle whorls at the Pace McDonald site suggests that Caddo women were processing fibers to produce textiles (cf. Alt 1999). Materials that could have been used include animal hair and various vegetable fibers, among them hemp, slippery elm, mulberry, milkweed, and nettle, as well as the bark of trees.

A detailed analysis of technological attributes of the Pace McDonald ceramic sherds was not conducted for this project, due primarily to time constraints and the inability to examine the sherd cores in any detail (i.e., by removing a small bit of the sherd to examine a freshly broken profile of the core). Nevertheless, it was possible to observe that the vast majority of ceramic vessel sherds from the site are from vessels tempered with grog (i.e., fired and crushed clay), occasionally in association with other tempers. This is the principal prehistoric Caddo ceramic practice in the upper Neches River valley (see Perttula 2008b:Figure 6-70). More than 14% of the sherds do have crushed and burned bone temper added to the clay paste (Table 5). Proportionally, bone temper is used most frequently in plain wares and utility wares.

Ceramic Pipe

Ceramic pipes and pipe sherds are common artifacts found in upper Neches River basin Caddo sites, especially those sites occupied after ca. A.D. 1400 (Gilmore 1974; Jackson 1933, 1936; Kleinschmidt 1982). Not too surprisingly then, a complete, but undecorated, L-shaped (i.e., L-shaped angle between the bowl and the stem) elbow pipe

Table 5. Use of bone temper in the Pace McDonald Caddo ceramic sherds.

Ware	No.	Percent	No. with bone temper	Percent
Plain Ware	755	77.4	114	80.0
Fine ware	50	5.1	4	2.8
Utility ware	170	17.5	24	16.9
Totals	975	100.0	142	14.5

was in the collections from the Pace McDonald site (Figure 4). The pipe is grog-tempered, and has been burnished on the exterior surface. It is 34.6 mm in height, and has a 55.6 mm stem length. The bowl orifice diameter is 23.7 mm, and the bowl itself is 3.7 mm thick. Along the stem, the exterior orifice diameter is 13.9 mm; the interior orifice diameter is 7.7 mm; and the stem is 3.1 mm thick.

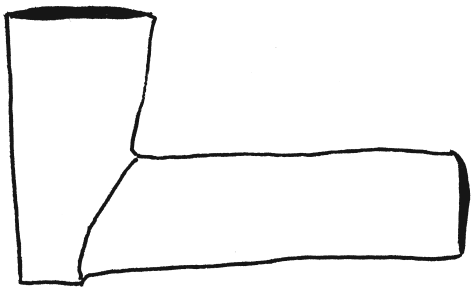

Figure 4. L-shaped elbow pipe from the Pace McDonald site.

Elbow pipes are a style of ceramic pipe manufacture that began to be popular after ca. A.D. 1350 in East Texas and elsewhere in the Caddo area (see Hoffman 1967; Rogers and Perttula 2004; Perttula 2008b), but are virtually the exclusive form of clay pipe made by the Caddo from the 15th century A.D. on. An examination of the clay elbow pipes from mortuary contexts in the upper Neches River basin (see Perttula 2008b), from cemeteries of known age, indicates that the earliest elbow pipes (Var. A) are plain L-shaped forms. Radiocarbon and thermoluminescence dates on sherds indicate that L-shaped pipes at the Lang Pasture site (41AN38) date in the 14th century A.D., from ca. A.D. 1320-1400. In other upper Neches River basin sites of known age (i.e., dating to the Frankston phase, subphase 1-3, and the Allen phase), Var. A pipes are restricted to pre-A.D. 1480 components.

Arrow Points

The arrow points in the TARL collection at the Pace McDonald site are dominated by parallel-stemmed Alba points (as well as a single possible Alba point preform). These account for 55% of the arrow points (Table 6). Relatively common are contracting stem Perdiz arrow points (23%) and expanding stem and flaring barb Catahoula points (10%).

The earliest arrow point form at the Pace McDonald site is probably the Catahoula type. This point is considered diagnostic of late Woodland (ca. A.D. 700-800+) components in the East Texas and Southeast Texas regions (Shafer and Walters 2010). Alba points, on the other hand, are generally considered Formative to Early Caddo period (ca. A.D. 800-1200) arrow points, although because they are diagnostic of the Alto phase (Story 2000), they may date from as long a period of manufacture and use as ca. A.D. 850-1300. They are particularly well-represented at the George C. Davis site on the Neches River (Newell and Krieger 1949:161 and Figure 56a-h), where they are considered the only "resident type."

The later (post-ca. A.D. 1200-1300) arrow points at the Pace McDonald site are dominated by Perdiz points. Perdiz points have been found in a number of East Texas Caddo sites that date from the 13th to the 17th century A.D., but as of yet, unfortunately, no temporally distinctive varieties have been defined within this broad span of time that would permit a more definitive conclusion as to the age of this prehistoric occupation at the site.

The arrow points from the Pace McDonald site are predominantly manufactured from non-local cherts that are apparently from the Edwards Plateau

Table 6. Arrow points from the Pace McDonald site.

Type	Lithic raw Materials				
	Non-local chert	Local chert	Quartzite	Petrified wood	N
Alba	13	1	2	–	16
Possible Alba preform	1	–	–	–	1
Catahoula	–	–	2	1	3
Perdiz	6	1	–	–	7
Unidentified	3	–	–	1	4
Totals	23	2	4	2	31

region of Central Texas, or from Brazos and Trinity River stream gravels (see Table 6); 74% of the identifiable points are made from these materials. The Caddo knappers that lived at the site clearly had a broad range of lithic raw materials to draw upon, as 82% of the Alba points and preforms are made from non-local chert, and 86% of the Perdiz points were made from this same suite of non-local cherts. The early Catahoula stemmed arrow points were made exclusively of petrified wood and quartzite.

Dart Points

There are 44 dart points in the TARL collections from the Pace McDonald site (Table 7). The most common type is the contracting stem Gary, which accounts for 36% of all the dart points from the site. Based on the shape of the dart points, particularly their basal and stem forms, and the identification of specific dart point types with known or estimated temporal limits (e.g., Story 1990; Turner and Hester

Table 7. Dart points from the Pace McDonald site.

Type	Lithic raw Materials				
	Non-local chert	Local chert	Quartzite	Petrified wood	N
Gary	8	1	5	2	16
Kent	3	–	–	–	3
Godley-like	1	–	1	–	2
Palmillas	2	–	–	–	2
Williams	1	–	–	–	1
Dawson	1	–	–	–	1
Straight stem and flat base	9	1	1	2	13
Expanding stem	1	–	–	–	1
Expanding/narrow stem and flat base	2	–	–	–	2
Expanding stem with concave base	1	–	–	–	1
Expanding to straight stem	1	–	–	–	1
Wells	1	–	–	–	1
Totals	31	2	7	4	44

1999), the dart points from the site were made and used in Middle Archaic (ca. 6000-3000 B.C.), Late Archaic (ca. 3000-500 B.C.), and Woodland period (ca. 500 B.C. to A.D. 800) times, primarily the latter.

The dart points from the Pace McDonald site can be grouped into temporal periods, including Woodland, Late Archaic, and Middle Archaic (Table 8). The usefulness of these groupings should be evaluated with the proviso that the majority of dart point types that occur in East Texas are not yet well-dated by secure archaeological association with a series of calibrated radiocarbon dates from features or single component archaeological deposits, but the estimated temporal periods to which the dart points from the Pace McDonald site are assigned is the product of a few calibrated dates as well as extrapolations with better dated temporal sequences in the western Gulf Coastal Plain, Central Texas, the Ouachita Mountains, and the Ozark Highlands (cf. Schambach 1982; Story 1990; Trubitt 2009; Turner and Hester 1999). Nevertheless, the groupings follow rather closely the artifact sequences for stone tools postulated by Story (1990:Figures 32 and 33) in her synthesis of the archaeology of the East Texas portion of the Gulf Coastal Plain.

A simple comparison of the number of dart points from the site that fall into each of these periods make evident that Woodland period dart points are by far the most abundant (52.3%), particularly the Gary (n=16), Kent (n=3), and Godley (n=2) types. Late Archaic dart points comprise another 40.9% of the recovered points; these include primarily parallel stemmed and flat-based projectile point forms, expanding stem points with a narrow stem and a flat base, as well as one Williams point. Middle Archaic points include one Dawson and one possible Wells specimens, along with an expanding stem form with a concave base (see Table 8).

Table 8. Summary of dart points by period from the Pace McDonald site, including the percent of dart points made from non-local cherts.

Type and Period	No.	Percent	Percent of non-local chert
Woodland			
Gary	16	36.4	50.0
Kent	3	6.8	100.0
Godley	2	4.5	50.0
cf. Palmillas	2	4.5	100.0
Sub-total	23	52.3	60.9
Late Archaic			
parallel stemmed	13	29.5	69.2
Williams	1	2.3	100.0
expanding stemmed	4	9.1	100.0
Sub-total	18	40.9	77.8
Middle Archaic			
Dawson	1	2.3	100.0
cf. Wells*	1	2.3	100.0
expanding stem, concave base	1	2.3	100.0
Sub-total	3	6.8	100.0
Totals	44	100.0	70.5

*no edge grinding

Several different kinds of lithic raw materials were used in the manufacture of the dart points that ended up discarded at the Pace McDonald site, including a variety of cherts (most of non-local origin); petrified wood; and quartzite. It is clear that non-local chert raw materials were principally used in dart point manufacture during all temporal periods of occupation at the site, especially during the Middle and Late Archaic periods (see Table 8). Local cherts, quartzite, and petrified wood gradually became more important for dart point manufacture during and after the Late Archaic period, while the use of cherts diminished from 100-77.8% in the Middle and Late Archaic periods to 60.9% in the Woodland period.

These trends in the use of lithic raw materials, particularly the non-local cherts that most likely were from gravels that originated from source areas to the west in Central Texas and the Edwards Plateau, suggest that the aboriginal populations that utilized the Mound Prairie Creek area prior to ca. 1200 years ago had access to a wide range of non-local lithic raw materials. This is probably because they were relatively mobile foraging populations that ranged west into the Trinity and Brazos River valleys—where high quality cherts could be obtained from gravel sources—and where they collected these high-quality lithic resources during the course of their settlement and foraging forays. Locally available lithic raw materials became more important as sources of chipped stone tools during the Woodland period. These later groups that used the Pace McDonald site likely had a more territorially-confined settlement/foraging area in the East Texas Pineywoods, although certainly there were contacts between Pineywoods Woodland groups and peoples living in areas with high quality chert raw materials that led to the continued and extensive acquisition of non-local chipped stone for tool manufacture and use.

Bifaces

Both of the two large bifaces in the collection are made from a non-local chert. These bifaces are probably discarded fragments from the attempted manufacture of bifacially chipped dart points.

Flake Tool

A single flake tool with unilateral use wear is in the Pace McDonald collection. This expedient tool was made from a non-local (Edwards Plateau?) dark gray chert.

Ground Stone Tools

The ground stone tools in the collection are a disparate lot, with a grooved axe, a polished stone, a mano, and three celts (Table 9); the mano and polished stone are made from locally available lithic raw materials. The grooved axe probably represents a Middle to Late Archaic use of the site, as those are the time periods when this tool type was predominantly used by East Texas prehistoric peoples (cf. Turner 2006). The axe is made from a grayish-black diorite or tuff from a Ouachita Mountains source area, and has been broken above the groove. It is 60.4 mm wide at the groove, 69.7 mm from the groove to the bit, 38.2 mm wide, and the bit width is 65.7 mm.

The cobble-sized mano has been ground smooth on both surfaces from use on a metate or grinding slab. The quartzite polished stone was probably used to polish and finish ceramic vessels made at the site; it is 46.2 mm in length, 32.3 mm in width, and 12.2

Table 9. Ground stone tools in the Pace McDonald collection.

Tool type	Ouachita Mountains raw material source	Quartzite	Ferruginous sandstone
Celt	3	–	–
Grooved axe	1	–	–
Mano	–	–	1
Polished stone	–	1	–
Totals	4	1	1

mm thick. The temporal association of these tools is unknown, but the use of such tools would not be unexpected in prehistoric Caddo times.

The three celts are associated with the prehistoric Caddo occupation of the Pace McDonald site. They are made on Ouachita Mountains raw materials, including greenish-gray siliceous shale, tuff or diorite, or graywacke. The tools are completely polished on the body and bit, with either flat (n=2) or rounded (n=1) poll ends. Th celts range in length from 80.3-206.4 mm; width ranges are 37.2-81.7 mm; thickness ranges are 32.2-51.4 mm; and bit widths range from 32.1-75.0 mm.

Lithic Debris

The small amount of lithic debris in the Pace McDonald collections (Table 10) indicate that the knapping of stone tools took place at the site, but was not apparently a common activity. Both local (45%) and non-local (55%) raw materials are represented in the lithic debris.

The non-local lithic debris includes several different colors of chert, including several with a stream-rolled cortex, that likely originated in the Edwards Plateau area of Central Texas, and cobbles and pebbles of this material can be found in stream gravels well to the east of the Plateau, including the Brazos and Trinity River drainages. The local lithic raw materials are also available in local stream gravels, most likely in the Neches River valley. The one local hematite flake in the Pace McDonald collection appears to be a ground stone tool manufacture or resharpening piece.

Marine Shell

A small, pitted/etched, and unmodified marine conch shell is in the collection from the Pace McDonald site, but its provenience within the site is unknown. The conch is 73.3 mm in length and 49.0 mm in width.

Animal Bone

There are five unidentifiable pieces of animal bone in the collections. One of these has been burned.

SUMMARY AND CONCLUSIONS

The Pace McDonald site (41AN51) is a prehistoric Caddo mound center in the upper Neches River basin of East Texas; it also was occupied during the Archaic and Woodland periods. Its temporal and cultural relationships to other important mound centers in the region (Figure 5) is poorly known, however, primarily because of limited archaeological investigations and analytical studies over the years. This analysis of the artifacts in the collections of the

Table 10. Lithic Debris.

