

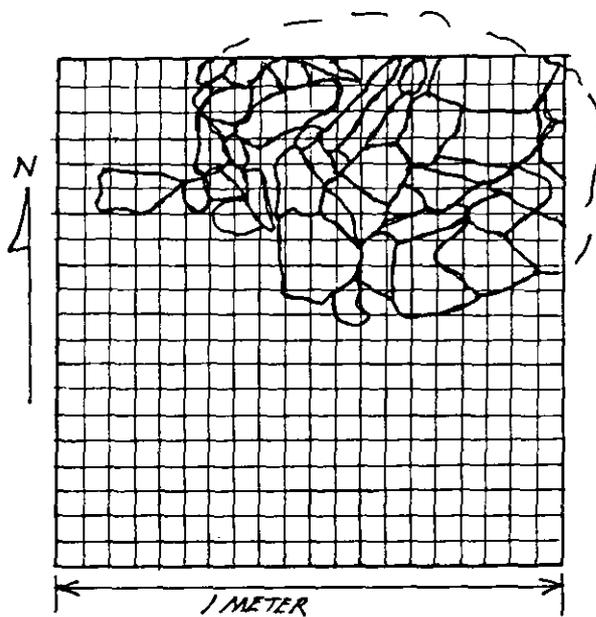


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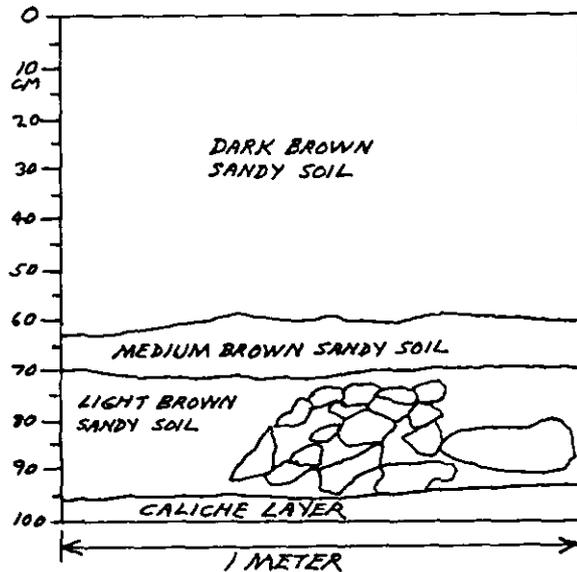
Number 91

August 1988

TOP VIEW



VERTICAL PROFILE
NORTH WALL



Unusual Sandstone Feature at Site 41WH50

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Prehistoric Sites 41WH50-51, Wharton Co., Texas

L. W. Patterson and J. D. Hudgins

Introduction

The Houston Archeological Society has a continuing program of investigations of prehistoric Indian sites along the San Bernard River in western Fort Bend and eastern Wharton Counties. Previous publications on the results of these investigations include Site 41FB34 (Patterson and Hudgins 1986), Site 41FB32 (Patterson and Hudgins 1987a) and Site 41FB37 (Patterson and Hudgins 1987b) in Fort Bend County. This article describes the results of test excavations at Site 41WH50 and a surface survey on nearby Site 41WH51 in Wharton County.

Site 41WH50 was originally found by Joe Hudgins and recorded on the basis of small shell fragments on the surface. Test excavations were made on November 21, 1987 and March 26, 1988 by members of the HAS to obtain more data on the nature of this site. Participants in this work included Linda Moorrees, Mike Marshall, Bernard Naman, Lee Patterson, Joe Hudgins, Sheldon Kindall, Dick Gregg, Joan Few, Tommy Nuckols, C. R. Ebersole, Camille Nasher, Gary Ryman, Marshall Black, John Tracey, Dudgeon Walker, Steve Carter, Carolyn Riley, Alexandra Hamaker, Regan Wilson, Dave Atherton, Gail Marshall, Alexandra Zielke, Bill Schurmann, Ray McCausland, Shirley Walker and Joseph Miles. Appreciation is expressed to the landowner, Dr. Walter E. Culpepper, for permission to work on this site. Work was done under the direction of the HAS Field Director, Sheldon Kindall. Laboratory processing of materials recovered was under the direction of David Pettus.

The location of 41WH50 is on a gently sloping terrace near the San Bernard River. The general location is a mixture of woodlands and coastal prairie. The geology of the soil levels tested appears to involve only post-Pleistocene alluvial deposits.

Faunal materials recovered at 41WH50 will provide additional data on subsistence patterns in this area. This site has an occupation sequence starting at some undetermined time in the Late Paleo-Indian or Archaic period and continuing through the Early Ceramic and Late Prehistoric periods.

In contrast with 41WH50, the surface collection from Site 41WH51 appears to be entirely preceramic, starting in the Late Paleo-Indian period and continuing into some undetermined portion of the Archaic time period.

Site 41WH51

Site 41WH51 is located on the top of a high terrace near the San Bernard River, about 100 meters farther from the river than Site 41WH50. The area at Site 41WH51 is heavily eroded. A shovel test showed less than 20 cm of soil remaining above sterile clay. Lithic artifacts were observed along a road where erosion had reached the sterile clay. Chert flakes and small cores were observed and the artifacts shown in Figure 2 (L to O) were collected. The projectile point shown as 2L is similar to a type of Late Paleo-Indian point found in excavations at nearby site 41WH19 (Patterson et al. 1987:Figure 10H,K). Two other unclassified dart points or preforms and a miscellaneous small biface were found at this location (Figures 2M,N,O). This site is not suitable for test excavations.

Site 41WH50

Excavation details

A total of 11 one-meter square test pits were done at Site 41WH50, with a fairly low yield of artifacts from each pit. These pits were dug in 10 cm levels terminating at varying depths, depending on when 20 cm of sterile soil was encountered in each pit. Pits C, G, and I were terminated at a depth of 130 cm, but traces of freshwater shellfish remains were found even deeper by shovel and auger tests, so that there may be even deeper cultural deposits than determined by these excavations. An impression is made from the overall data on the site that occupations at various excavation levels are fairly dispersed, rather than having occupations of all time periods concentrated on a small area.

A layout of the excavations is shown in Figure 1. The east-west base line is approximately 300 meters south of the San Bernard River. The first six test pits were located where significant densities of shell were found on the surface. Some soil disturbance by gophers was noted at this site.

In the various test pits, the top 50 cm was a dark brown silty sand, grading to a lighter color from 50 to 70 cm. Medium to light brown soils were encountered from 70 to 100 cm in the various pits. In Pit C, a layer of caliche was found from 105 to 115 cm. In Pit I, which has a slightly higher surface level, a layer of caliche was found from 125 to 135 cm. In Pit C, there was a reddish soil below the caliche layer (below 115 cm) and in Pit I there was light tan sand below the caliche layer (below 135 cm).

