



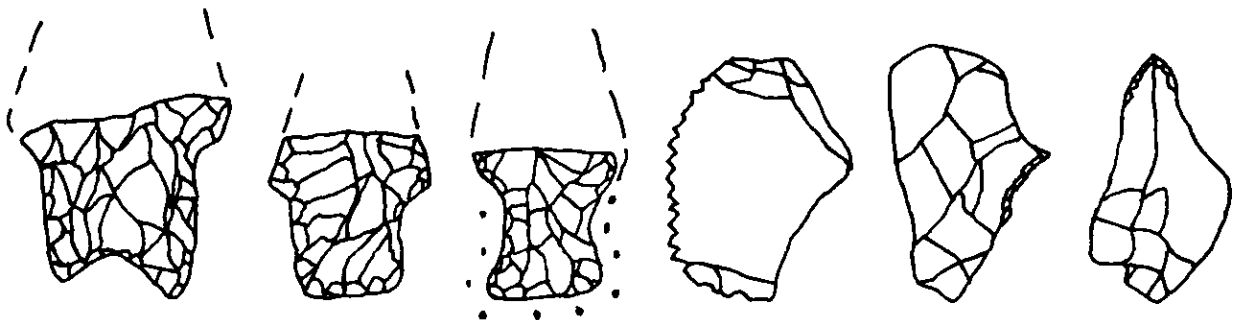
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Projectile Points and Other Lithic Tools from Site 41WH77



and Site 41WH24

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Excavations at the Williams Site, 41WH77, Wharton Co., Texas

L. W. Patterson, J. D. Hudgins, S. M. Kindall, and W. L. McClure

Introduction

This report presents the results of excavations by the Houston Archeological Society (HAS) at prehistoric site 41WH77 in eastern Wharton County, Texas. The site was originally discovered and reported for state records of the Texas Archeological Research Laboratory by Joe Hudgins. Work at this site was made possible through the courtesy of the landowners, Sloan and Molly Williams.

Excavations at site 41WH77 were initially done at an HAS one-day field school in 1993. Students who participated include Carl Baeckle, Bill Csayni, Philip Dasler, David Dasler, Kurt Geissler, Ken Hallenberg, Debbie Hallenberg, Janice Holmes, Greg Ilich, Bill Just, Brad Kristinik, Karen Krodel, Marie Preston, Alison Stern, and Karen Vanek. Additional excavations were done in October 1995. Field work was directed by Joe Hudgins, the HAS Field Director. Site mapping and field records were handled by Sheldon Kindall, assisted by Richey Ebersole. Fine screening of soil samples and faunal analysis were done by Bill McClure. Persons who participated in field work include Bill Csayni, Richey Ebersole, Joe Hudgins, Bill Just, Sheldon Kindall, Ray McCausland, Lee Patterson, Bob Shelby, and Roy Whitney.

Site 41WH77 has an occupation sequence in the Early Ceramic and Late Prehistoric time periods. This location was a campsite of nomadic hunter-gatherers. Data from excavations indicate that site-occupation events were only for short time periods. Artifact types found here are typical of sites in these time periods in the western part of Southeast Texas.

This site is located about 150 feet from West Bernard Creek in an open farm field. The general area is a mixture of woodlands and coastal prairie. The ecological diversity would have provided a variety of faunal and floral food resources. Deer hunting is still being done in this area.

Excavation Details

A total of 10 one-meter square pits were excavated at site 41WH77, as shown in the excavation layout of Figure 1. All soil was processed through 1/4-inch (6 mm) mesh screens. Soil samples (10 by 10 cm) were taken from each level from surface to 40 cm in Pit AA. This material was dried and washed through 20-mesh screens. Soil was a medium brown sandy loam. Little natural stratification could be observed in the vertical excavation profile because of the uniform soil type throughout the various strata.

Cultural materials were found at deeper excavation levels on the north side of the site. Any future excavation work here should consider additional test pits to the north of previous excavation pits.