Raw Material	Cortical	Non-Cortical	N
Non-local chert			
dark gray chert	–	1	1
brownish-gray chert	1	1	2
gray chert	–	1	1
grayish-brown chert	1	–	1
brown-black chert	1	–	1
Local lithic raw materials			
Hematite	–	1	1
Quartzite	2	1	3
Petrified wood	–	1	1
Totals	5	6	11

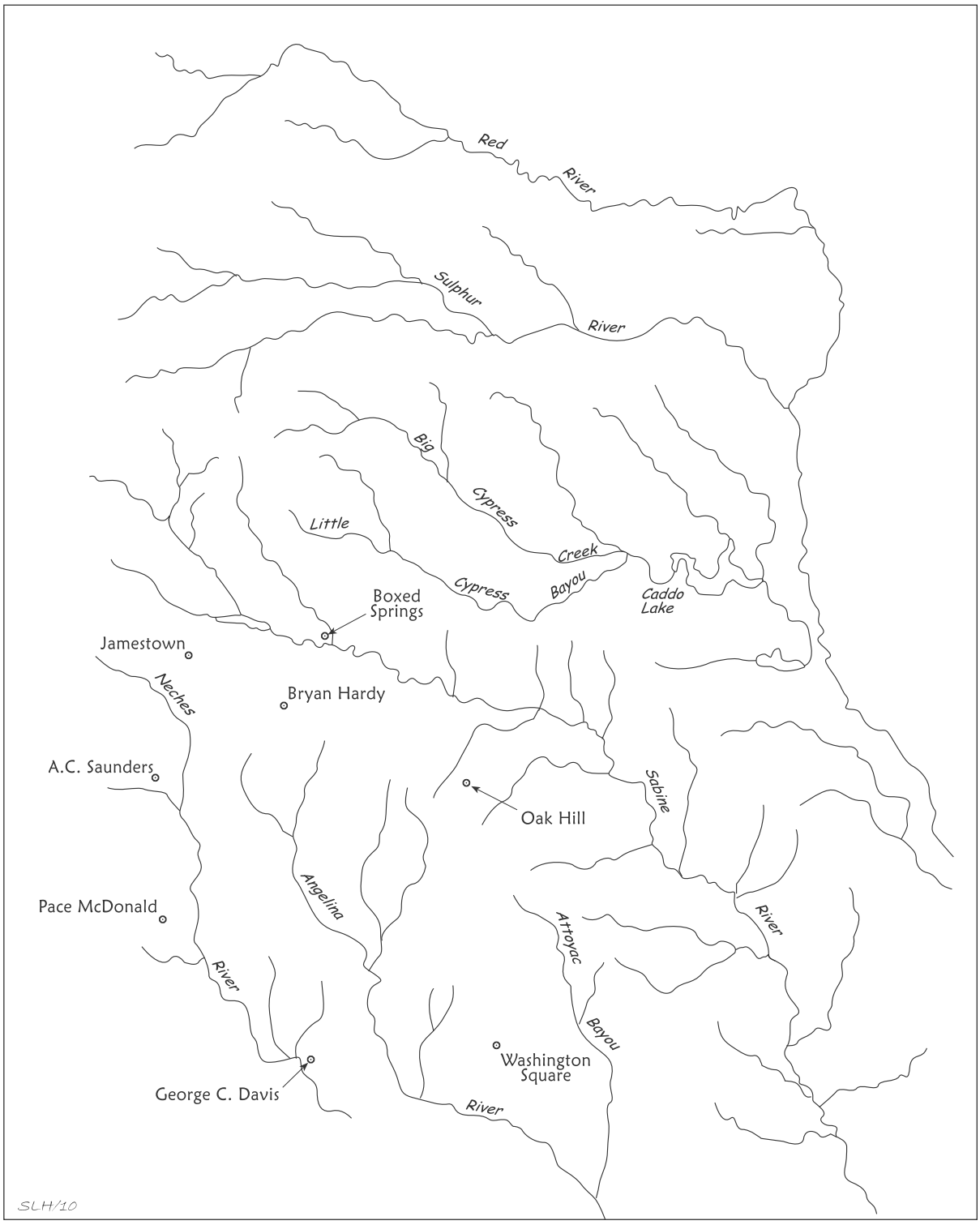

Figure 5. Known Caddo earthen mound sites in the area around the Pace McDonald site.

Texas Archeological Research Laboratory at The University of Texas at Austin represents the first step in a likely long-term effort to learn more about the nature of the Caddo occupation at this mound center.

What is known about the prehistoric Caddo occupation of the Pace McDonald site is that the site is on an upland landform overlooking Mound Prairie Creek, a tributary to the Neches River, has evidence of a settlement that covers at least 11 acres, and two earthen mounds were constructed there by the Caddo. Both mounds appear to have been built to cover special purpose structures where significant deposits of ash was accumulated, similar to the main mound at the nearby A. C. Saunders site (see Jackson 1936) (see Figure 5) or the ash temple (albeit, without a covering mound) at the Crenshaw site (Schambach 1996).

There also is a reasonably large sample of ceramic and lithic artifacts from the site that have been collected over the years, mainly from Jackson's 1933 excavations in the two mounds and a surface collection, and various surface collections gathered between 1978 and ca. 1985. With respect to the prehistoric Caddo component, the material culture remains that can be associated with it include: (1) a significant percentage of plain ware vessel sherds (mainly grog-tempered), primarily incised, punctated, and incised-punctated utility wares, and both engraved (i.e., geometric elements, significant proportion of hatched and cross-elements, mainly triangles, and carinated bowls and bottles) and (many) red-slipped fine wares; (2) an L-shaped elbow pipe, a 14th century ceramic innovation; and (3) Alba and Perdiz arrow points and a few expedient flake tools.

Temporally, the overall impression obtained from the examination of the decorated sherds, the ceramic pipe, and arrow points is that the Pace McDonald site was first occupied sometime before the 13th century A.D.—based on the predominance of Alba arrow points and some of the decorated utility wares—contemporaneous with some part of the lengthy Caddo occupation at the George C. Davis site (Story 2000). Without radiocarbon dates from the site, it is difficult to establish the early beginnings of this occupation with any precision, largely because the apparently lengthy use (ca. A.D. 850-1300) of many kinds of distinctive Alto phase or Early Caddo ceramic and lithic artifacts, as well as the inability to identify temporal varieties of these artifacts that have more discrete temporal periods of use.

The apparent popularity of red-slipped pottery at the Pace McDonald site is consistent with a Caddo occupation during the 13th and 14th centuries A.D., which was when a tradition of manufacturing red-slipped carinated bowls and bottles was established across much of the western part of East Texas. At the Middle Caddo period Jamestown Mound site (41SM54), for example, more than 26% of the decorated sherds (n=84) are from red-slipped vessels, including one Maxey Noded Redware bottle sherd (Perttula and Walker 2008:7).

The end of the Caddo occupation at the Pace McDonald site can be more precisely established as ca. A.D. 1350 to A.D. 1400, based on the presence of the early L-shaped elbow pipe in the assemblage, and perhaps also by the one red-slipped Redwine mode rim (see Walters 2010). Other indications that the Caddo occupation must have lasted into and through the 14th century include Perdiz arrow points, the brushed and pinched utility ware sherds, and much of the distinctive engraved fine wares found at Pace McDonald. These fine wares from the site may be part of a Middle Caddo period (ca. A.D. 1200-1400) East Texas style zone or ceramic tradition in the Angelina and Neches river basins, as well as parts of the middle and upper Sabine River basin, at other better known and studied sites such as Washington Square, Oak Hill, Redwine, and Jamestown (see Figure 5). The engraved fine wares at these sites have hatched or cross-hatched curvilinear and vertical ladders or narrow panels, as well as hatched and cross-hatched triangles, pendant triangles, or rectangular panels with engraved triangles (see Rogers and Perttula 2004); in some instances, there are engraved vessels with vertical and triangular panels filled with concentric circles (Hart and Perttula 2010). A number of the engraved fine ware vessels from these sites, but not yet identified in the assemblage of Pace McDonald fine wares, have horizontal interlocking, slanting, and vertical scrolls—including negative S-shaped scrolls—as their principal motif. There are also rayed circles/sun elements and the swastika cross-in-circle, but these are absent in the small sample of fine wares in the site collections.

It is interesting that the George C. Davis site may also has a component that dates to the Middle Caddo period, and that has a ceramic assemblage that may be part of this East Texas ceramic tradition, although red-slipped sherds are not at all common in the ceramic assemblage (Stokes and Woodring 1981:222-223). Story (2000:13-14) suggests there are "late Alto phase" ceramics (i.e., dating after ca. A.D. 1200) in certain areas of the site that include

"brushed utility wares, a hallmark of the Frankston phase, as well as Maddox Engraved, Pease Brushed-Incised, and other pottery usually associated with the Middle Caddoan Bossier phase." Stokes and Woodring (1981:206) indicate that this collection of ceramics also include those with incised or punctated panels as well as appliqued strips. At the George C. Davis site, interestingly, the Maddox Engraved sherds from "late Alto phase" contexts are described as having narrow bands (either straight or curvilinear) filled with cross-hatched lines (Stokes and Woodring 1981:190-191), very similar to several of the decorative elements in the Pace McDonald fine wares (see Figure 2e-g).

Story (2000:23) examined, some years ago, the Pace McDonald collection at the Texas Archeological Research Laboratory at The University of Texas at Austin, and her comments are apt, as she "found little evidence for either an Alto phase or Frankston phase connection. The age and affiliation of this, one of the few other mound sites near Davis [George C. Davis], are yet to be established." Thurmond (1978:26), some years before, concluded that the Pace McDonald site was "transitional between the two foci [Alto and Frankston]."

Essentially, what both Story (2000) and Thurmond (1978) are suggesting is that the Pace McDonald Caddo occupation dates prior to the onset of the Late Caddo Frankston phase, which occurred around A.D. 1400, which is a reasonable suggestion, and began sometime before the end of the Alto phase. If the ca. 450 years of the "Alto phase" could be subdivided (and there is not necessarily any good reason to think that they can) into two sequent early and late sub-phases of ca. A.D. 850-1075 and ca. A.D. 1075-1300, I think it would be fair to say that the Pace McDonald site—while not an Alto phase component—probably began to be occupied and used at a time contemporaneous with this hypothetical late subphase (ca. A.D. 1075-1300), and its occupation continued into the 14th century A.D. Temporally speaking then, the Pace McDonald site is best viewed as an Early to Middle Caddo period mound site whose occupation overlapped with that of the long-occupied George C. Davis mound center (most likely the component there associated with the construction of the Mound B platform around ca. A.D. 1200, see Story 1997:65), but apparently continued after the George C. Davis mound site was abandoned in the early A.D. 1300s. In cultural terms, then, and relying heavily on the character of the decorated ceramic sherds in the assemblage, the Pace McDonald site was an important mound center built by a prehistoric Caddo group that was apparently related to others of similar socio-political character in the upper Neches, middle and upper Sabine, and the Angelina River basin (see Figure 5). Whether it was a subsidiary or satellite to any other contemporaneous Caddo mound centers is not known.

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Analysis of Artifacts from a 2010 Surface Collection at the Pace McDonald Site (41AN51), a Probable Middle Caddo Mound Center in Anderson County, Texas

Timothy K. Perttula, Mark Walters, and Bo Nelson

INTRODUCTION AND SITE SETTING

The Pace McDonald site (41AN51) is a prehistoric Caddo mound center on Mound Prairie Creek in Anderson County, Texas, in the upper Neches River Basin (Pearce and Jackson 1933; Newell and Krieger 1949; Story 2000; Thurmond 1978). With the permission of one of the landowners, Mr. Johnny Sanford, the Friends of Northeast Texas Archaeology has initiated an archaeological research effort at the site in 2010, the first part of which was an April 2010 surface reconnaissance of the Sanford lands at the site, and the surface collection of artifacts exposed there following shallow disking of several tracts within the known boundaries of the site. This article discusses the character of the artifacts collected in the spring 2010 work.

The purpose of this work at the Pace McDonald site is to learn more about the native history of this mound center—when it was occupied and used, and by which prehistoric Caddo group—and its intra-site spatial organization. Ultimately, we hope to be able to obtain site-specific archaeological information that can help us to better understand the site's place and role in the Caddo prehistory of this part of East Texas.

The site is situated on a large and relatively flat upland landform (420-430 feet amsl) not far north of Mound Prairie Creek, in central Anderson County, Texas, in the East Texas Pineywoods (Diggs et al. 2006). Mound Prairie Creek is a southward- and eastward-flowing tributary to the Neches River; the confluence of these two streams lies about 20 km to the east of the site. When the site was first visited and recorded in the 1930s, it was in a large cotton field (Pearce and Jackson 1933:2). In more recent years, it is in an improved pasture, and the site is apparently owned by several landowners, including the Texas Historical Commission.

The site is on an expanse of Elrose fine sandy loam, 1-3 percent slopes (Coffee 1975:17 and Sheet 34). This is a relatively fertile upland soil that "formed under a pine-hardwood forest in stratified marine and alluvial sediment high in glauconitic sandstone" (Coffee 1975:17 and Table 2). A typical profile of the Elrose fine sandy loam is a 25 cm thick A-horizon that ranges from reddish-brown to yellowish-red fine sandy loam developed atop a thick (ca. 165 cm) Bt horizon composed of red, dark red, yellowish-red, or strong brown sandy clay loam and sandy loam. The underlying C horizon is a massive red loamy fine sand with an occasional fragment of glauconitic sandstone.