Chronology, ceramics and projectile points

A relative chronological sequence for occupations at Site 41WH50 can be established by the vertical distributions of ceramics and projectile point types. The distribution of ceramics is shown in Table 1. It is difficult to establish the stratigraphic starting point for ceramics with a total sample of only 12 sherds and the possibility of soil disturbance by gophers or cultural causes. Ceramic specimens were found below 50 cm only in adjacent Pits J and K. Sherds at the 70-80 and 80-90 cm levels of Pit J may be from displacement by a stone hearth feature. This would place the start of ceramics at the 60-70 cm level. Most of the sherd specimens can be classified as Goose Creek Plain, with 2 thin, unclassified specimens at the 10-20 cm level.

Lithic specimens recovered are shown in Figure 2. An expanding stem with ground edges from a dart point (Figure 2F) was found on the surface. This specimen may be from a nearby pipeline trench, and is possibly related to similar Late Paleo-Indian points found at Site 41WH19 (Patterson et al. 1987:Figure 9). A Perdiz arrow point (Figure 2A) from the Late Prehistoric period was found at the 20-30 cm level in Pit B. A Kent dart point (Figure 2E) was found at the 60-70 cm level in Pit B. This specimen is from the Early Ceramic or Late Archaic period, depending on which level represents the start of ceramics. Kent points were made for a long time interval from the Middle Archaic through the Late Prehistoric period (Patterson 1983:Table 1).

It appears from the vertical distribution of ceramics and projectile point types that the occupation sequence of Site 41WH50 starts at some undetermined time in the Archaic period of 7000 to 1900 years ago (Patterson 1979:106) or possibly even earlier, and continues through the Early Ceramic and Late Prehistoric periods. Shell samples are available to radiocarbon date the lowest excavation level of this site, so dating could be done if funds were available.

General lithic technology

Dart point preforms were found at the 40-50 cm level of Pit C (Figure 2B), the 20-30 cm level of Pit H (Figure 2I), the 60-70 cm level of Pit I (Figure 2H) and the 70-80 cm level of Pit J (Figure

2J). The preform from Pit J appears to be a thinning failure, while the other three specimens were probably broken during manufacture. Two bifacial drills were found, at the 40-50 cm level of Pit J (Figure 2G) and the 110-120 cm level of Pit C (Figure 2C).

A summary of chert flakes recovered at Site 41WH50 is shown in Table 2. Most of the specimens were interior flakes (no remaining cortex), indicating that mainly trimmed lithic raw material pieces were brought to this site. A total of 608 chert flakes were recovered from these excavations, with the recovery per excavation level ranging from 17 to 68 flakes. This is not a large amount of flakes to recover from this much excavation work, so that a fairly low level of lithic manufacturing activity is indicated at this site. The flakes and preforms do indicate that projectile points were being manufactured at this location. A summary of flake size distributions from each excavation level is given in Table 3. As with some other excavated sites in this region, in Harris County (Patterson 1980:Figure 19) and Wharton County (Patterson et al. 1987:Figure 20), the percentage of small flakes (especially under 15 mm square) decreases in the older, deeper excavation levels. The percentages of flakes over 25 mm square are not high at any excavation level, indicating that few large size pieces of chert were brought to the site.

The prehistoric sites tested so far on the San Bernard River have all had a relatively low intensity of lithic manufacturing activity, judging by the low number of chert flakes recovered at each site. In contrast, some of the sites on nearby West Bernard Creek have produced large lithic flake collections, such as from Site 41WH19 (Patterson et al. 1987). The relatively low lithic manufacturing activity at sites on the San Bernard River may reflect some differences in seasonal use patterns of various sites in this general area. It should be noted that variations in seasonal use of different sites is not the same as the concept of base and satellite camps, but instead simply indicates various uses of sites in seasonal subsistence rounds.

Small chert cores were found in Pit B (70-80 cm), Pit C (100-110 cm) and Pit J (90-100 cm). Most lithic raw material, however, was probably imported as flake blanks to manufacture projectile points. A unifacial side scraper was found in Pit F at the 20-30 cm level. Utilized flakes were probably the main stone tools used here aside from projectile points.

A grooved sandstone specimen (Figure 2K) was found at the 60-70 cm level in Pit I. This type of object is sometimes identified as being a wood shaft smoothing device.

Faunal remains

Faunal remains recovered at Site 41WH50 consisted of bone (Table 4) and freshwater shellfish (Table 5). W. L. McClure will analyze the bone and Raymond Neck will analyze the shell, as has been done for other sites in this area (McClure 1986, 1987; Neck 1986). Because of the relatively good bone preservation, sites in this area have given good data on prehistoric faunal subsistence patterns.

A disk-shaped shell bead was found in Pit I at 95 cm. This specimen has an outside diameter of 8.4 mm, an inside diameter of 3.0 mm and a thickness of 2.3 mm. All edges are rounded and the hole drilled from one side. It is probably made from marine shell. This specimen is similar to a bead from the Late Archaic illustrated for a site in Austin County (Hall 1981:Figure 48, Form 6).

Hearth feature and clayballs

A feature constructed of sandstone slabs and chunks was found at Site 41WH50 that is interpreted as being a hearth associated with cooking functions. A rock hearth is a very unusual feature in this region as rock is generally not available. In this case, Indians seem to have located sandstone outcrops along the San Bernard River, as can still be observed in a few locations. Hearths containing sandstone pieces have also been found at site 41AU36 in Austin County (Hall 1981:Figure 25) in the lower Brazos River Valley.

Two large sandstone slabs were found at 77 cm in the northwest corner of Pit J. It was apparent that a feature had been found that extended beyond the test pit. On March 27, 1988, Joe Hudgins and Gary Ryman excavated Pit K on the west side of Pit J to uncover more of the feature. The rock feature was at depth of 70 to 95 cm in Pit K and occupied the northeast quarter of the pit, as shown in top and side views in Figure 3. The rock midden extends to the north beyond Pit K, and is estimated to have a diameter of 0.8 meters. A layer of caliche was found under this feature at a level of 95 to 100 cm.

In addition to the rock hearth, fired clayballs were recovered at this site on many excavation levels (Table 6). Hearth features formed by clayballs are common in Southeast Texas (Patterson 1986), so clayballs may have had a cooking function at this site.

Other materials

Aside from the caliche layers noted in the description of site stratigraphy, including under the rock hearth feature, chunks of caliche were recovered at some other excavation levels. At the 60-70 cm level, 85 gm of caliche were found in Pit C and 106 gm were found in Pit E. Also in Pit C, 242 gm of caliche were found at 80-90 cm and 122 gm were found at 90-100 cm. This caliche may have been used together with clayballs in hearth construction.

Other carbonate concretions were found at various excavation levels as summarized in Table 7. This material also may have been used in hearth construction, although carbonate concretions seem to be fairly common in this area.