Projectile Points

Projectile points from these excavations are summarized in Table 1, and are illustrated in Figure 2. All projectile points are made of chert. Scallorn bifacial arrow points representing the Late Prehistoric period (A.D. 600-1500) were found at excavation depths from 5-10 cm to 30-35 cm. A Scallorn-like unifacial arrow point was found in Pit BB (20-25 cm), and an unclassified unifacial arrow point was found in Pit B (15-20 cm). Both of these unifacial arrow points are from the Late Prehistoric period. An arrow point preform fragment was found in Pit BB (5-10 cm). A flake with an impact fracture found in Pit BB (5-10 cm) may have been used as an arrow point.

Impact fractures can be used as a diagnostic attribute for flakes with little modification that have been used as arrow points (Odell 1988; Patterson 1994).

The presence of Scallorn arrow points throughout the Late Prehistoric excavation levels of 41WH77 again indicates that the Scallorn point was used for a longer time period in Southeast Texas than in Central Texas. One of the Scallorn points from 41WH77 was found in the 5-10 cm excavation stratum in the later part of the Late Prehistoric, possibly close to A.D. 1500 or perhaps even later in the Protohistoric period (A.D. 1500-1700). A Scallorn point in the uppermost stratum of site 41WH19 is associated with a Protohistoric radiocarbon date of A.D. 1585 ± 80 (Patterson et al. 1987:9). In Central Texas, the time range of the Scallorn arrow point is about A.D. 700-1200 (Turner and Hester 1993:230). In Southeast Texas, the Scallorn point appears to start about the same time as in Central Texas, but continues into the Protohistoric period in Southeast Texas (Patterson 1991), several hundred years after the end of the Scallorn point in Central Texas. Unlike the Scallorn-Perdiz time sequence of Central Texas, there was concurrent use of Scallorn and Perdiz points throughout the Late Prehistoric period in Southeast Texas.

The Scallorn point found at the 30-35 cm excavation stratum probably represents the deepest stratum of the Late Prehistoric period at this site. Artifacts from depths below 35 cm are judged to be from the Early Ceramic (A.D. 100-600) time period. Projectile points from the Early Ceramic period at this site include a unifacial arrow point from Pit C (35-40 cm) and a Kent dart point from Pit CC (45-50 cm). In Southeast Texas, unifacial arrow points occur earlier than standardized bifacial arrow point types, in the Early Ceramic and Late Archaic (1500 B.C.-A.D. 100) time periods (Patterson 1992).

In the inland part of Southeast Texas, dart points are often found together with standardized bifacial arrow points in the Late Prehistoric period. This shows concurrent use of the spear and spearthrower, and the bow and arrow (Aten 1983:306; Patterson 1980). In fine screen processing of soil samples from 41WH77, a very small fragment of a dart point tip was found in Pit AA, 10-15 cm. This is another of many examples of dart points occurring in the Late Prehistoric period in the inland part of this region.

General Lithic Materials

As is common at prehistoric sites in Southeast Texas, few formal types of unifacial stone tools were found at site 41WH77. A denticulate (Figure 2M) was found in Pit A (5-10 cm), an end scraper (Figure 2L) was found in Pit E (5-10 cm), and a scraper-graver (Figure 2N) was found in Pit CC (30-35 cm). A scraper with a concave working edge was found in Pit F (10-15 cm), made of petrified wood. This is the only lithic artifact at this site not made of chert.

The unmodified utilized flake is the dominant tool type used at prehistoric sites in Southeast Texas. Three flakes with scraper-type edge use-wear were found in Pit A (0-5 cm), and Pit B (5-10 cm, 10-15 cm). An extensive edge use-wear study was not made for the lithic collection from this site.

A total of 784 chert flakes were recovered from excavations at site 41WH77, as summarized in Table 2. This is a fairly small flake density. Only a modest amount of lithic manufacturing was done at this site, which possibly indicates short-time occupation events. Flake size distributions are given in Table 3, and flake size distributions by excavation level are illustrated in Figure 3. There is a significant decrease in the percentage of flakes under 15 mm square at excavation levels below 25 cm. This may indicate that fewer dart points were made at this site in the later part of the Late Prehistoric period. Dart point manufacture produces more larger size by-product flakes than arrow point manufacture, and a smaller percentage of smaller size flakes, especially below 15 mm square.