Limited archaeological investigations at the Pace McDonald site since the 1930s indicates that the site covers ca. 11 acres (45,000 m^2) of the upland landform adjacent to Mound Prairie Creek. The site has two deliberately constructed prehistoric Caddo earthen mounds, a large and associated habitation area (including several midden areas) and surface scatters of ceramic and lithic artifacts, and probably at least one associated cemetery area (Figure 1). There are also a number of small depressions, with an average depth of 30-60 cm, visible on the landform that may represent borrow pits for sediments used by the Caddo to build the two earthen mounds (Mounds No. 1 and No. 2) that were constructed over special purpose structures with significant accumulations of ash (Perttula 2011). In 1978, the depressions ranged from 6.1-25 m in diameter (Thurmond 1978).

Analysis of the artifacts from the site in the collections at the Texas Archeological Research Laboratory at The University of Texas at Austin (TARL) suggests that the Pace McDonald Caddo occupation probably began in the 12th century A.D. and continued well into the 14th century A.D. Temporally speaking then, Perttula (2011) views the Pace McDonald site as a Early to Middle Caddo period mound site whose occupation

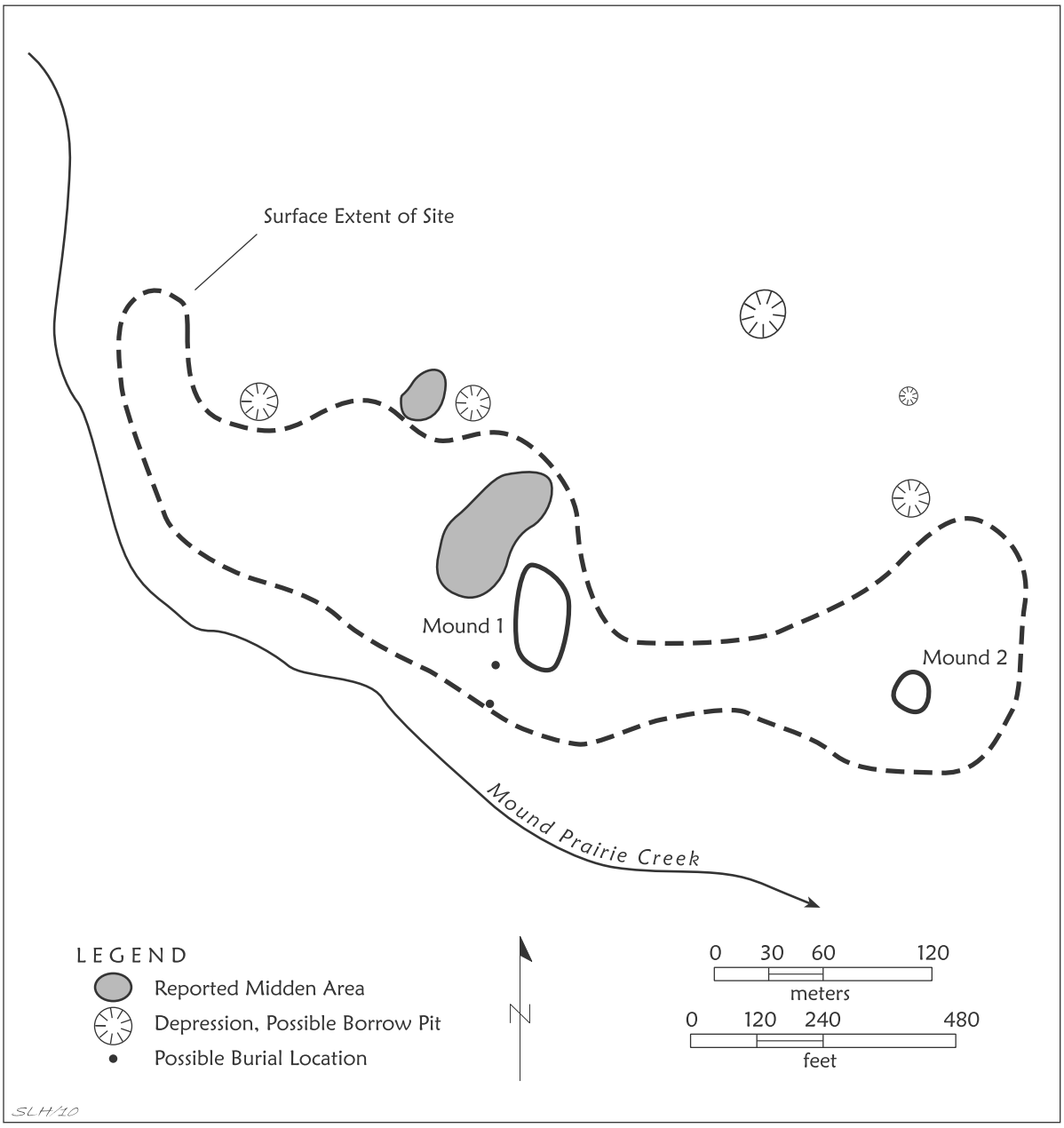

Figure 1. Map of the Pace McDonald site (41AN51), based on a 1978 sketch map by Ulrich Kleinschmidt and Pete Thurmond, and other information in the Texas Archeological Research Laboratory, The University of Texas at Austin files.

began and overlapped with that of the George C. Davis mound center after ca. A.D. 1100, but apparently the use of the Pace McDonald site as a mound center continued after that important site was abandoned in the early A.D. 1300s (Story 2000). In cultural terms, the Pace McDonald site was likely occupied by a prehistoric Caddo group who was apparently related to others of similar socio-political character in the upper Neches, middle and upper Sabine, and the Angelina River basins (Perttula 2011). Whether it was a subsidiary or satellite to any other contemporaneous Caddo mound centers is not known.

SITE IMPRESSIONS FROM THE 2010 SURFACE COLLECTIONS

Based on the surface collecting work, it is apparent that the main concentration of surface artifacts on the Sanford lands at the Pace McDonald site is in a ca. 150 x 150 m area (5.5 acres) north of Mound No. 1, the mound owned by the Texas Historical Commission (Figure 2). This concentration apparently extends to the north and west off of the Sanford lands an unknown distance, but probably at least another 100+ m to the west on the landform and towards Mound Prairie Creek (see Figure 1; Thurmond 1978; Perttula 2011). Midden deposits have been previously noted in this same area, as well as a possible borrow pit depression (No. 5) (see Figure 1). The density of Caddo artifacts is very low in surface contexts east of Mound No. 1 and around Mound No. 2, as had been previously noted by Thurmond (1978).

Amidst the primary artifact concentration north and northeast of Mound No. 1 are three possible low mounds (see Figure 2), each about 40 m in diameter and 1 m in height. These possible mounds are approximately the same size as Mound No. 2 appears in 2010, though it was estimated at only 18.3 m in

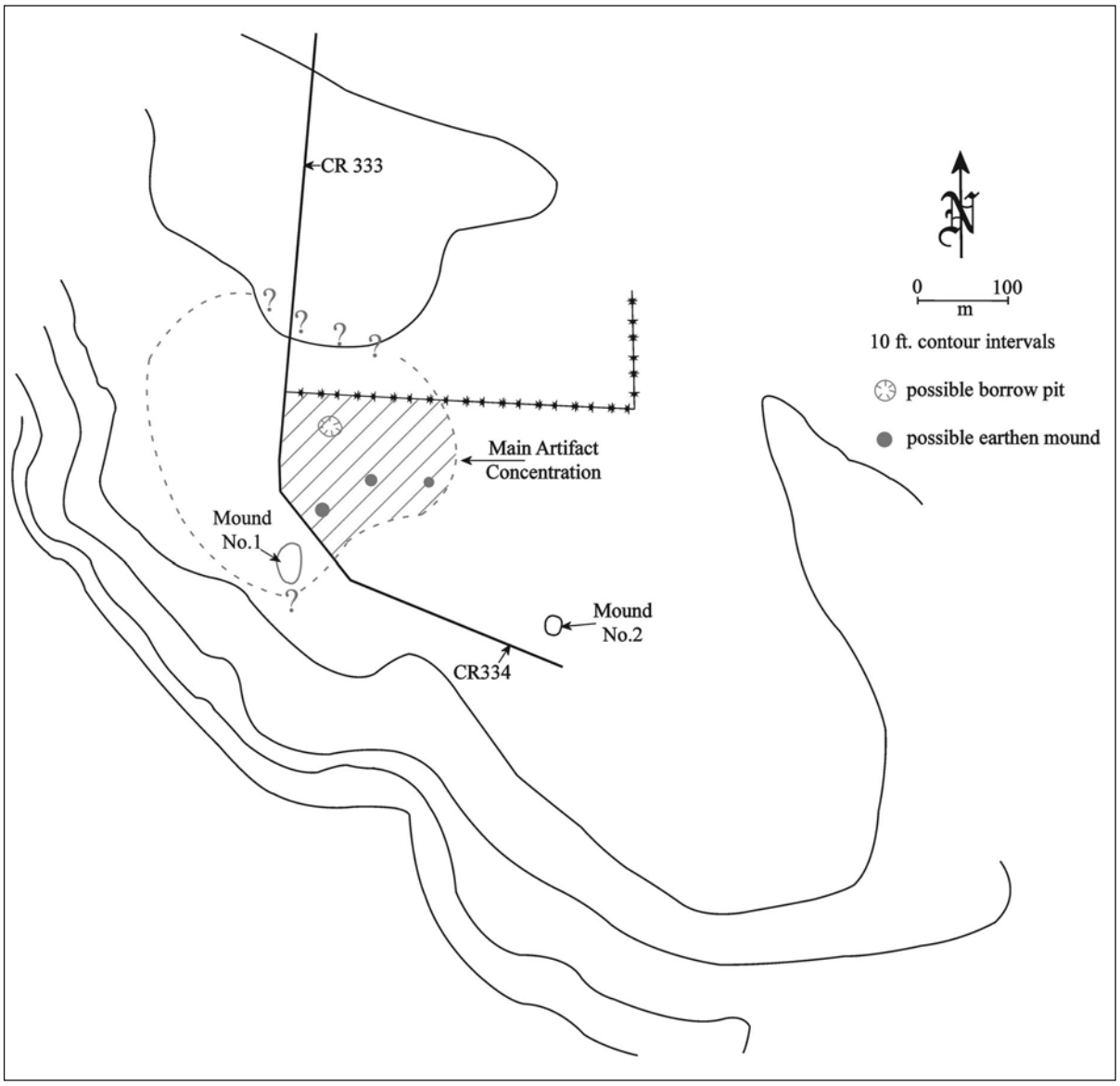

Figure 2. Visible features and artifact concentrations at the Pace McDonald site, April 2010.

diameter in 1933 (Pearce and Jackson 1933). These mounds and possible mound features have been plowed down and spread out over the years.

ARTIFACT ASSEMBLAGE FROM THE 2010 SURFACE COLLECTION

The artifacts found in the 2010 surface collections at the Pace McDonald site are dominated by prehistoric Caddo ceramic sherds and lithic debris (Table 1). There is only a limited range of other artifact categories represented in the surface collection assemblage, including burned clay, chipped stone tools, animal bones, and a small assortment of 19th century Anglo-American artifacts.

Table 1. Artifacts recovered in the April 2010 surface collection at the Pace McDonald site.

Artifact Category	No.	Percent
Caddo Ceramic Sherds	382	86.6
Burned Clay pieces	1	0.2
Chipped Stone Tools	2	0.5
Prehistoric Lithic Debris	42	9.5
19th Century Historic Artifacts	9	2.0
Animal bones, burned	5	1.1
Totals	441	100.0

Ceramic Vessel Sherds

Approximately 78% of the vessel sherds in the 2010 surface collection are from undecorated vessels or the undecorated portions of decorated vessels; 21.7% of the sherds, including both fine wares (engraved and red-slipped sherds) and utility wares (wet paste decorations), are decorated (Table 2). These proportions are almost identical to that documented in the larger assemblage of Caddo ceramic sherds in the TARL collection (Perttula 2011:Table 1).

The plain to decorated sherd ratio (P/DR) in this surface-collected assemblage is 3.60. The P/DR in the TARL collections from Pace McDonald is 3.43 (Perttula 2011), clearing indicating that both collections derive from the same prehistoric Caddo sherd sample, a sample with a high proportion of plain sherds, likely plain vessels, and/or vessels with

Table 2. The Caddo ceramic sherd assemblage in the 2010 surface collection.

Sherd Type	No.	Percent
Plain rim	7	1.8
Plain body	276	72.2
Plain base	16	4.2
Subtotal, Plain sherds	299	78.2
Decorated fine ware	29	7.6
Decorated utility ware	54	14.1
Subtotal, Decorated sherds	83	21.7
Totals	382	99.9

decorations confined principally to the rim, rather than being decorated commonly on the vessel rim and body. Combining the TARL and 2010 surface collection assemblages (n=1357 sherds), the P/DR at the Pace McDonald site is 3.48 (i.e., only about 22% of the sherds are decorated).

There are 13 rim sherds in the 2010 surface collection of vessel sherds. More than 53% are from plain ware vessels (n=7); another 30.8% are from decorated fine ware vessels (n=4, engraved vessels), and only 15.4% are from utility ware vessels. If we combine the TARL and 2010 surface collection sherds, the 52 rim sherds are distributed amongst the three wares as follows: plain ware (n=22, 42.3%); utility ware (n=22, 42.3%); and fine ware (n=8, 15.4%).

In the 2010 surface collections from the Pace McDonald site, fine wares are well represented (35%) in the decorated sherd sample (Table 3). Slightly more than half of the fine wares have engraved decorations, with the remainder comprised of red-slipped bottle and bowl/carinated bowl sherds. The combined TARL and 2010 sherd samples indicate that approximately 26% of the decorated sherds from the site are from fine wares, with the fine wares divided into sherds that are engraved (57% of the fine wares); engraved and red-slipped (1.3%); and red-slipped (41.8%).