Aside from the rock hearth feature, smaller concentrations of sandstone were found in Pit G (809 gm at 110-120 cm), Pit I (167 gm at 80-90 cm) and Pit J (49 gm at 80-90 cm). This material could have been used for construction of small hearths.

Summary

Test excavations at Site 41WH50 have been successful in defining the general nature of this site, which appears to have been a seasonal campsite of nomadic hunter-gatherers with an occupation sequence in the Archaic, Early Ceramic and Late Prehistoric periods. Faunal materials recovered will add to the data base on subsistence patterns in this area. The rock hearth feature at this site is unusual for sites in this region, as large pieces of rock are generally not available.

The surface survey of Site 41WH51 shows possible occupation of this site during the Late Paleo-Indian and Archaic periods. Further research at this location is probably not warranted, as erosion has destroyed much of this site.

The program of the Houston Archeological Society to survey a section of the San Bernard River drainage system continues to obtain significant additional data on prehistoric sites in this area.

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Table 1. Potsherd Distribution for 41WH50

level, cm	Test Pit						
	A	B	C	E	H	J	K
10-20					1	1	
30-40	1	1		1	1		
40-50			1				
50-60						1	
60-70						1	1
70-80						1	
80-90						1	

Table 2. Summary of Chert Flakes, 41WH50

level, cm	Test Pit										
	A	B	C	D	E	F	G	H	I	J	K
10-20	3	1	4	19	2	11	5	7	0	1	
20-30	2	8	5	25	3	5	3	2	0	11	
30-40	3	9	8	9	7	2	7	1	8	12	
40-50	2	7	7	5	19	-	12	1	3	9	
0-50	-	-	-	-	-	-	-	-	-	-	5
50-60	4	12	0	5	13	-	4	0	4	15	11
60-70	0	9	11	-	15	-	6	0	4	6	7
70-80	0	12	14	-	2	-	10	-	2	8	6
80-90	0	10	10	-	4	-	14	-	9	4	1
90-100	-	6	9	-	2	-	13	-	8	0	4
100-110	-	-	9	-	0	-	20	-	13	4	1
110-120	-	-	5	-	-	-	6	-	6	-	-
120-130	-	-	13	-	-	-	4	-	-	-	-

Table 3. Summary of Flake Size Distributions
(% of total by level)

level, cm	flake size, mm square					over 35
	under 15	15-20	20-25	25-30	30-35	
10-20	70.6	19.6	3.9	5.9	-	-
20-30	68.2	24.2	3.0	-	4.6	-
30-40	67.7	23.1	-	1.5	6.2	1.5
40-50	67.8	12.5	12.5	3.6	3.6	-
50-60	66.2	22.1	8.8	-	2.9	-
60-70	58.7	22.4	10.3	6.9	1.7	-
70-80	48.1	24.1	22.2	3.7	1.9	-
80-90	52.0	26.9	15.4	1.9	3.8	-
90-100	42.8	28.6	23.8	2.4	2.4	-
100-110	40.4	42.6	14.9	-	2.1	-
110-120	41.2	11.8	29.4	11.8	5.8	-
120-130	41.2	41.2	-	11.7	-	5.9

Table 4. Summary of Bone Recovered, 41WH50
(weight in grams)

level, cm	Test Pit										
	A	B	C	D	E	F	G	H	I	J	K
10-20	8	40	0	5	0	1	0	24	0	1	
20-30	7	3	27	13	0	0	0	0	0	9	
30-40	196	tr	tr	1	6	0	0	0	0	5	
40-50	98	3	22	0	5	-	0	0	0	13	
0-50	-	-	-	-	-	-	-	-	-	-	54
50-60	0	3	0	0	4	-	0	0	6	0	7
60-70	0	26	tr	-	6	-	0	-	9	5	4
70-80	0	0	0	-	tr	-	4	-	45	10	7
80-90	0	1	16	-	0	-	0	-	25	9	0
90-100	-	3	0	-	0	-	0	-	12	0	0
100-110	-	-	0	-	0	-	0	-	17	0	0
110-120	-	-	0	-	-	-	0	-	8	-	-
120-130	-	-	-	-	-	-	0	-	0	-	-

Table 5. Summary of Shell Recovered, 41WH50
(weight in grams)

level, cm	Test Pit										
	A	B	C	D	E	F	G	H	I	J	K
10-20	48	49	20	158	0	tr	0	163	tr	0	
20-30	122	64	40	837	0	8	0	95	tr	8	
30-40	170	34	37	345	30	0	0	39	tr	8	
40-50	98	86	73	294	38	-	0	22	20	5	
0-50	-	-	-	-	-	-	-	-	-	-	39
50-60	163	105	66	165	23	-	0	22	57	18	46
60-70	107	87	154	-	482	-	0	0	99	58	100
70-80	57	118	118	-	126	-	11	-	112	83	99
80-90	tr	117	186	-	19	-	8	-	227	63	21
90-100	-	143	230	-	0	-	65	-	204	45	57
100-110	-	-	280	-	12	-	244	-	201	18	63
110-120	-	-	95	-	-	-	212	-	118	-	-
120-130	-	-	230	-	-	-	211	-	30	-	-

Table 6. Summary of Clayballs, 41WH50

level, cm	Test Pit										
	A	B	C	D	E	F	G	H	I	J	K
10-20	4	1	0	0	2	4	0	12	0	0	0
20-30	5	12	7	22	0	0	0	16	0	0	0
30-40	6	0	2	16	2	0	0	5	0	0	0
40-50	14	0	12	14	7	-	0	12	0	0	0
50-60	5	9	5	0	8	-	0	0	6	0	15
60-70	5	23	24	-	8	-	0	0	3	3	14
70-80	5	10	13	-	6	-	6	-	8	10	19
80-90	0	10	31	-	3	-	0	-	15	5	0
90-100	0	5	12	-	0	-	6	-	17	0	0
100-110	-	-	33	-	0	-	13	-	31	0	0
110-120	-	-	23	-	-	-	10	-	14	-	-
120-130	-	-	15	-	-	-	6	-	-	-	-

Table 7. Summary of Concretions Recovered, 41WH50
(weight in grams)

level, cm	Test Pit										
	A	B	C	D	E	F	G	H	I	J	K
10-20	67	0	0	0	0	0	0	246	0	0	
20-30	318	0	0	68	0	0	0	0	0	0	
30-40	196	0	0	70	0	0	0	0	0	0	
40-50	98	0	0	0	0	-	0	0	0	0	
50-60	0	440	0	0	0	-	0	0	0	0	64
60-70	275	355	0	-	650	-	0	0	0	0	72
70-80	415	0	0	-	0	-	0	0	0	0	147
80-90	0	0	0	-	0	-	0	-	307	1115	165
90-100	0	97	362	-	0	-	33	-	0	0	208
100-110	-	-	0	-	0	-	102	-	0	0	128
110-120	-	-	0	-	-	-	0	-	0	-	-
120-130	-	-	0	-	-	-	0	-	-	-	-