The utility wares account for 65% of the 2010 surface collection decorated sherds, and 73.9% of the combined sherd samples (see Table 3). Sherds from vessels decorated with incised, tool punctated, fingernail punctated, and incised-punctated elements are the most popular in both collections, with 43%

Table 3. Decorated sherds in the 2010 surface collection and TARL collections.

Decorative Method	TARL Collections		2010 Collections		Combined Samples	
	N	Percent	N	Percent	N	%
Fine Ware						
Engraved	29	13.2	16	19.3	45	14.9
Engraved-red slipped	1	0.5	-	0.0	1	0.3
Red-slipped	20	9.1	13	15.7	33	10.9
Subtotal	50	22.6	29	35.0	79	26.1
Utility Ware						
Incised	74	33.6	22	26.5	96	31.7
Tool punctated	37	16.8	11	13.3	48	15.9
Fingernail punctated	24	10.9	11	13.3	35	11.6
Incised-punctated	12	5.5*	6	7.2	18	5.9
Circular punctated	8	3.6	1	1.2	9	3.0
Brushed	5	2.3	2	2.4	7	2.3
Pinched	4	1.8	1	1.2	5	1.7
Linear punctated	3	1.3	-	0.0	3	1.0
Cane punctated	1	0.5	-	0.0	1	0.3
Appliqued	1	0.5	-	0.0	1	0.3
Appliqued-punctated	1	0.5	-	0.0	1	0.3
Subtotal	170	77.4	54	65.0	224	73.9
Totals	220	100.0	83	100.0	303	100.0

*There is also one vessel section comprised of 12 body sherds and one rim sherd; it is not included in the total number of decorated sherds.

of the utility ware sherds having incised designs (Figure 3d); 21% are tool punctated (Figure 3b); 15.6% are fingernail punctated (Figure 3c); and 8% have incised and punctated decorations. Less common utility ware sherds at the Pace McDonald site have circular punctated, brushed, pinched, linear punctated, cane punctated, and appliqued decorative elements (see Table 3); together these comprise 12% of the utility ware sherds.

As with the TARL sherd sample from the Pace McDonald site (Perttula 2011:Table 3), red-slipped sherds from bottles (i.e., those with an exterior red slip) and carinated bowls/bowls are common in the fine ware sherds in the 2010 surface collection (Table 4). They comprise 44.8% of the fine wares in this small sherd assemblage. In East Texas, the manufacture and use of red-slipped pottery unembellished with engraved decorations is most commonly seen in Middle Caddo ceramic traditions, whether it be in Caddo sites on the Red River or in parts of the upper Sulphur, Big Cypress, and Sabine River basins.

There are several different engraved decorative elements in the 2010 surface collection from Pace McDonald (see Table 4). Of those that have more than horizontal engraved lines (from Hickory Engraved vessels?), or just straight or parallel lines of uncertain orientation (see Figure 3g), this includes a diagonal engraved rim sherd (see Figure 3f), a body sherd with opposed engraved lines, and two bottle sherds with curvilinear engraved lines.

There is a possible post-A.D. 1400 rim sherd from a bowl or carinated bowl with a horizontal engraved line below the lip, and that has at least two small hatched triangles pendant from that line (see Figure 3e and Table 4). This decorative element is reminiscent of at least two varieties of Hume Engraved (see Suhm and Jelks 1962:Plate 42b-c; Perttula 2008:Figure 6-65f-g), particularly Hume

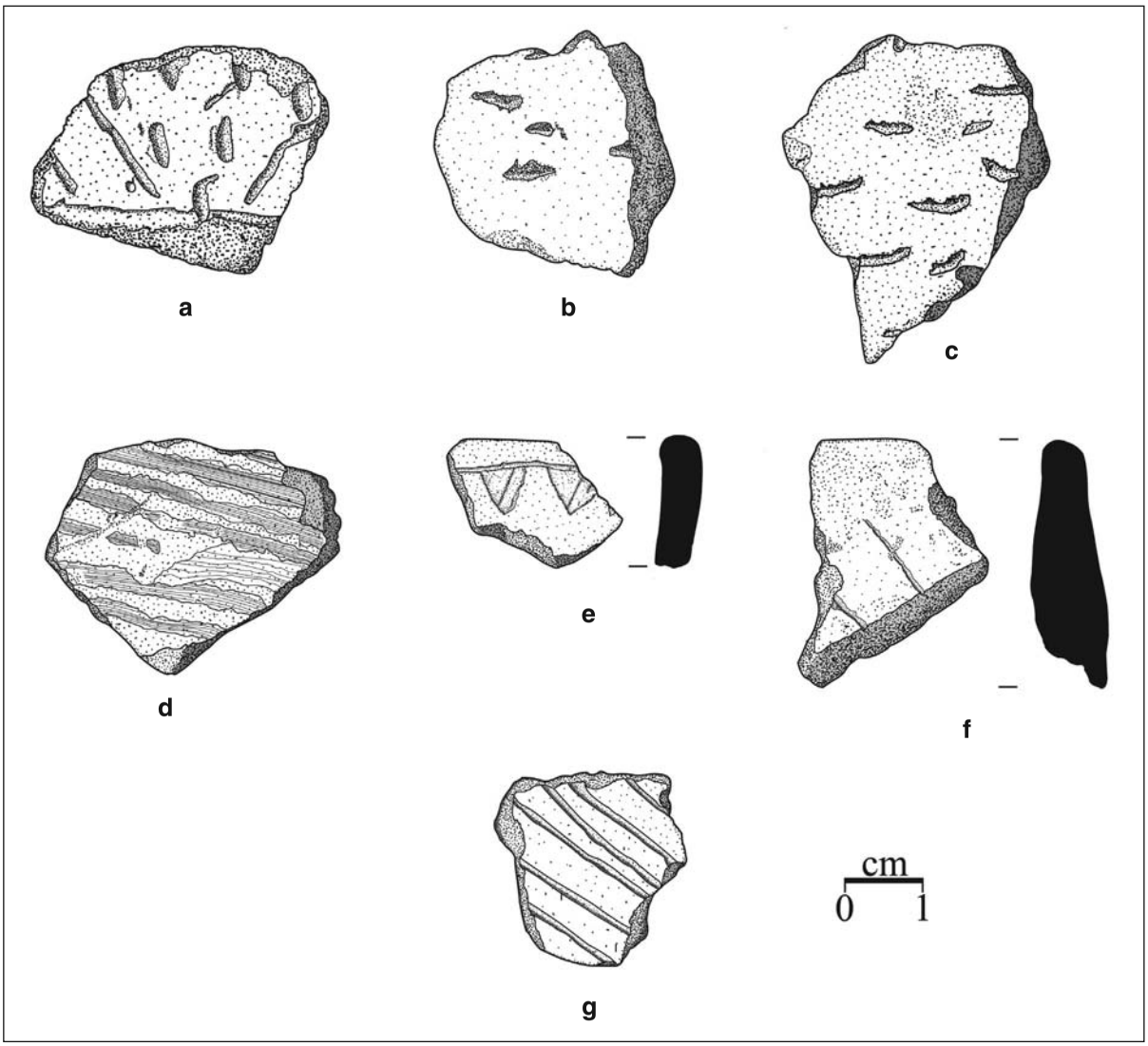

Figure 3. Selected decorated sherds from the Pace McDonald site: a, incised-punctated; b, tool punctated; c, fingernail punctated; d, broad parallel incised lines; e, hatched engraved triangles; f, diagonal engraved lines; g, parallel engraved lines.

Engraved, *var. Allen*, since this variety includes bowls rather than short-necked bottles. Poynor Engraved, *var. C* (Perttula 2008:Figure 6-64) also has small hatched pendant triangles. If either of these variety identifications are reasonable, the occurrence of this sherd would suggest a very limited use of the Pace McDonald site in Frankston phase times, after ca. A.D. 1480-1560 (Perttula 2008:Table 6-37). A body sherd with parallel and several arcing engraved lines may be from a Poynor Engraved, *var. Cook* vessel (see Perttula 2008:Figure 6-63d). This particular variety of Poynor Engraved is common in ca. A.D. 1400-1560 burial contexts in the upper Neches River basin (Perttula 2008:Table 6-37).

Absent in the engraved fine wares at the site are types such as Holly Fine Engraved or Spiro Engraved (Suhm and Jelks 1962). These fine ware engraved types are considered material culture hallmarks of the Early Caddo period (along with various decorated utility wares), and the Alto phase (e.g., Story 2000:14) in East Texas. Their absence at the Pace McDonald site may be indicative of the fact that the Caddo occupation here postdates the Early Caddo period.

The decorated utility ware sherds in the 2010 surface collection at the Pace McDonald site are dominated by sherds from vessels decorated with punctations (44.4% of the utility wares), incised

Table 4. Decorative elements in the fine ware sherds.

Decorative elements	No.	Percent
Interior/exterior red slip	5	17.2
Exterior red slip	8	27.6
Straight engraved line	4	13.8
Straight and opposed engraved lines	1	3.4
Diagonal engraved lines*	1	3.4
Horizontal engraved lines*	2	6.9
Horizontal engraved lines+	1	3.4
Horizontal engraved line and hatched pendant triangles*	1	3.4
Opposed engraved lines	1	3.4
Parallel engraved lines, closely-spaced	2	6.9
Parallel and arcing engraved lines	1	3.4
Curvilinear engraved lines**	2	6.9
Total	29	100.0

*rim sherds; **bottle sherds; +=carinated bowl sherd

lines (40.7%), and sherds from vessels decorated with incised-punctated elements (9.3%) (Table 5). Minor decorative methods documented in the site's utility wares are brushed (3.7%) and pinched (1.9%) categories. These proportions for each decorative methods/elements categories are not significantly different than the utility ware assemblage in the TARL collections from the site (Perttula 2011:Table 4).

The punctated sherds from the site are comprised of a mixture of tool (46% of the punctated sherds), fingernail (46%), circular (4%), and crescent-shaped (4%) punctated elements (see Table 5). There are no punctated rim sherds, suggesting that the bodies of many utility ware vessels are decorated with punctations; the decoration on the rims of these vessels was probably not punctated, but more likely had incised decorative elements (cf. Dunkin Incised or Weches Fingernail Impressed), typical of Caddo utility wares that have different rim and body decorations. There is one Weches Fingernail Impressed, *var. Alto* body sherd (see Stokes and Woodring 1981:185-186 and Figures 22m and 23b-c) in the assemblage. This particular sherd has rows of crescent-shaped punctations.

Among the incised utility wares in the 2010 surface collection, there are sherds with widely-spaced cross-hatched lines (likely either from Canton Incised or Dunkin Incised vessels), opposed incised lines (also probably from Canton Incised or Dunkin Incised vessels), parallel or straight incised lines of uncertain orientation (possibly body decorative treatments), diagonal (a rim sherd), and horizontal-diagonal and opposed incised lines on another vessel rim (see Table 5). These incised sherds may be from Davis Incised, Dunkin Incised, or Canton Incised vessels, or from other Caddo ceramic types with incised elements that have not been typologically identified to date in the region.

The incised-punctated sherds in the 2010 surface collection sample from the Pace McDonald site have opposed or opposed diagonal incised lines with associated tool punctated zones (likely below the incised decorative element) or triangular zones filled with tool punctations (see Figure 3a). These utility wares are likely from Canton Incised and Pennington Punctated-Incised vessels. Other sherds have a zone of punctations adjacent to simple geometric incised elements, with the punctated elements apparently limited to the body of the vessel and the incised elements restricted to the rim.

A distinctive characteristic of the Pace McDonald utility wares is the occurrence of sherds from brushed and pinched jars, but only in low frequencies (see Table 4). These two categories of decorated utility wares together comprise only 5.6% of the assemblage. They apparently represent different means of rim and/or body decoration on jars, with parallel (likely vertical) or curvilinear brushing on

Table 5. Decorative elements in the utility ware sherds.

Decorative methods and elements	No.	Percent
Brushed, parallel	1	1.9
Brushed, curvilinear	1	1.9
Subtotal, brushed	2	3.7
Cross-hatched incised lines	1	1.9
Diagonal incised lines*	1	1.9
Horizontal, diagonal, and opposed incised lines*	1	1.9
Opposed incised lines	1	1.9
Parallel incised lines	8	14.8
Single straight incised line	4	7.4
Straight incised line, broad line	6	11.1
Subtotal, incised	22	40.7
Vertical pinched ridges	1	1.9
Subtotal, pinched	1	1.9
Circular punctated rows	1	1.9
Fingernail punctated rows/zone	4	7.4
Fingernail punctated, single	7	13.0
Tool punctated rows/zone	5	9.3
Tool punctated, single	6	11.1
Weches Fingernail Impressed, *var. Alto*	1	1.9
Subtotal, punctated	24	44.4
Opposed incised lines and tool punctated zone	1	1.9
Opposed diagonal incised lines and tool punctated-filled triangles+	1	1.9
Straight incised line adjacent to zone of tool punctates	3	5.6
Subtotal, incised-punctated	5	9.3
Totals	54	100.0

*rim sherd; +=carinated bowl sherd

jar bodies and vertical pinched rows on both the rim and body of jars. The pinched jar sherd may be from a Killough Pinched vessel (see Suhm and Jelks 1962:Plate 46f).

The very low frequency of brushed pottery at the Pace McDonald site is notable. Brushed utility wares like Bullard Brushed account for at least 50-80% of all the decorated sherds in upper Neches River basin Frankston phase (ca. A.D. 1400-1650) assemblages (Perttula 2008:Table 6-38), making it clear that Pace McDonald was likely not occupied in the Frankston phase. It was only by the early 15th century A.D. that "Caddo potters in the upper Neches River basin began to manufacture considerable numbers of jars with brushed vessel bodies and rims" (Perttula 2008:6-247).

The vast majority of ceramic vessel sherds from the site, whether in the TARL collections or the 2010 surface collections, are from vessels tempered with grog (i.e., fired and crushed clay), occasionally in association with other tempers (such as hematite or bone). This is the principal prehistoric Caddo ceramic practice in the upper Neches River valley (see Perttula 2008:Figure 6-70). More than 13.9% of the sherds do have crushed

Table 6. Use of bone temper in the Pace McDonald Caddo ceramic sherds, TARL collections and 2010 surface collections.

Ware	No.	Percent	No. with bone temper	Percent of total bone-tempered sherd sample
Plain Ware	1054	77.4	153	80.1
Fine ware	79	5.8	5	2.6
Utility ware	229	16.8	33	17.2
Totals	1362	100.0	191	13.9

and burned bone temper added to the clay paste (Table 6). Proportionally, bone temper is used most frequently in the plain wares and utility wares, about twice as frequently as is the case for the fine wares.

Burned Clay

Only a single piece of burned clay is in the 2010 surface collection. This piece is a product of a localized burning event at the site where a piece of clay was hardened through exposure to fire, perhaps an earth oven or hearth.

Chipped Stone Tools

The first chipped stone tool in the 2010 surface collections is an Alba point made from a non-local grayish-brown chert (Figure 4). This point has a parallel stem and a flat base, is bifacially chipped, and reworked on the tip (probably after it was broken during its first use after knapping). It is 20.1 mm in length, 15.0 mm in width, 2.9 mm in thickness, and it has a stem width of 4.3 mm. Alba points are generally considered Formative to Early Caddo period (ca. A.D. 800-1200) arrow points, although because they are diagnostic of the Alto phase (Story 2000), they may date from as long a period of manufacture and use as ca. A.D. 850-1300. They are particularly well-represented at the George C. Davis site on the Neches River (Newell and Krieger 1949:161 and Figure 56a-h), where they are considered the only "resident type." In the TARL collections from Pace McDonald, 55% of the arrow points are of the Alba type (Perttula 2011:Table 6).

The second chipped stone tool is a graver/unilateral retouched flake. It is made from a non-local gray chert.

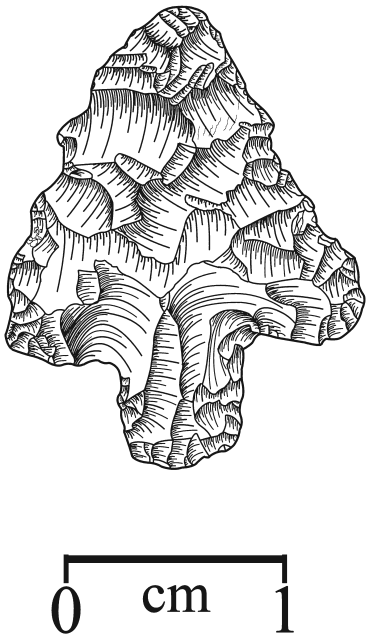

Figure 4. Alba arrow point from the 2010 surface collections at the Pace McDonald site. Illustration by Lance Trask.

Lithic Debris

The lithic debris from the Pace McDonald site in the 2010 surface collection (n=42) are predominantly pieces of non-local cherts that are apparently from the Edwards Plateau region of Central Texas, or from Brazos River and Trinity River stream gravels (Table 7); 86% of the lithic debris are made from these materials. The one piece of white novaculite lithic debris is from a southeastern Oklahoma Ouachita Mountains source

Table 7. Lithic debris from the 2010 surface collection at the Pace McDonald site.

Raw Material	Cortical	Non-Cortical	N
Non-local chert			
dark gray chert	4	2	6
gray chert	7	14	21
gray chert with black inclusions	1	–	1
grayish-brown chert	–	1	1
brown-dark brown banded chert	1	–	1
black chert	–	1	1
white chert	–	2	2
white-black chert	1	1	2
white novaculite	1	–	1
Subtotal	15	21	36
Local lithic raw materials			
yellow chalcedony	1	–	1
brown chert	3	–	3
yellow chert	–	1	1
quartzite	–	1	1
Subtotal	4	2	6
Totals	19	23	42

or a Red River gravel source. The Caddo knappers that lived at the site clearly had a broad range of lithic raw materials to draw upon, including ready access to non-local chert, Ouachita Mountains chert, and local (14%) chalcedony, earth-colored cherts, and quartzite. Other local lithic raw materials noted in the Pace McDonald lithic debris includes petrified wood and hematite (Perttula 2011:Table 10).

Cortical pieces—including both stream-rolled, roughened, and with a limestone-covered cortex—comprise 45% of all the lithic debris, including 42% of the non-local cherts and 67% of the local lithic raw materials (see Table 7). The high proportion of cortical flakes suggests that these lithic raw materials were brought to the site with significant amounts of cortex remaining on them (perhaps as pebbles), and knapped on-site; less likely is the possibility that both non-local and local lithic raw materials were brought to the site as tools or near-complete tools with cortical remnants (or even as large flakes with cortical remnants).

19th Century Artifacts

The historic artifacts in the 2010 surface collection were found in an area about 100-150 m northeast of Mound No. 1 (see Figure 2). These few artifacts are domestic/kitchen and architectural in character, and include a cut nail (1820-1891, see Wells 2000), a plain ironstone body sherd (post-1850s), a ca. post-1870s (see Greer 1981) stoneware base sherd with a clear exterior glaze, and a blue flown blue body sherd. Flown blue vessels became popular in the United States in the 1840s-1850s (Samford 2000:79). Overall, the few historic artifacts from the Pace McDonald site suggest there may have been a mid- to late 19th century settlement/farmstead on one part of the 2010 surface collection area.

Animal Bone

Five small pieces of poorly preserved burned animal bone were recovered in the 2010 surface

collections. They may be refuse from prehistoric Caddo midden deposits or other areas of concentrated trash disposal at the site.

SUMMARY

In April 2010, we were able to conduct a surface collection after a recent disking over a substantial portion of the known extent of the Pace McDonald site, a prehistoric Caddo mound center in the upper Neches River basin that may have been occupied from ca. A.D. 1100-1400 (Perttula 2011). During the course of the surface collection, one substantial artifact concentration was identified in an area just north of Mound No. 1, the larger of the two known mounds at the site. This area contained numerous Caddo ceramic vessel sherds, and much lesser amounts of chipped stone tools, lithic debris, burned clay, animal bone, and mid- to late 19th century ceramics and a cut nail. In this same area are three small and low rises that may be additional earthen mounds (see Figure 2); they have yet to be examined through shovel testing, coring, or any kind of excavations.

The eastern part of the Pace McDonald site (in the general vicinity of Mound No. 2) appears to have a very low density of prehistoric Caddo artifacts, as was previously noted by Thurmond (1978). This area of the mound center may not have been a locale for domestic habitation during the Early to Middle Caddo period occupation.

The surface collection-recovered artifacts from the site are very much the same in character and relative proportions as the larger sample of artifacts from the Pace McDonald site in the TARL collections (from both mound excavations and disparate surface collections). This indicates that the construction and use of the mounds was contemporaneous with the occupation of non-mound habitation areas.

The ceramic vessel sherds in the 2010 surface collection are predominantly grog-tempered, and plain ware vessels are particularly common (based on a P/DR ratio of 3.60 and a relatively high proportion of plain rims); sherds from decorated utility ware vessels outnumber fine wares about 3:1. In the utility wares, decorative elements consist primarily of simple geometric patterns of incised lines and incised-punctated designs (usually featuring diagonal opposed incised lines and triangles filled with tool punctations), rows and/or zones of tool, fingernail, and circular punctations; brushed and pinched sherds are a minor aspect of the utility wares at Pace McDonald. The fine wares include engraved (i.e., geometric elements, hatched and cross-hatched elements, mainly triangles, and carinated bowls and bottles) and red-slipped fine wares. Finally, the lithic artifacts found in the 2010 surface collection also indicate the manufacture and use of chipped stone tools made from non-local cherts.

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A Prehistoric Caddo Site on Black Fork Creek, Upper Neches River Basin, Smith County, Texas

Timothy K. Perttula and Bo Nelson

INTRODUCTION

During the course of recent archaeological survey investigations for a proposed waterline, a previously unrecorded prehistoric Caddo site—Lakewood Gardens (41SM425)—was found near, but outside the right-of-way and construction easement of, the proposed waterline (Nelson and Perttula 2010). This article provides summary details about the site, hopefully adding information to the sparse archaeological record of prehistoric Caddo sites along Black Fork Creek.

The site is situated on a natural upland rise (440 feet amsl) overlooking the Black Fork Creek floodplain less than 200 m to the north. Black Fork Creek is in the upper Neches River basin; the creek flows west into Prairie Creek, which enters the Neches River about 10 km to the west of the site. This area is in the Post Oak Savannah (Perttula and Nelson 2004:Figure 2). Before the mid- to late 19th century, the swampy Black Fork Creek floodplain would have been covered with an oak-hickory forest, with more mesic hardwoods, including various oaks, maple, sweetgum, ash, and elm (Hatherly 1993; Perttula and Nelson 2004). The Post Oak Savanna vegetation would have been dominated by a variety of fire-tolerant oaks and hickory on upland landforms. The upland landforms in this part of Smith County area have Eocene-aged Queen Sparta, Tyler Greenstone Member, and Weches Formation interbedded deposits of sand and clays (Bureau of Economic Geology 1965).

ARCHAEOLOGICAL FINDINGS

All six shovel tests excavated at the Lakewood Gardens site contain prehistoric Caddo ceramic and lithic artifacts in moderately thick (ca. 80 cm) Bresner soils (Hatherly 1993:22). These soils have yellowish-brown fine sandy loam A- and E-horizons overlying a strong brown clay subsoil. The prehistoric Caddo occupation at the site is shallowly and naturally buried in this soil at depths between 40-80 cm bs; no artifacts were found in the shovel testing between 0-40 cm bs. The density of prehistoric artifacts in the shovel testing is 1.83 per positive shovel test, or a relatively low density of ca. 14.6 artifacts per m^2. The size of the landform and the distribution of positive shovel tests suggests the Lakewood Gardens site covers ca. 1 acre (4000 m^2).

Prehistoric grog-tempered Caddo sherds were recovered in two shovel tests (ST 4 and ST 6) between 40-80 cm bs (Table 1). All three sherds are from the body of moderately thick-walled vessels, probably jars. One of the sherds has parallel brushing on its exterior surface, suggesting it came from a cooking or storage jar; the brushing probably was oriented vertically on the vessel body.

In this part of Smith County, Texas, brushed jars were likely manufactured and used first in the Middle Caddo period (cf. Perttula and Nelson 2004; Walters 2008), from ca. A.D. 1200-1400, and this may be the likely period when the Lakewood Gardens site was occupied by prehistoric Caddo peoples, since just to the north in the Sabine River basin, Caddo groups had abandoned this region about A.D. 1400 (cf. Walters 2008). Late (ca. A.D. 1400-1650) and Historic (post-ca. A.D. 1650) Caddo groups in the upper Neches River valley to the south and west (see Anderson et al. 1974) continued to make brushed ceramic vessels, however, until they abandoned the area in the early 18th century.

Chipped stone tools were knapped and/or resharpened at the Lakewood Gardens site, and certain tools were used here as well. Evidence of chipped stone tool manufacture and use includes one bilateral and unifacially used/worn expedient flake tool (ST 4, 40-60 cm bs)—probably used to cut, slice, and lightly scrape hides and packages of meat—made from a non-local grayish-brown chert raw material. Knapping debris consists of small (less than 6.4 mm)

Table 1. Detailed Analysis of Ceramic Sherds from the Lakewood Gardens Site (41SM425).

Provenience (cm bs)	Sherd Type	Temper	FC	ST	Th (mm)	Decoration
ST 4, 40-60	body	grog	C	–	9.6	plain
ST 4, 60-80	body	grog	G	I SM	7.2	parallel brushed
ST 6, 60-80	body	grog	E	–	7.7	plain

FC=firing condition (following Teltser [1993]); C and E=incompletely oxidized during firing; G, fired in a reducing environment, and cooled in the open air; ST=surface treatment; I=interior; SM=smoothed

flakes on locally available lithic raw materials that have both smooth cortical (n=2; probably gathered from stream gravels) and non-cortical (n=5) exterior surfaces. These flakes are from petrified wood (n=4) and quartzite (n=3); one of the quartzite pieces came from a heat-treated core or tool.

SUMMARY

The Lakewood Gardens site (41SM425) is a shallowly buried Middle and/or Late Caddo period habitation site recently discovered in the Black Fork Creek valley in the upper Neches River basin. The fact that the site appears to contain both intact and buried archaeological deposits and Caddo habitation debris suggests that the site may contain—upon further investigation, provided it is not disturbed by future development activities—features from a domestic occupation, including one or more wood structures, outdoor activity areas with ramadas and arbors, and localized trash deposits.

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Archaeological Sites Along King Creek in Western Nacogdoches County, in East Texas

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INTRODUCTION

The King Creek area of western Nacogdoches County in East Texas is known to be a locality where Historic Caddo sites (of the Allen phase, ca. A.D. 1650-1800) are abundant (Middlebrook 2007; Perttula et al. 2010a; Walker and Perttula 2010), or at least abundant relative to many other parts of East Texas. In addition to there being at least two branches of the late 17th-early 19th century El Camino Real de los Tejas that bisect the area on their way to crossings on the nearby Angelina River, three important Historic Caddo sites have been identified not far apart in the valley: J. T. King (41NA15) (Figure 1), David King (41NA321), and Wes Wisener (41NA336); the David King and Wes Wisener sites lie a short distance south of the J. T. King site, on the west side of the King Creek valley. Tom Middlebrook (2010 personal communication) suggests these sites, and other Historic Caddo sites yet to be identified in the valley, are part of an early 18th century Hainai Caddo village that had farmstead compounds dispersed across at least a 3-4 km stretch of the valley.