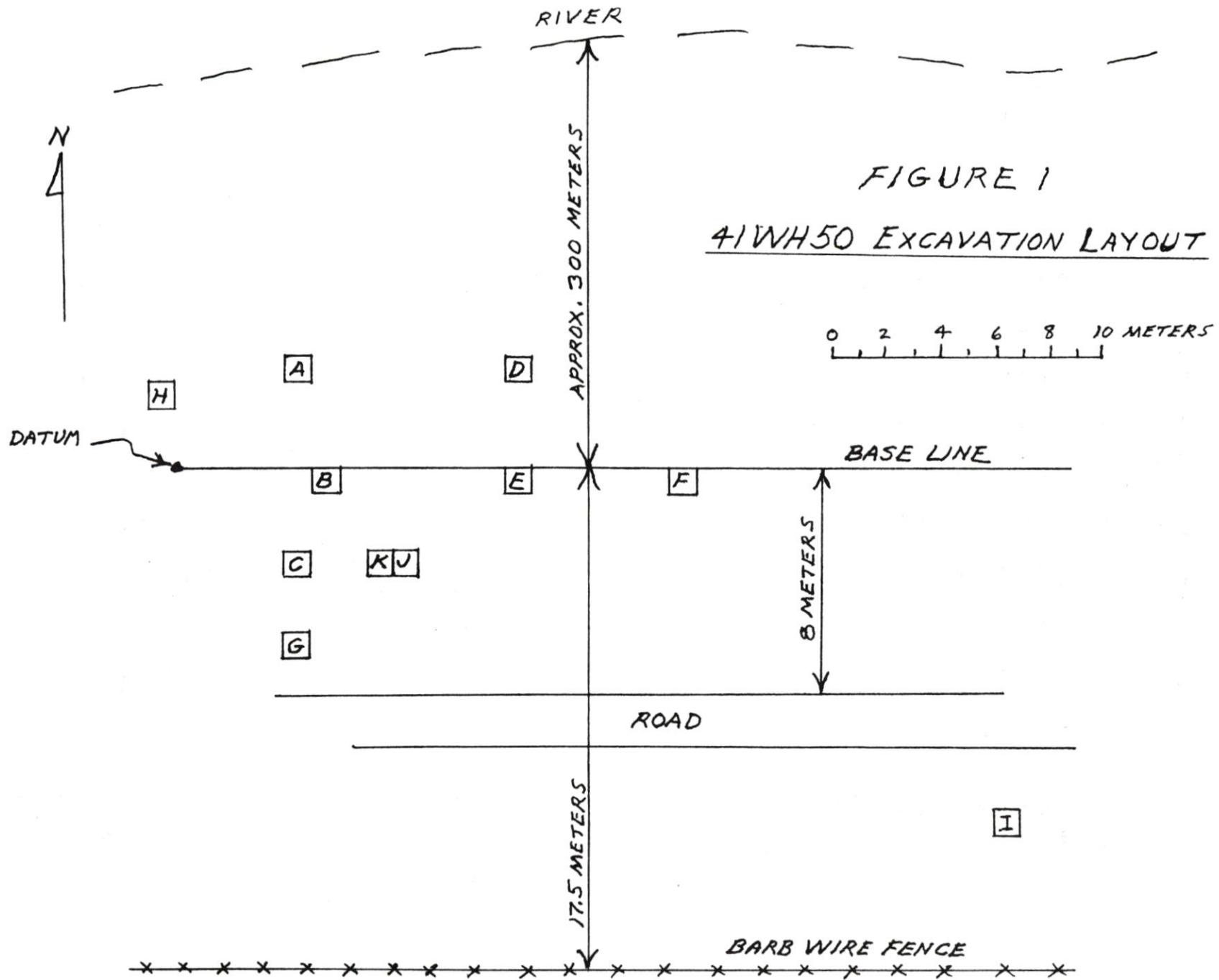
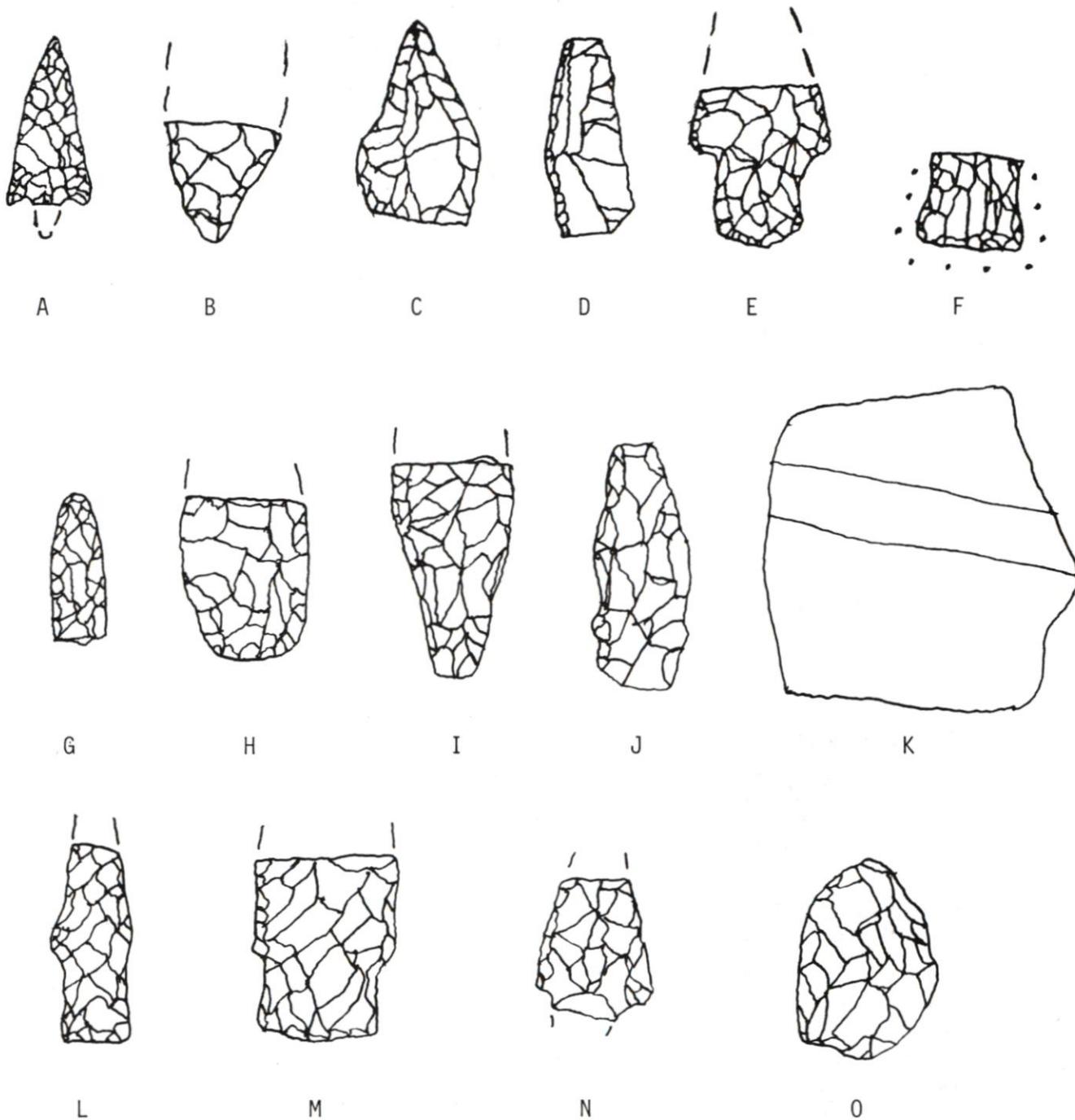