In 2009, we had the opportunity to conduct archaeological survey investigations on private land on King Creek and one of its tributaries. The survey area is about 1-1.5 km northeast of the J. T. King site (see Figure 1). The principal focus of the survey work was to identify other Historic Caddo sites in the King Creek valley. Our interest in this property had first been piqued because the landowner had reported that a iron Spanish sword had been found on the property some years earlier; the landowner also mentioned that there were preserved segments of El Camino Real de los Tejas on the property. This article summarizes the findings from a first round of archaeological survey investigations

SITES

A total of six new archaeological sites (41NA323-328) have been identified to date along this particular stretch of King Creek. Three of the sites have prehistoric and/or Caddo occupations (41NA323, 41NA325-326), a fourth appears to be of Historic Caddo age (41NA327), a fifth has both unknown prehistoric and late 19th-early 20th century artifacts (41NA324), and the last site was occupied in the early to mid-19th century (41NA328). During the course of the archaeological survey investigations, a total of 167 prehistoric and 46 historic artifacts were recovered from surface collection and/or shovel testing (Table 1); the majority of the artifacts (n=148), all aboriginal, are from 41NA327.

Prehistoric and/or Caddo Sites

41NA323 is on a rise at the edge of a wooded toe slope (310-320 feet amsl) overlooking the floodplain of King Creek. The estimated site area is 1200 m^2 (0.3 acres). This is the site that the landowner indicated a Spanish sword was found eroding out of a cut bank some years ago.

Two positive shovel tests, documenting archaeological deposits from 0-60 cm bs, and a small surface collection, recovered artifacts from what appears to be primarily a Caddo site that was occupied sometime after ca. A.D. 1200. The temporal estimate is based on the occurrence of brushed (n=2) and brushed-punctated (n=1) ceramic sherds from the shovel testing; a parallel incised body sherd was also recovered at the site. The brushing of utility wares by Caddo potters in the Angelina River basin postdates ca. A.D. 1200, and these decorative methods on ceramic vessels continued until at least the early 18th century. Thus, it is pos-

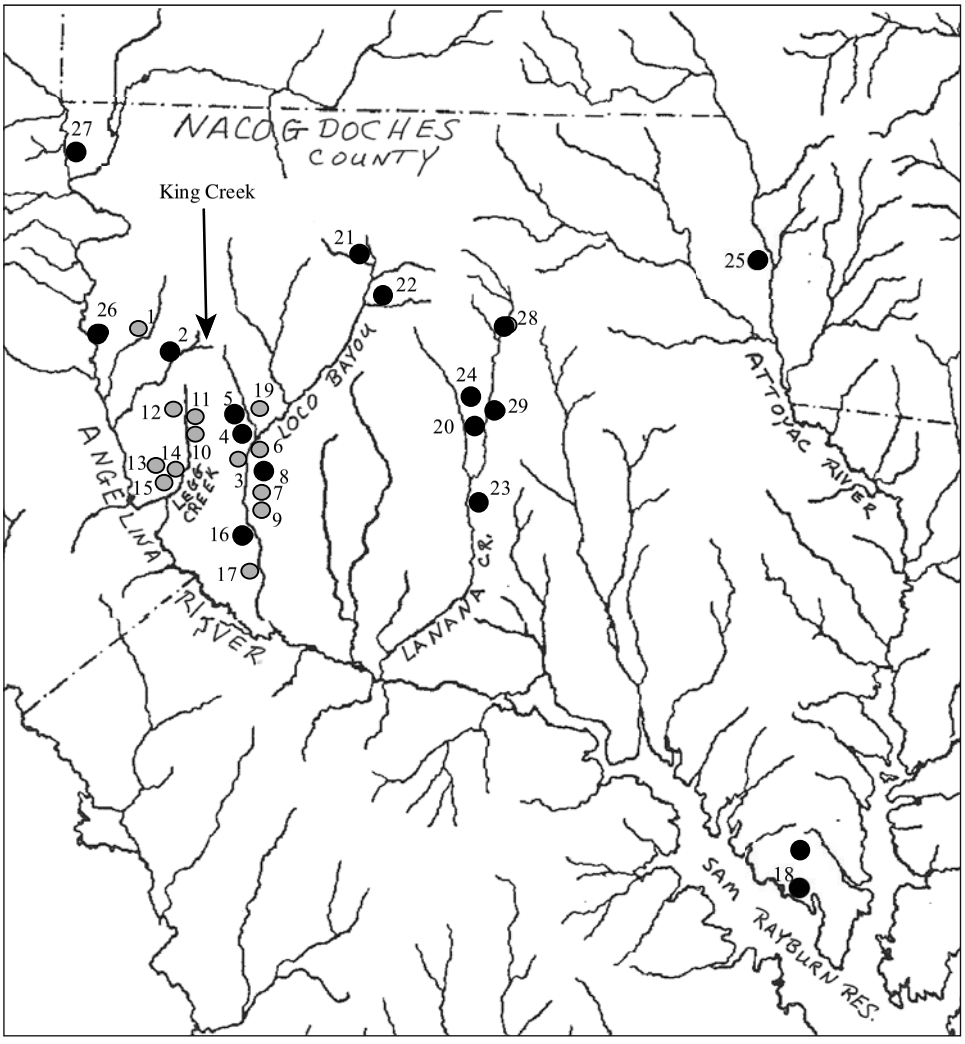

Figure 1. Known and possible Historic Caddo sites in Nacogdoches County, Texas (from Middlebrook 2007:Figure 1).

1-NA6 Dorsey
2-NA15 King
3-NA18
4-NA21 Mayhew
5-NA22 Iron Rock
6-NA23 Loco Bottom
7-NA26
8-NA27 Deshazo
9-NA29 Perkins
10-NA33
11-NA44 Chayah
12-NA47
13-NA53
14-NA Cecil Sparks
15-NA55
16-NA60 Henry M.
17-NA65
18-NA67
19-NA111 Dick Shipp
20-NA113
21-NA187 Loco Fork
22-NA202 Stevens
23-NA206 Steve Spradley
24-NA223 Guadalupe Pilar
25-Joe Little
26-AL Self
27-WT Williamson
28-Appleby Bead
29-Nac. East Bead

sible that 41NA323 could have been occupied by an Historic Caddo group, and the discovery of the Spanish sword would lend credence to this suggestion, but a larger sample of plain and decorated sherds (as well as the recovery of other European trade goods) would be needed to determine that with any confidence.

The lithic artifacts from 41NA323 include a single piece of gray chert lithic debris from a shovel test, and two chipped tools from the surface. These are a unifacial flake tool (gray chert) and a petrified wood biface fragment. Presumably these artifacts are associated with the Caddo occupation.

41NA325 has both Woodland and Caddo occupations. The site is on a small toe slope (310-330 feet amsl) about 25 m north of a tributary to King Creek. Artifacts were noted over a 4000 m^2 area (1 acre) in surface and shovel test contexts. The one positive shovel test documented archaeological deposits that extend from 0-40 cm bs.

Table 1. Summary of the artifacts collected during the archaeological survey investigations.

Site	Prehistoric to Early Historic					Historic				
	PS*	DS	DP	T	LD	WC	N	SW	G	D/Br
41NA323	2	4	–	2	1	–	–	–	–	–
41NA324	–	–	–	–	3	4	–	6	1	–
41NA325	1	1	–	–	1	–	–	–	–	–
41NA326	–	–	–	–	4	–	–	–	–	–
41NA327	35	99	1	3	10	–	–	–	–	–
41NA328	–	–	–	–	–	12	18	–	2	3
Totals	38	104	1	5	19	16	18	6	3	3

* PS=plain sherd; DS=decorated sherd; DP=dart point; T=tool; LD=lithic debris; WC=whiteware ceramics; N=cut nails; SW=stoneware; G=glass, both window and bottle; D/Br=daub/brick

Artifacts found at 41NA325 include a piece of gray chert lithic debris from the surface, along with a grog-tempered diagonal incised body sherd from a Caddo utility ware vessel of unknown age. The one shovel test recovered a plain sandy paste Goose Creek Plain, *var. unspecified* body sherd. This type of pottery is found in ca. 500 B.C. to A.D. 800 Woodland period contexts in the Angelina River basin in East Texas (Story 1990; Perttula 2008).

The last of the prehistoric sites in this survey area is 41NA326, which is located on a lower upland slope (310 feet amsl) overlooking the floodplain of King Creek and a tributary stream 150 m to the north that flows west a short distance to a confluence with King Creek. Shovel testing and surface artifacts indicate that the site covers ca. 1350 m^2 (0.3 acres). Two positive shovel tests document archaeological deposits between 20-40 cm in depth.

Only prehistoric lithic debris (n=4) of an unknown age were found at 41NA326. These include flakes on local raw materials—brown chert (n=1), quartzite (n=1), and petrified wood (n=1)—as well as a non-local piece of gray novaculite.

Possible Historic Caddo Site

This possible Historic Caddo site (41NA327) is on a wooded alluvial rise and alluvial fan (290 feet amsl) immediately adjacent to the King Creek floodplain. It covers an estimated 10,800 m^2 (2.7 acres) as defined by 14 positive shovel tests. Archaeological deposits extend from 0-50 cm bs, based on the shovel tests and the excavation of Unit 1, a 1 x 1 m unit. The mean artifact density in the shovel testing at 41NA327 is 5.5 per positive shovel test, or ca. 44 artifacts per m^2. The one excavation unit has documented an area with a density of 71 artifacts per m^2 (Table 2). Ceramic sherds comprise more than 90% of the artifacts from the site (see Table 1).

The Caddo ceramics from 41NA327 include 32 plain grog-tempered body (n=31) and base (n=1) sherds and 99 decorated rim and body sherds (Table 3). More than 86% of the decorated sherds (including 83% of the rim sherds) are from utility ware vessels, with the remaining 13.1% coming from broken engraved or engraved-brushed fine ware vessels. Of the utility wares (n=86), 89% are from jars with brushed, brushed-incised, or brushed-punctated decorations, followed by jar sherds with incised (5%), punctated (2.3%), incised-punctated (1.2%), and appliqued (1.2%) decorations.

Table 4 provides a more specific breakdown of the decorative elements identified in the 41NA327 utility wares and fine wares. Most of the jars are decorated with brushing on the rim and/or body (probably from Bullard Brushed jars), although two rims are brushed as well as punctated below their folded over rims, and a fifth rim has horizontal incised lines on it. Jar bodies had primarily parallel (likely vertical in orientation), vertical, overlapping, and opposed brushed marks on them, with small amounts of body sherds with brushed-incised lines (Spradley Brushed-Incised?, an Historic Caddo type in the Angelina and Neches river basins), brushed-punctated body sherds, a few incised sherds (including one with a cross-hatched element), and a single

Table 2. Summary of the artifacts collected from Unit 1 at 41NA327.

Depth (cm bs)	Plain Sherd	Decorated Sherd	Chipped Stone Tool	Ground Stone Tool	Lithic Debris	N
0-10	5	12	–	–	–	17
10-20	7	13	–	1	2	23
20-30	5	13	–	–	–	18
30-40	2	8	1	–	2	13
Totals	19	46	1	1	4	71

body sherd with an unidentifiable incised-punctated decorative element.

The two most distinctive fine ware sherds from 41NA327 are two King Engraved body sherds with cross-hatched engraved zones/panels (see Table 4). As recently defined, the King Engraved type has cross-hatched engraved zones, either in panels, panel dividers, or in large bands apparently oriented in several directions on the rim panel. Similar sherds have been documented at several Historic Caddo Allen phase sites, among them the Deshazo site (Fields 1995:Figure 70d, j-l), the J. T. King site (Walker and Perttula 2010), the David King site (Perttula et al. 2010a), the Henry M. site (Perttula et al. 2010b:Figures 14b and 15b), as well as in other Historic Caddo ceramic assemblages in the Angelina River basin (Shawn Marceaux, November 2008 personal communication).

Another fine ware sherd has an engraved design (horizontal lines) on the rim of a carinated bowl, and the vessel body has horizontal brushing marks (see Table 4). The brushing of fine ware vessel bodies is a practice seen on both Late Caddo (ca. A.D. 1400-1650) and Historic Caddo vessels in the Angelina-Neches river basins, so its occurrence at 41NA327 would not be unexpected if the site dates to the Historic Caddo period. Other engraved sherds are currently unidentifiable to type, but include examples with geometric elements, as well as two with panels filled with horizontal or parallel engraved lines (see Table 4).

Table 3. Decorated sherds from 41NA327.

Decorative Method	Rim	Body	N
Utility Wares			
Brushed	4	68	72
Brushed-Incised	–	2	2
Brushed-Punctated	–	3	3
Punctated	–	2	2
Incised	1	4	5
Incised-Punctated	–	1	1
Appliqued	–	1	1
Fine Wares			
Engraved	1	11	12
Engraved-brushed	–	1	1
Totals	6	93	99

Table 4. Decorative elements on the utility ware and fine ware sherds from 41NA327.

Decorative Element	Rim	Body	N
Utility Wares			
Appliqued ridge	–	1	1
Horizontal brushed	2	–	2
Opposed brushed	–	3	3
Overlapping brushed	–	6	6
Parallel brushed	–	60	60
Vertical brushed	–	1	1
Opposed brushed-incised line	–	2	2
Horizontal brushed and tool punctates on folded over rim	1	–	1
Overlapping brushed and tool punctates on folded rim	1	–	1
Parallel brushed with tool punctated row pushed through the brushing	–	1	1
Tool punctated row	–	2	2
Horizontal Incised lines	1	1	2
Cross-hatched Incised lines	–	1	1
Parallel incised lines	–	1	1
Single straight incised line	–	1	1
Straight incised line adjacent to linear punctated zone	–	1	1
Subtotal	5	81	86
Fine Wares			
Cross-hatched engraved zone/panel+	–	2	2
Horizontal engraved lines/horizontal brushing on body; CB	–	1	1
Horizontal and diagonal opposed engraved lines	1*	–	1
Opposed sets of parallel engraved lines	–	1	1
Opposed engraved lines and panel filled with parallel engraved lines	–	1	1
Panel filled with horizontal engraved lines, CB	–	1	1
Parallel engraved lines	–	1	1
Single straight engraved line	–	5	5
Subtotal	1	12	13

* this rim sherd has a possible Redwine mode rim (Walters 2010), with a folded over and flat lip;
CB=carinated bowl; +=King Engraved

Overall, the ceramic sherd assemblage from 41NA327 is quite similar in character to the three Historic Caddo sites situated 1-2 km downstream on King Creek (Table 5). It is true that no Patton Engraved sherds—the quintessential Historic Caddo ceramic type in the Angelina-Neches river basin—have been found at 41NA327, but then again only 13 small engraved sherds have been recovered at the site during our limited archaeological investigations. King Engraved, another Historic Caddo fine ware type, is present at 41NA327. More telling is the amount of brushed sherds in the 41NA327 assemblage, as the proportion of brushed sherds in an assemblage as a whole, or its proportions in the decorated sherd assemblage, are key measures in the identification of Historic Caddo sites in the Angelina River basin in the absence of European trade goods (see Middlebrook 2007; Perttula et al. 2010a, 2010b; Walker and Perttula 2010).

By the late 17th-early 18th centuries, for example, in Caddo sites in the Angelina River basin such as Deshazo (41NA27), Mayhew (41NA21), Steven Spradley (41NA206), and the Mission San Jose de la Nasoni sites (41RK191, 198, 200), brushed sherds account for between 50-90% of all the decorated sherds. All of the King Creek sites, including 41NA327, discussed here have assemblages where between 69-78.5% of the decorated sherds are brushed. Furthermore, more than 51% of all the sherds (plain and decorated) from these generally contemporaneous sites have brushed decorations, and the highest proportion (58.8%) is documented from 41NA327 (see Table 5).

Another measure of the age of the Caddo occupation at 41NA327 is the plain/decorated sherd ratio (P/DR) (see Table 5). This ratio appears to hold considerable promise as an independent means of establishing the age of Caddo ceramic-bearing components on Historic Caddo sites in the Angelina-Neches River basin. For example, Historic Caddo sites in this region have P/DR values that are less than 0.60, but Caddo sites that are older have P/DR values that range from 0.77 to greater than 4.00. For example, the P/DR ratio from the ca. A.D. 1675-1715 occupation at the Deshazo site (41NA27) is only 0.30 (Fields 1995). The Allen phase component at the Kah-hah-ko-wha site (41CE354) has a P/DR of 0.20 (Perttula and Nelson 2007a:72, 74), while Historic Caddo (Nabedache Caddo) ceramic assemblage on San Pedro Creek (Perttula and Nelson 2006, 2007b; Perttula et al. 2010a) have P/DR ratios that range from 0.07-0.60. The P/DR ratios from the four Caddo sites on King Creek listed in Table 5 range only between 0.33-0.51, and it seems reasonable to conclude that all four sites are generally contemporaneous Historic Caddo settlements. Further investigations at 41NA327 will be geared to acquiring a larger sample of both plain and decorated sherds to refine the select ceramic comparisons, as well as determining if European trade goods are present at the site; these goods are rare (a few beads, lead balls, kettle fragments) at the other King Creek Historic sites.

In addition to the possible Historic Caddo ceramic sherds from 41NA327, there are three Goose Creek Plain, *var. unspecified* body sherds from ST 11 (0-20 cm bs), ST 12 (0-20 cm bs), and ST 19 (20-40 cm bs). The recovery of these sherds is evidence that 41NA327 was also occupied by Mossy Grove Culture people (see Story 1990; Perttula 2008) some time during the lengthy Woodland period.

Table 5. Selected ceramic comparisons between 41NA327 and nearby Historic Caddo sites.

Comparisons	J. T. King (41NA15)	David King (41NA321)	Wes Wisener (41NA336)	41NA327
Plain to Decorated Sherd Ratio (P/DR)	0.51	0.36	0.37	0.33
% Brushed in decorated sherds	78.5	69.0	76.8	77.8
% Brushed among all sherds	52.0	50.7	55.9	58.8
Sherd sample size	1694	209	272	131*

*Does not include three Goose Creek Plain, *var. unspecified* sherds

A dart point fragment from ST 7 (40-50 cm bs) suggests that 41NA327 was also occupied during the Archaic period, perhaps ca. 4000 B.P. or earlier. The dart point tip and blade, made from a light gray chert, has a distinctive beveled blade, an attribute more commonly seen on points made and used prior to the Late Archaic in East Texas.

Other lithic artifacts—of unknown temporal attribution—include a petrified wood hammerstone from Unit 1 (20 cm bs), an expedient unifacial flake tool (gray chert) from Unit 1 (30-40 cm bs), and 10 pieces of lithic debris. The lithic debris is from the knapping of several different raw materials: quartzite (n=3, 100% cortical); hematite (n=1, 100% cortical); petrified wood (n=1, 100% cortical); red chert (n=1, 100% cortical); grayish-brown chert (n=1, 100% cortical); brownish-gray chert (n=1, 100% cortical); dark gray chert (n=1, 0% cortical); and white-gray chert (n=1, 100% cortical). Known local raw materials (quartzite, hematite, petrified wood, and red chert) comprise 60% of the small sample of lithic debris; the other 40% (cherts of various colors) of the lithic debris may be from non-local raw material sources in Central Texas or stream gravels in the Brazos, Trinity, and Neches rivers (see Girard 1995).

A single piece of burned animal bone was recovered from ST 7 (0-20 cm bs)

UNKNOWN PREHISTORIC AND LATE 19TH-EARLY 20TH CENTURY SITE

This site (41NA324) is situated on an upland ridge (350 feet amsl) about 280 m north of an intermittent tributary to King Creek. It is about 2000 m^2 in size (0.5 acres) around the edge of a 2 acre well pad, as estimated from the surface extent of artifacts, but may be larger based on the size of the landform. No shovel testing was done at 41NA324.

The prehistoric artifacts on the surface consist of three pieces of non-cortical lithic debris of an unknown age. The lithic debris are dark gray chert (n=2), probably from a non-local (i.e., Central Texas) raw material source, and a white quartzite (n=1), possibly Glover quartzite from a Neches River source (see Perttula and Nelson 2006).

The historic artifacts found at 41NA324 are likely from a tenant farm that was known to be in this general location (George Perry Campbell, May 2009 personal communication). The artifacts include four pieces of plain whiteware (n=2) and porcelain (n=2), late 19th to early 20th century stone ware sherds (one sherd with a Bristol glaze with a cobalt tint; one sherd with an Albany glaze; three sherds with a brown lead glaze; and one salt-glazed sherd) (see Greer 1981; Lebo 1987), and a clear tableware glass sherd.

EARLY TO MID-19TH CENTURY SITE

41NA328 is an early to mid-19th century farmstead on an upland landform (350 feet amsl). In addition to archaeological deposits that extend from 0-40 cm bs over a 2500 m^2 area (0.6 acres), there is a visible well depression at the site, and there are ruts from a section of El Camino Real de los Tejas that run just south of the farmstead.

Seven positive shovel tests at 41NA328 contain early to mid-19th century plain (n=7) and decorated (n=5) whiteware ceramics, cut nails (n=18, 1820-1891, see Wells 2000), brown beer/snuff bottle glass (n=1), aqua-colored window glass (n=1), daub or burned clay (n=2), and hand-made brick fragments (n=1); the daub and brick fragments are likely from a chimney associated with a wood-framed structure that stood on the site. The density of artifacts in the shovel testing is 5.0 artifacts per positive shovel test, or ca. 40 artifacts per m^2.

One of the decorated whiteware sherds from 41NA328 is a blue painted shell-edged rim with a non-scalloped rim but impressed lines. Blue shell-edged plates and platters with unscalloped rims and impressed lines were being made by the 1840s, while the earlier symmetrical scalloped shell-edged ware continued to be made into the 1830s (Hunter and Miller 1994, 2009:13); this earlier form is absent in the 41NA328 artifact sample. The other four decorated sherds are transfer-printed, either brown (n=1), light blue (n=1), red (n=1), or black (n=1). The date ranges of production of the different colors of transfer-printed ceramics found at the site are: brown (1818-1869), light blue (1818-1867), red (1818-1880), and black (1785-1864) (Samford 2000:Table 5). Because these transfer-printed sherds are whitewares, and based strictly on the production date ranges, the occupation at 41NA328 could have ranged from ca. 1830s-1880. Mean beginning and end production dates for the transfer printed wares suggest these sherds are from vessels that were most likely manufactured between ca. 1830-1843 (Samford 2000:Table 5).

The one piece of aqua-colored window glass suggests that at some time, the wood-framed structure at 41NA328 had a window installed in one or more of the walls. The pane thickness (1.9 mm) of the one window glass sherd suggests the window pane was manufactured and installed in the early 1870s (Moir 1987).

CONCLUSIONS

The recent archaeological survey of a parcel of private property along King Creek in western Nacogdoches County in East Texas has documented sporadic use of the land since at least 4000 years ago by ancestors of the modern day Caddo Nation of Oklahoma. The existence of a branch of El Camino Real de los Tejas that cuts across the property, and the possibility that a Spanish sword was found at 41NA323, suggests use of the land during the Spanish and/or Mexican colonial periods (ca. 1690 to 1836). The land was also settled by Anglo-Americans in the 1830s—probably after the Caddo peoples had been removed from their traditional East Texas homelands and after Texas became an independent Republic—and used as a farm since that time.

With respect to the aboriginal use of the land, it was during occupations by Caddo peoples (after ca. A.D. 1200 and as late as the early 18th century), that the land along King Creek was apparently most intensively used for settlement. The Caddo sites (41NA323, 41NA325, and 41NA327), although poorly known due to limited archaeological investigations, were likely farmsteads or small hamlets (in the case of 41NA327, the possible Historic Caddo site). Agricultural fields would also have been situated around each of the habitation sites, as well as foot trails connecting the sites to others in the King Creek valley, including the Historic Caddo sites not far downstream at the J. T. King, David King, and Wes Wisener sites.

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Notes on the Hudnall-Pirtle Site (41RK4) in the Buddy Calvin Jones Collection at the Gregg County Historical Museum

Timothy K. Perttula

INTRODUCTION

The Hudnall-Pirtle site (41RK4) is an important Early Caddo (ca. A.D. 900-1200) period multiple mound center and large village situated on an alluvial terrace of the Sabine River in East Texas (Bruseth and Perttula 2006). Although best known through the archaeological investigations conducted by the Texas Historical Commission (on behalf of the Archaeological Conservancy) at the site in 1989 and 1990, Buddy Calvin Jones, then of Longview, completed his own investigations at the site in the 1950s and early 1960s (Bruseth and Perttula 2006:59; Perttula 2009), although he never published any of the archaeological findings from his work, and is has not been clear from the available records and anecdotal information (Bruseth and Perttula 2006:59; Perttula 2009:37-40) where he conducted his excavations.

At the 1963 Caddo Conference, Jones described the Hudnall-Pirtle site (which he called the Bivins Farm site) as follows:

> there is one big mound site (Bivins farm) located in the Sabine bottomlands of northeast Rusk County. It is composed of five mounds arranged around a plaza; they consist of two large rectangular temple mounds and three large circular mounds. I would guess this site to be primarily of Alto origin although tests in the village area revealed Alto and Coles Creek sherds (Davis et al. 1971:101).

Since the Hudnall-Pirtle site is now known to actually have eight mounds (Bruseth and Perttula 2006:Figure 2), it would be useful to present-day Caddo archaeologists to know which mounds Jones was referring to in his description, and how their layout and placement compared to current maps of the site. It would also be helpful if information was available on where Buddy Jones conducted excavations at Hudnall-Pirtle, and what he may have found in that work.

Until just a few months ago, all that was known or conjectured about the Buddy Calvin Jones excavations at the Hudnall-Pirtle site consisted of information gleaned in conversations with his mother, who mentioned trench excavations in Mound C, thought to be a burial mound (Bruseth and Perttula 2006:59), and other trenches excavated in village areas and at least one mound in 1958 and 1959 (Perttula 2009:37-39). Fortunately, however, Buddy Calvin Jones maps and profiles from his work at the Hudnall-Pirtle site have been recently donated to the Gregg County Historical Museum (GCHM), although it is not known if all the notes, maps, and profiles compiled by Jones are now in the GCHM collections. This article discusses the Buddy Calvin Jones notes on his 1956-1961 work at the Hudnall-Pirtle site.

BUDDY CALVIN JONES NOTES ON THE HUDNALL-PIRTLE SITE

Buddy Jones identified five prehistoric Caddo mounds, a sixth possible mound, a refuse area, and a borrow pit at the Hudnall-Pirtle site in a 1961 map (Figure 1); that map also showed a modern ramp house west of one of the mounds. Notably, his map does not include the southern or eastern parts of the current site area (Bruseth and Perttula 2006:Figure 2). The mound designations on this map follow those used by Bruseth and Perttula (2006:Figures 2, 4-10); on Jones' map, he used numerical designations: Mound 1 (Mound C); Mound 2 (Mound D); Mound 3 (Mound E); Mound 4 (Mound B); and Mound 5 (Mound A). The Borrow pit on Figure 1 corresponds to Borrow Pit A in Bruseth and Perttula (2006:Figure 2).