Figure 1. 41WH50 Excavation Layout

0 1 2 3 4 5 cm



A to K — Site 41WH50, L to O — Site 41WH51

A — Perdiz point; B,H,I,J — preforms; C,G — bifacial drills; D — scraper; E — Kent point;
 F — expanding point stem; K — grooved standstone; L — Late Paleo-Indian point;
 M,N — unclassified points or preforms; O — misc. biface; dots show ground edges

Figure 2. Lithic Artifacts, Sites 41WH50-51

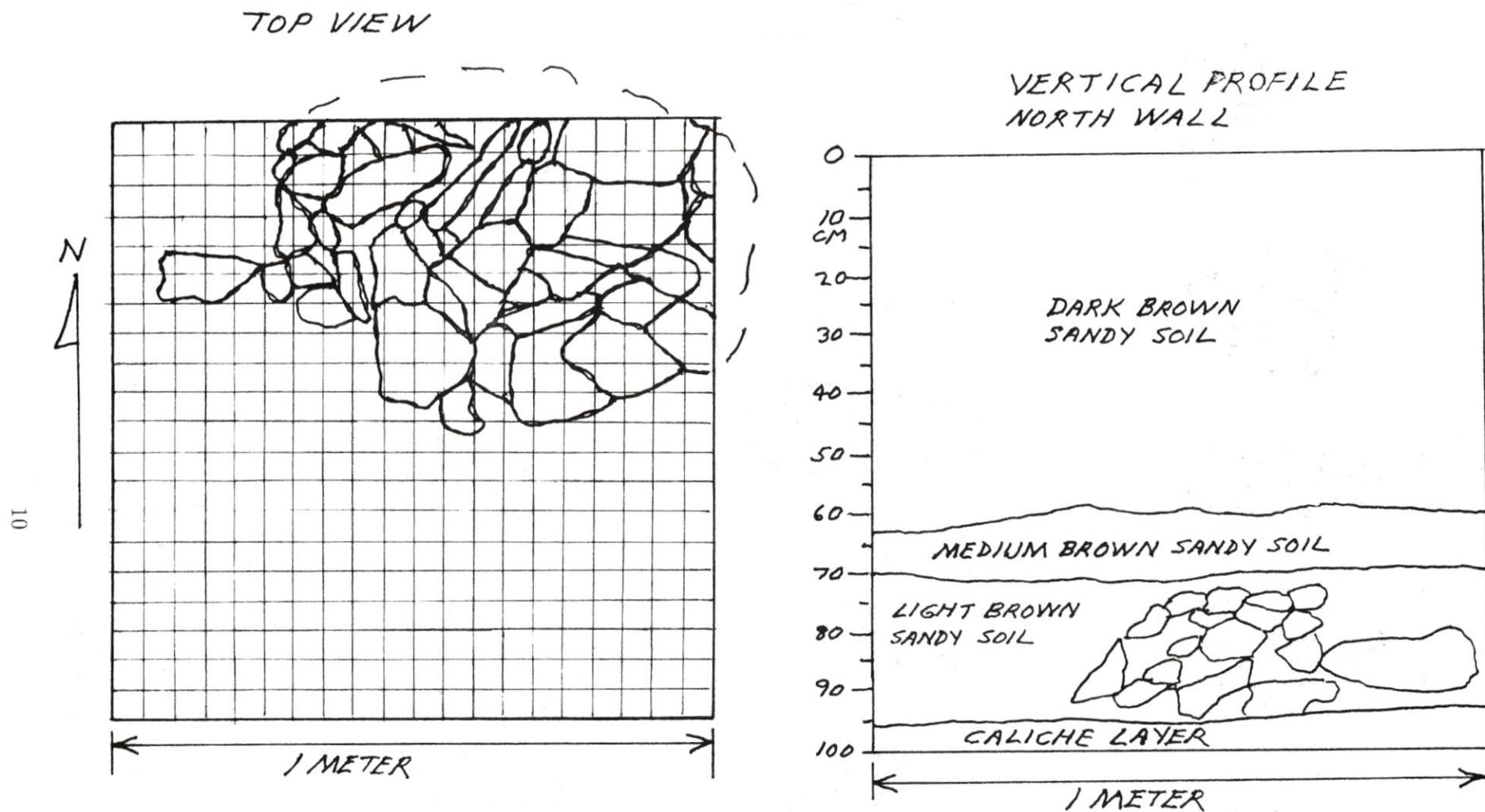


Figure 3. Pit K Rock Feature

Additional Artifacts from the Strawberry Hill Site (41SJ160) in San Jacinto County, Texas

William E. Moore and John Dockall

Introduction

The Strawberry Hill site (41SJ160) was first recorded by William E. Moore in 1971. A survey of the area to be included within the highway right-of-way for an extension of county road 2693 brought this site to the attention of the State Department of Highways and Public Transportation (SDHPT). It was tested by Daymond Crawford and John E. Keller in April of 1974 and recommended for more extensive excavation. Investigations of 41SJ160 were initiated in the fall of 1974 and were completed in the spring of 1975. This work was carried out under Texas Antiquities Committee Permit Number 69 under the direction of Mr. Keller. Frank A. Weir served as the Principal Investigator.

During the excavation of 41SJ160, William E. Moore assisted as a volunteer and informed SDHPT archaeologists of other sites in the area. Artifacts had been collected by Moore from the surface of this site prior to SDHPT investigations but they were not integrated into the report by Keller and Weir (1979) describing the work conducted there. The purpose of this article is to describe those artifacts collected by Moore before adding them to the main collection currently permanently curated at Stephen F. Austin State University.

The site

The Strawberry Hill site is situated on a sandy ridge adjacent to Hopkins Branch, a tributary of Winters Bayou. The location of this site on a sandy rise is typical of sites in this area. According to Keller and Weir (1979:2), "There is nothing to distinguish Strawberry Hill from a thousand similar situations, and, in fact, subsequent investigations revealed that almost every low sandy hill in proximity to water in the Winters Bayou drainage contains evidence of prehistoric occupation."

Although the site produced a large number of artifacts, it was disappointing according to Keller and Weir (1979:37) in terms of new data learned. Basically, it was interpreted as a small, multi-component site used in the exploitation of a particular resource or group of resources. The authors state that the acidic condition of the soil at 41SJ160 has probably leached any organic materials to the point of complete disintegration, making it virtually impossible to identify specific plants and/or animals exploited by its inhabitants.

Artifact discussion

The lithic artifacts collected by Moore were found on the site surface when 41SJ160 was first recorded and during several subsequent visits. At the time of Moore's visits, the site was under cultivation and had one outbuilding on it. Moore's collection includes 11 dart points, 2 arrow points, 1 drill, 1 biface, and 1 possible preform. These artifacts are illustrated in Figure 1. All artifacts were measured and described. Measurements of the preform, biface, and drill, notes on the entire collection, and color photographs of the artifacts are filed with the collection at the Texas Archeological Research Laboratory in Austin, Texas.

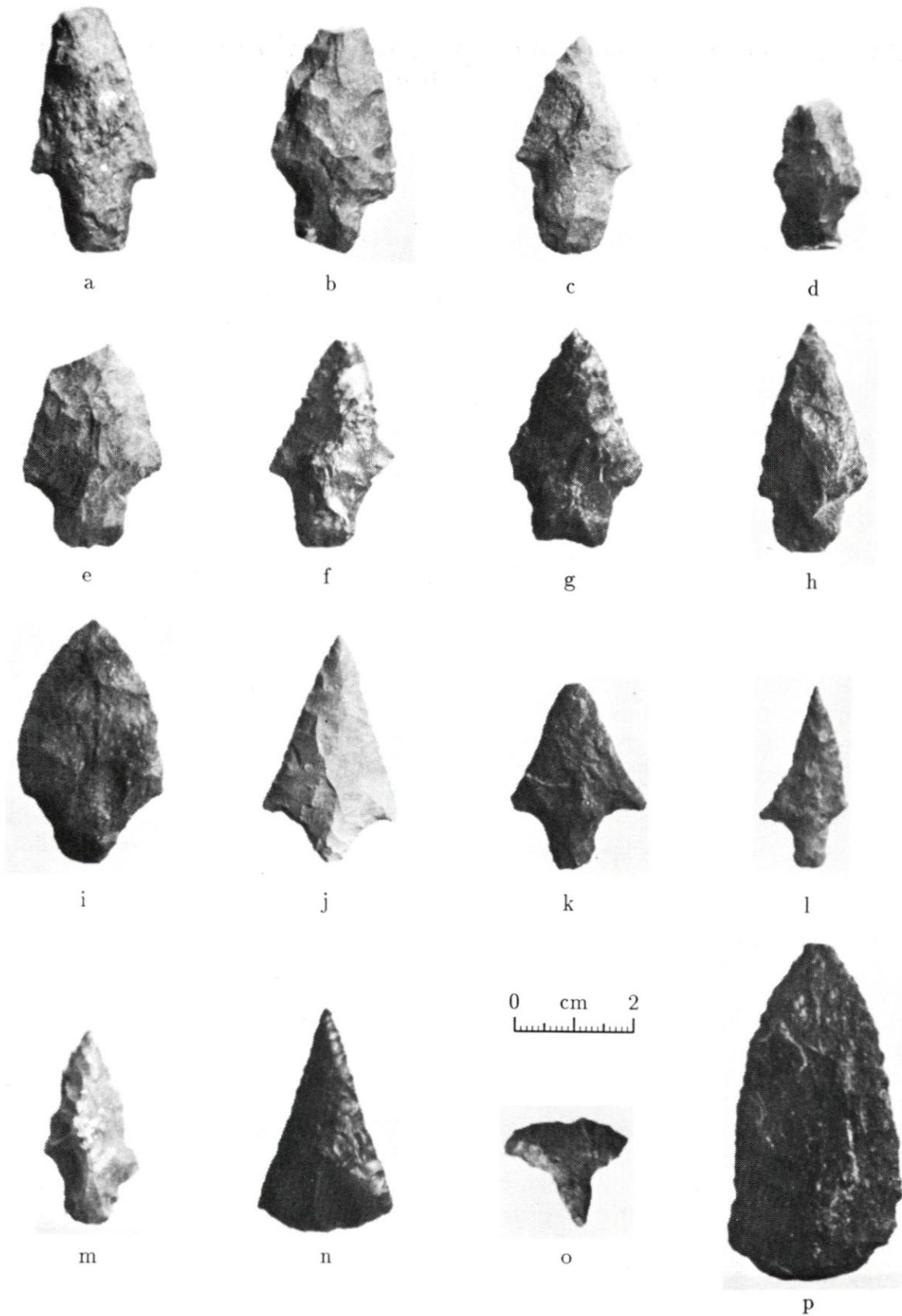


Figure 1. Artifacts Collected from 41SJ160 by Moore. Dart Points, a-k; Arrow Points, l-m; Preform, n; Drill, o; Biface, p

Dart points

According to Keller and Weir (1979:18), virtually all of the dart points in their sample were made by reducing an initial core until a desired form was achieved. The exceptions noted by them are certain Gary points believed to have been made from flakes. Keller and Weir refer to these specimens as Gary, Variety III.

In our sample, four of the dart points (Figure 1a-d) were probably reduced from cores or nodules as evidenced by the presence of cortex on the bases of these specimens. These artifacts were made from quartzite and have slightly contracting stems similar to the Kent type illustrated by Keller and Weir (1979:Figure 11). Although some cortex is present on the body portions of two dart points (Figure 1e-f), it is not certain if they were made from cores, nodules, or flakes. These two points have slightly contracting stems similar to those described above.

Three dart points in the sample resemble the Variety III Gary points as illustrated by Weir and Keller (1979:Figure 11). Two (Figure 1j-k), due to their thinness, are believed to have been manufactured from flakes. This is consistent with the findings of Keller and Weir (1979). One (Figure 1i) is grouped with the other two specimens as belonging to Variety III but it is not certain if it was also made from a flake. Another specimen (Figure 1f) may possess remnants of a faceted striking platform which would indicate possible manufacture from a flake.

The 11 dart points in our collection appear to belong to the Gary/Kent series. This is consistent with the Highway Department's findings at Strawberry Hill and sites in the San Jacinto River Basin (Shafer 1968) and Livingston Reservoir (McClurkan 1968). Measurements for these dart points appear in Table 1.