The sixth possible mound in the northwest part of the site (see Figure 1) corresponds to the

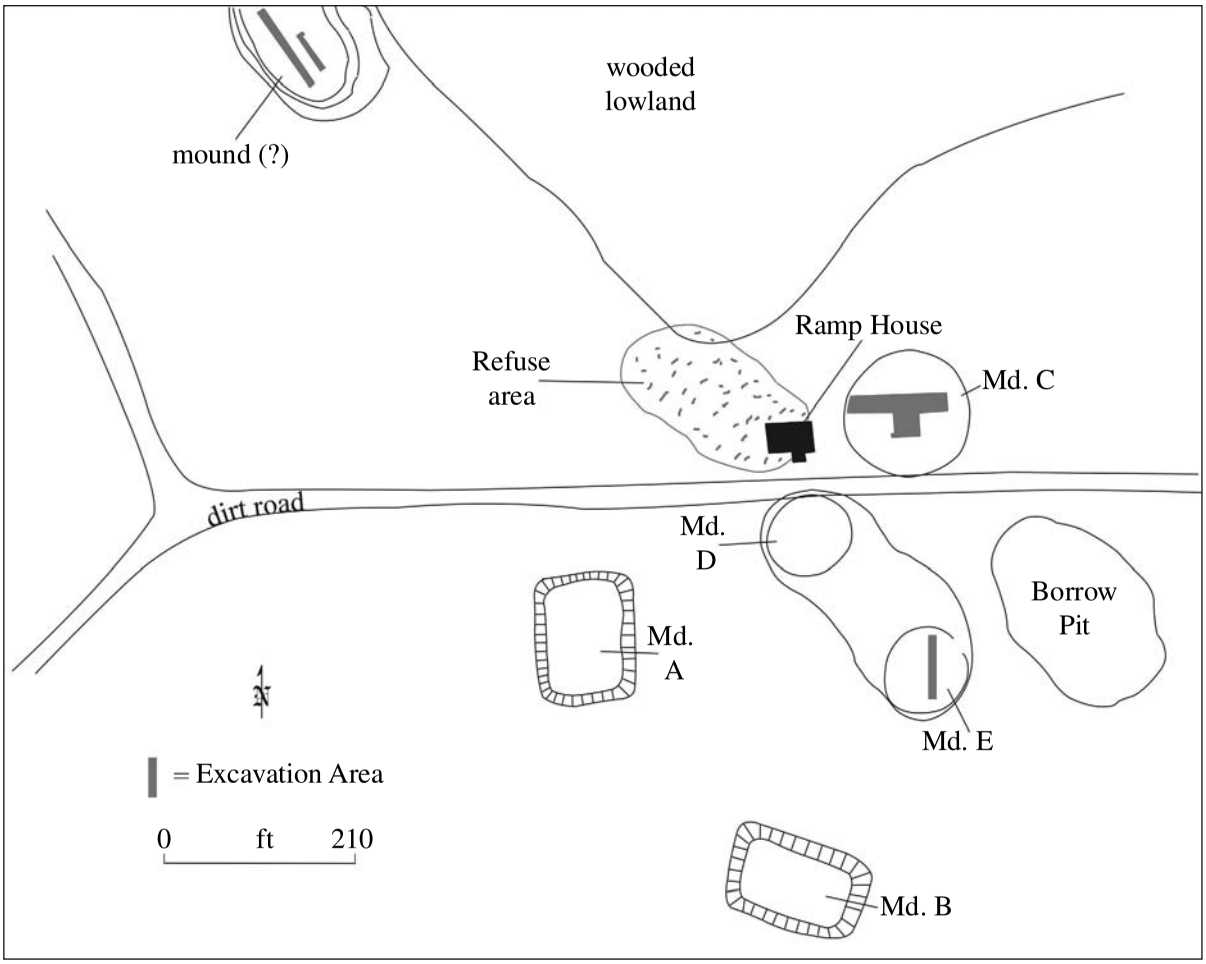

Figure 1. Buddy Jones 1961 map of the Hudnall-Pirtle site.

Northwest Area in Bruseth and Perttula (2006). Excavations here by Bruseth and Perttula (2006:68) determined that this was a natural alluvial rise, not a deliberate mound construction. Jones also identified a refuse area—presumably a product of prehistoric Caddo habitation deposits—to the immediate west of Mound C. This may be the location of his Trench A and B village area excavations in 1959 (Perttula 2009:37-38), which contained Early Caddo period ceramic sherds and ear spool fragments.

Mounds A and B were flat-topped platform mounds between 6-10 ft. (1.8-3.0 m) in height, with basal areas ranging from 16,644-27,300 square feet (Figure 2). Mound C was conical-shaped, with a total diameter of 126 ft. and a total height of 11.75 ft. (3.6 m).

Jones did not excavate in either of the two flat-topped platform mounds, but did excavate a rectangular-shaped unit near the crest of Mound C in December 1956 (with the assistance of C. W. Bailey and Jan Burandt) and an east-west trench in 1960 (see Figure 1). According to Jones' notes, the rectangular-shaped unit was excavated to a depth of 7 ft. (2.1 m), but no notable cultural features were encountered. Jones did note that clusters of pottery sherds were encountered at depths of 2 ft. (0.61 m) and 3.3 ft. (1 m) in the unit, and a piece of sandstone was found at 2.9 ft. (0.88 m). The sherds from "Cherokee Bayou Mound site, Easton" and "Easton" proveniences at the GCHM (Perttula 2009:39) may have come from these excavations.

Other excavations by Jones occurred in Mound E (see Figure 1), where in August 1961 he dug a 22 ft. long (6.7 m) and 3.67 ft. wide (1.12 m) north-south trench (Figure 3) across the center of the mound; the pothole shown in Bruseth and Perttula (2009:Figure 8) is likely the remnant of this 1961 trench. In these excavations, he documented a 4.1 ft. high (1.25 m) mound with two fill stages. The mound was constructed over a Caddo house built

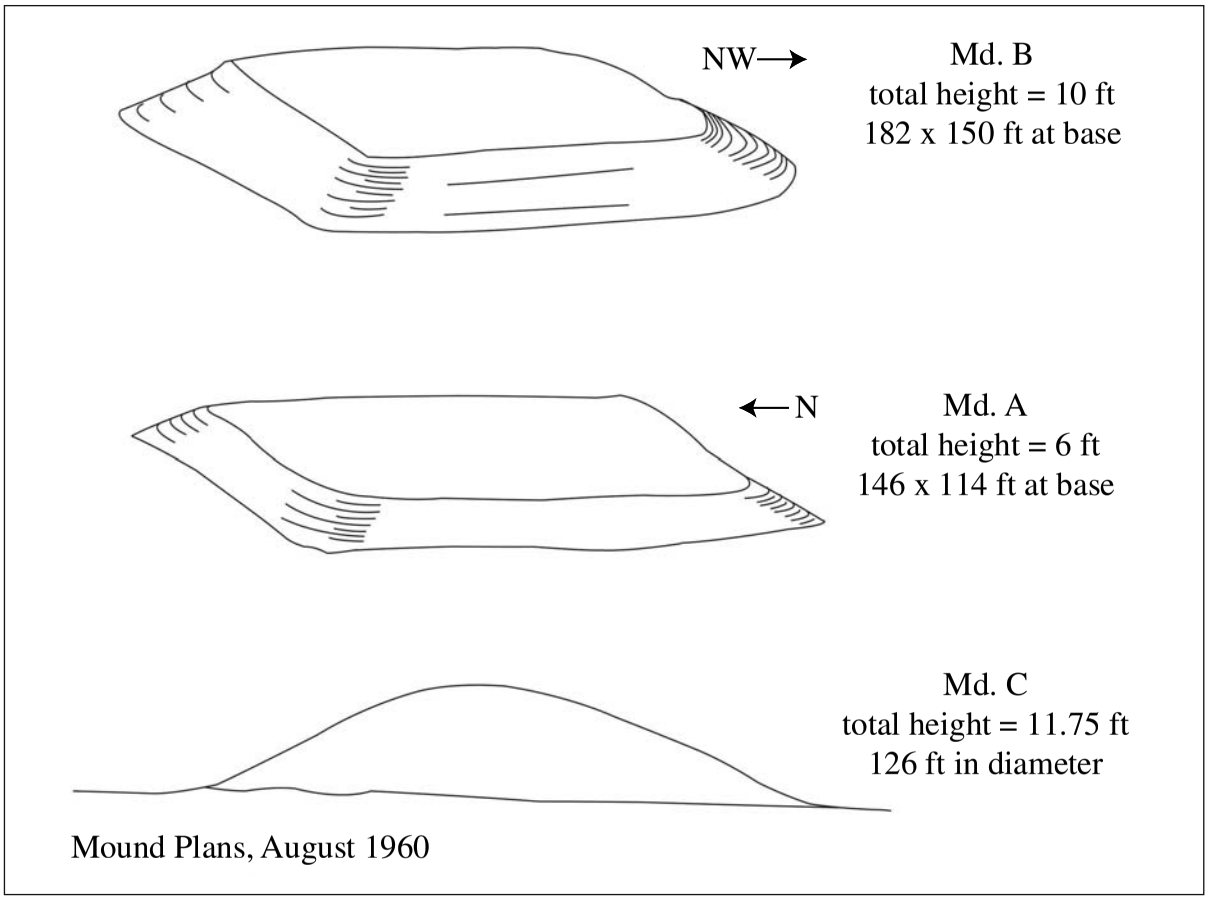

Figure 2. August 1960 drawing by Buddy Jones of Mounds A, B, and C at the Hudnall-Pirtle site.

on the natural ground surface, and the house had a 1.5 inch thick (3.8 cm) prepared yellow clay floor. Prepared clay floors are rare features in prehistoric and early historic Caddo structures in East Texas, whether in structures on or under mounds or on non-mound sites (Schultz 2010:328-329), suggesting the structure under the mound was likely inhabited by a member of the Caddo socio-political elite. The house was burned—as marked by charred logs and burned clay—then buried by the first mound fill stage, a 1.8 ft. thick (0.56 m) deposit.

A second house was built upon this first mound fill stage. It was also burned, and then covered with the second mound fill stage, a 2.2 ft. (0.67 m) sterile sand (see Figure 3). The second house floor was comprised of a mixture of ash and burned clay extending across much of the trench profile. Finally, Jones suggested that there may have been a third house floor, marked by ash deposits, near the very top of the mound. If accurate, this particular burned house deposit was not capped before mound construction was terminated.

Mounds D and E as sketched by Jones (see Figure 1) suggest that they represent conjoined mounds that served as platforms for structures. Based on a comparison with the Belcher Mound site (16CD13) (Webb 1959), as well as other such mounds in the Caddo area, it is likely that throughout much of the history of the Hudnall-Pirtle site, structures may have stood simultaneously on the two conjoined mounds. After a period of use, structures on each of the two mounds were likely ritually burned and immediately covered by a layer of earth/mound fill.

The last excavations recorded by Jones at the Hudnall-Pirtle site were two trenches dug in 1957 in a large rise in the northwestern part of the site, which Jones thought may have also been a mound (see Figure 1). What Jones uncovered here is unknown, although the ceramic sherds from his "North Mound, Area I" excavations (Perttula 2009:38-39) may have come from these two trenches. The sherds included Crockett Curvilinear Incised and Dunkin Incised vessels, as well as sherds from a Williams Plain vessel.

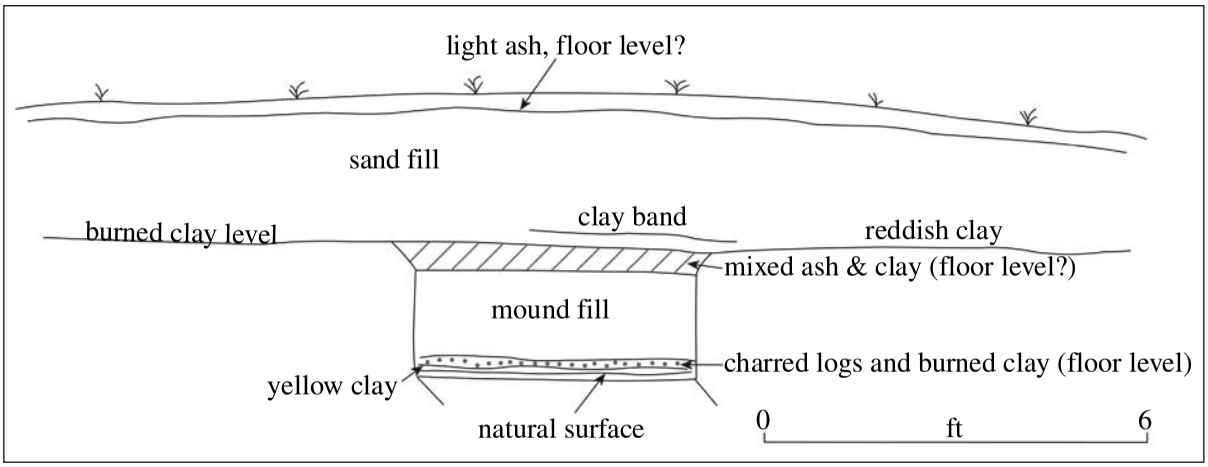

Figure 3. Profile of Mound 3 (Mound E) at the Hudnall-Pirtle site, August 1961, drawn by Buddy Calvin Jones.

CONCLUSIONS

It is fortunate that some, but hopefully not all, notes, maps, and profiles from the late 1950s-early 1960s excavations by Buddy Calvin Jones at the Hudnall-Pirtle site have recently been donated to the Gregg County Historical Museum, where they are accessible for research studies. These notes provide specific information on the size, placement, and probable function of five of the eight mounds at this Early Caddo period site (see Figure 1); the location of a large refuse area not previously mentioned in the Hudnall-Pirtle archaeological literature; and the timing and extent of excavations by Jones in Mounds C and E as well as in a large natural rise northwest of the main mound group. The profile information from the Mound E excavations was particularly useful, in the absence of any other specific information (see Bruseth and Perttula 2006), in that the profile clearly indicates that the mound was built over a burned house (and also suggesting a similar function for Mound D) that had a prepared clay floor. This house was apparently that of an important Caddo personage that lived there, and it was ritually abandoned and burned. Mound E served as a platform for a second ritually abandoned and burned house.

ACKNOWLEDGMENTS

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