Table 1. Dart Point Measurements

Specimen	Length cm	Thickness cm	Basal Width cm	Weight gm
Figure				
1a	4.5	0.8	1.3	6.8
1b	4.1	0.7	1.3	4.5
1c	4.0	0.7	1.4	3.7
1d	2.8	0.7	1.1	1.3
1e	3.6	0.7	1.4	3.9
1f	3.7	0.7	1.2	2.7
1g	3.7	0.6	1.5	3.6
1h	4.2	1.0	1.3	4.1
1i	4.2	0.7	1.9	5.5
1j	4.1	0.5	1.1	2.0
1k	3.3	0.4	1.1	5.1

Arrow points

Arrow points from the Highway Department sample are described as made from flakes. There are two arrow points in our sample. One (Figure 1l) was made from a flake and is of chert. It is similar to the Bonham type as described by Suhm and Jelks (1962:267-268) and Turner and Hester (1985:165). The other (Figure 1m), also of chert, was definitely made from a flake. A portion of the ventral surface is visible on one side of the specimen. This arrow point could not be classified. These arrow points have been measured and this information appears in Table 2.

Table 2. Arrow Point Measurements

Specimen	Length cm	Thickness cm	Basal Width cm
Figure			
1l	3.2	0.3	0.6
1m	3.5	0.8	1.0

Preforms

This artifact (Figure 1n) is made from chert and exhibits pressure flaking along the edges. Three large flake scars are present on the proximal end, two on one surface and one on the other. They appear to be the result of soft hammer percussion because they are relatively shallow and expand widely onto the surface of the specimen. We believe these scars are the result of the removal of the bulb of percussion and the striking platform.

It is believed that this artifact represents an early stage in the manufacture of an arrow point. Its shape strongly suggests that the intended finished product may have been a Catahoula arrow point. Since preforms are not mentioned in the report by Keller and Weir (1979), this specimen represents an addition to the artifact inventory at 41SJ160.

Drills

Five drills were found by SDHPT at 41SJ160. They are described as having delicate bits and made from arrow points or flakes.

This artifact (Figure 1o), due to its shape and observed wear patterns, is believed to have functioned as a drill. Microscopic examination of the area believed to represent the bit shows probable evidence of use. Wear is confined to the extreme distal portion of the bit, which was created through pressure flaking. Evidence of wear is indicated by a rounded and blunt tip and dulling or rounding on the edges. It is made from quartzite.

Bifaces

The Highway Department reported several categories of bifaces from 41SJ160. They include canted, thick lanceolate, heavy pointed, small crude pointed, thin ovate, and small oval types.

One artifact (Figure 1p) is believed to be a large dart point, but since it is not certain if a base or shoulders were once present it is classified at this time as a biface. It does possess a fracture on the proximal end, which may indicate a missing base, and the edges possess evidence of pressure flaking. It is made from petrified wood and was finished through soft hammer percussion. If this artifact was not intended to function as a dart point it would most closely resemble the category of thin ovate biface as described by Keller and Weir (1979:29).

Conclusions

Our sample does not add to or change significantly any of the conclusions arrived at by Keller and Weir (1979). The fact that the artifacts discussed in this article were collected from the surface hinders some of the kinds of statements that could be made if they had come from controlled subsurface

excavations. According to Keller and Weir (1979:37), a lack of "distinct stratigraphic separation" at 41SJ160 precluded many statements that might include feature data and site structure.

The artifact assemblage discussed in this article does not contain any specimens that would extend the temporal range of this site. That is, our types are roughly the same as those found by SDHPT during their investigation at Strawberry Hill. Therefore, this site was probably occupied sometime during the Late Archaic and Late Prehistoric periods which, according to Patterson (1983:257), lasted from circa 2500 B.P. to European contact.

Almost without exception, lithic materials in the Highway Department collection seem to have been collected locally in the form of fist-sized nodules. Raw materials used in the manufacture of dart points were largely quartzite according to Keller and Weir (1979:17). In our sample, 9 of the 11 dart points are believed to be made from quartzite. The remaining two are probably chert.

Arrow points, according to Keller and Weir (1979:17), were primarily made from quartzite and petrified wood. The two in our sample were made from chert.

Our sample evidences hard hammer percussion reduction in regard to quartzite and chert specimens. We see no evidence of bipolar reduction. This technique is mentioned by Weir and Keller (1979:17) as a plausible means of reduction due to the size of the nodules. Soft hammer percussion may have been used to reduce the biface of petrified wood (Figure 1p).

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Authors

William E. Moore is President of Brazos Valley Research Associates, a contract archaeology firm in Bryan, Texas.

John Dockall is a graduate student at Texas A&M. His major area of interest is lithic manufacture.

Evidence for Conflict in Prehistoric Texas: A Response to Patterson

Grant D. Hall

The point made by Patterson in his recent article concerning interpretation of evidence for conflict in prehistoric Texas is well taken (Patterson 1988:8-10). Countering my argument (Hall 1981:89) that deaths attributable to projectile point wounds are an indication of intergroup warfare (actually "conflict" and "raiding" are more accurate terms) among Late Archaic peoples, Patterson suggests that such killings were more likely perpetrated by members of the victims' own band. This is a reasonable speculation. Lee's (1979:397) ethnographic study of the !Kung San, a hunter-gatherer culture occupying the Kalahari Desert region of Africa, supports an intragroup origin for deadly conflict; the incidence of homicide is highest when nuclear groups aggregate to create maximum population density at certain times of the year. It is Lee's opinion that !Kung San social institutions are not capable of dealing with the tensions that develop when the groups merge to form abnormally large aggregates. I find this observation attractive with respect to the Late Archaic situation in those parts of southeast Texas where the presence and size of cemeteries have been interpreted as signs of greater population density and seasonal aggregation to exploit desirable, but spatially limited, food resources (Story 1985; Hall in press). The conflict-related deaths evidenced in certain Texas sites may support Lee's interpretation of increased population density and corresponding inability of relatively simple forms of social organization to cope with the resultant stresses.

Irrespective of the fact that hunter-gatherer homicides can be perpetrated entirely within the group, it is unfortunate that Patterson dismisses the idea that raiding between groups took place in prehistoric Texas. There is an extensive literature dealing with warfare and raiding among historically and ethnographically observed hunter-gatherer societies around the world, including the works of Durham (1976), Ember (1975, 1978), Ember and Ember (1971), Divale (1972, 1973, 1974), and Knauff (1987). These studies recognize warfare as playing various important roles in the structure and functioning of band level society. Story (1985:52) alluded to one such function when she said: "Combined, the Witte and Piekert sites [in southeast Texas] provide good evidence for intergroup conflicts. These hostilities may have stemmed from competition over resources which were becoming scarce because of habitat changes or overexploitation."

Closer to home are observations concerning both intra- and intergroup violence made by Cabeza de Vaca while in southeast Texas among the Doguenes and their enemies, the Quevenes (Bishop 1933:82-83; Campbell and Campbell 1981). His account leaves no doubt that warfare existed among pristine (i.e., little influenced by European culture) aboriginal groups on the Texas coastal plain in the early 16th century.

Beyond the question of intragroup violence versus warfare, I take issue with some other statements casually spun off by Patterson in this same article. He briefly sketches a summary of the import-export sphere I hypothesized for the Late Archaic in central, southeast, and east Texas (Hall 1981:288-303), and cites Story (1985:48) to support his claim that "Trade in this region was not a well-organized system . . . , so that an apparent decrease in trade could have been caused for a variety of reasons" (Patterson 1988:9). Patterson distorts the statement made by Story; she actually says (Story 1985:48): "*With the exception of the Group 2 burials at the Ernest Witte site, there is no evidence that the exchange system was well organized. Trade seems to have been sporadic and probably dictated largely by convenience and immediate need*" (emphasis mine). Findings at the Albert George (Walley 1955), Crestmont (Hudgins 1988), and Brandes (Highley et al. 1988) sites, among others (Hall in press), add to what is known from the Ernest Witte site and certainly

do suggest that there was some kind of purposeful pattern to the influx of exotic artifacts into the region defined by the locations of these particular sites.

I hypothesized that exotic artifacts were being moved over much of southeast and central Texas through an import-export network and that, at the end of the Late Archaic period (between A.D. 250 and A.D. 450), the network retracted to the northeast (Hall 1981:302-9). I further proposed that the violent deaths seen in the Late Archaic cemetery component at the Ernest Witte site (Group 2) marked encroachment on the territory of the Allens Creek people by hostile bands from the west. Apparently referring to these hypotheses, Patterson (1988:8) states: "Changes in group territories due to aggression are difficult to determine because territorial changes over time can occur for reasons other than aggression, such as climatic change and general movements of nomadic groups to improve subsistence activities."

I have never claimed that aggression alone was the only reason that prehistoric territorial boundaries were violated or changed. In summarizing the model I proposed for southeast Texas, I stated (Hall 1981:308): "Whether because of a gradually hotter, drier climate, encroaching bands of bison hunters from the southern plains, or some combination of both, it is hypothesized that Late Archaic peoples east of the Balcones Escarpment came into conflict with their western neighbors and were absorbed, exterminated, or pushed out of the region by hunting-gathering groups who required greater territorial ranges in attempting to make their living . . . This idea poses some very complex, interrelated problems concerning climatic change, population fluctuations, and carrying capacity not to be considered in this study." Foreign bands were inferred because people in the Ernest Witte Group 2 cemetery had been shot with Fairland and Kent dart points. Patterson feels that local people possessed such point types and that their presence in the cemetery does not prove an incursion of outside bands into the region. I maintain that these point types (especially Fairland) represent people who moved into the area from the west and south, a contention with which Story (1985:52) concurs.

The final, and perhaps most fundamental, comment I have to make about Patterson's article concerns his general attitude about the potential for interpretation of prehistoric remains. He states: "Since archeological assemblages for hunter-gatherer groups normally define only a series of technological traits, it is difficult to use archeological data to address the higher level of abstraction for causes of social action, in this case homicide" (Patterson 1988:9). I agree that it is difficult, but I sense here the notion that, because of this difficulty, prehistorians should cease efforts at interpreting human behavior on the basis of archaeological remains. The important role of inferences, or interpretations, in archaeology should not be denied. I would emphasize here that an inference is not a fact. The most useful inferences are those that can be tested by additional research, not those that deny the potential of inferential explanations regarding prehistory. The recent synthesis by Story (1985), for example, represents the useful kinds of behavioral interpretations that can be inferred through analysis of prehistoric remains. I would take a position opposite to that which Patterson claims. If we do not make responsible inferences about prehistoric behavior based on conscientious examination of our data, and if our efforts are not aimed at composing and testing such inferences, then archaeology would be reduced to little more than production of "laundry lists" of projectile points, potsherds, bone fragments, and the other physical remains we recover from the field.

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Radiocarbon Dates from 41FB37, Fort Bend Co., Texas

Leland W. Patterson

Introduction

The results of test excavations at Site 41FB37 have been previously published (Patterson and Hudgins 1987). The significant strata of these excavations consisted of very deeply buried freshwater shell deposits. It was judged from projectile point types found in the shell deposits that occupations at this site covered some portion of the Late Paleo-Indian and Early Archaic time periods. Two radiocarbon dates have now been obtained from Teledyne Isotopes on shell samples that verify the previous conclusion.

Radiocarbon dates

A date of 6690 ± 120 years B.P. (I-15,206) was determined from a shell sample from Pit D at the 200-210 cm level. This is the bottom level where shell was found in Pit D. Another radiocarbon date of 6490 ± 120 years B.P. (I-15,333) was obtained from a shell sample from Pit D at the 170-180 cm level, where a Carrollton-like straight-stemmed projectile point was found. Both of these dates are within the definition of the Early Archaic time range of 7000 to 5000 B.P. given by Patterson (1979:106) for the upper Texas coast. Also, both of these dates are fairly close to the Late Paleo-Indian time period.

If dendrochronology corrections are desired for these two radiocarbon dates, 900 years must be added to each of these dates (Linick et al. 1986:Figure 3), and these two dates would then both be in the Late Paleo-Indian time period.

Discussion and summary

The two radiocarbon dates given here are the first dates obtained for the Early Archaic period in Southeast Texas, although there has been previous evidence from long occupation sequences at other sites that there were significant Indian occupations of this region during the Early Archaic (Patterson 1983). Also, these dates probably represent the earliest recorded use of freshwater shellfish in Texas.

The date of 6500 years B.P. (in round numbers) for the Carrollton-like point from Pit D (170-180 cm level) is consistent with McCormick's (1976:44) comment that the Carrollton Focus in North-Central Texas terminated about 6000 years ago. A Wells-like contracting stem point found at the 160-170 cm level in Pit C of Site 41FB37 (Patterson and Hudgins 1987:3) probably also falls within the Early Archaic period at this site. This is another demonstration that contracting stem points start early in Southeast Texas (Patterson 1983:Table 1).

The Carrollton-like point found in the Early Archaic period at this site is somewhat similar to points with long straight stems having ground basal edges found in the Late Paleo-Indian period at Site 41WH19 in Wharton County (Patterson et al. 1987:Figure 8C,D) and at Site 41HR315 in Harris County (Patterson 1980:Figure 5F,G). Thus, a variety of Carrollton-like points with straight stems are found through the Late Paleo-Indian and Early Archaic periods in Southeast Texas.

The concentrated shell deposits in Pit D of Site 41FB37 are from 130 to 210 cm deep. The two radiocarbon dates represent a difference of 200 years for approximately half of the thickness of the concentrated shell deposits. It is possible that the entire concentrated shell deposits at this site represent only a few hundred years of accumulation during the Early Archaic period.

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