For most excavation strata, flake size distributions give fairly linear curves when plotted with a logarithmic scale for percent of flakes versus a linear scale for flake size. This type of flake size distribution is characteristic of bifacial reduction when projectile points are made from flake blanks (Patterson 1990). An example plot of this type is shown in Figure 4 for flake size distribution from the 10-15 cm excavation stratum. The flake quantities from the various strata at site 41WH77 are rather minimal for this type of study.

All lithic materials used for manufacturing stone tools and projectile points were brought to this site in the form of flake blanks. No cores were found to indicate primary reduction of chert cobbles at this location. The small proportion of flakes with remaining cortex is another indication that no primary reduction of chert cobbles was done here. For flakes larger than 15 mm square, there are 3.3% primary flakes (covered with cortex), 20.0% secondary flakes (partially covered with cortex), and 76.7% interior flakes (no remaining cortex). Thus, only 23.3% of flakes have remaining cortex. Still another indication that little or no primary reduction of chert cobbles was done at this location is that only two thick chert pieces were found, in Pit D (5-10 cm) and Pit CC (40-45 cm).

Heat treatment was used for chert materials found at this site to improve knapping properties, as indicated by flakes with waxy luster, reddish coloration, or small potlid surface fractures. A thick biface fragment from Pit CC (35-40 cm) may be from an early stage dart point preform.

Three small prismatic blades with widths of 11.2, 12.8, and 9.4 mm were recovered, respectively, in Pit A (0-5 cm), Pit B (15-20 cm), and Pit E (20-25 cm). Since no polyhedral blade cores are present, these blades were not made at this site, unless produced fortuitously during projectile point manufacture.

Ceramics

A total of 144 potsherds were found in excavations at site 41WH77, as summarized in Table 4. Sherd types include 126 Goose Creek Plain, 1 Goose Creek Incised, and 17 bone-tempered. Bone-tempered sherds were found in both the Late Prehistoric (above 35 cm) and Early Ceramic (below 35 cm) excavation strata. The Goose Creek Incised sherd is decorated with a single discontinuous line. The modest amount of pottery found here is another indication that occupation events were for short time intervals. All excavation levels contained pottery. A quartzite pebble found in Pit BB (50-55 cm), with a length of 29 mm and diameter of 15 mm, may have been used for pottery surface smoothing.

Modern Materials

Pieces of clear glass were found in Pit D (0-5 cm), and in Pit CC (5-10 cm). It is common to find modern materials near the surface of prehistoric sites, because modern trash dumping is a widespread practice.

Fired Clayballs

A total of 234 fired clayballs were found at site 41WH77, as summarized in Table 5. A summary of clayball data is given in Table 6. This small number of clayballs indicates that clayballs were occasionally used at this site as heating elements for earth ovens. Hudgins (1993) has experimentally demonstrated the use of earth ovens with clayballs for cooking meat. It cannot be determined what types of food were cooked in earth ovens at this site, because of poor preservation of organic materials and lack of an intact earth oven.

Faunal Analysis

The preservation of bone in this site is very poor. Only 81 bones and 2 mussel shell fragments were recovered from the 1/4-inch screens. Of the bones, 61 are unidentifiable fragments, 1 is an unidentified Teleost fish, 1 is an unidentified turtle, 1 is a tooth of a raccoon, *Procyon lotor*, 5 are of deer-size mammals, and 12 are of white-tailed deer, *Odocoileus virginianus*. The deer bones are 6 teeth, 2 fragments of tibiae, and 1 fragment each of skull (w/antler pedicle), humerus, radius, and calcaneus.

The fine-screen samples did not produce much additional data. Fresh seeds were numerous in the upper level and a few were as deep as 30 cm. The bones that were recovered consist of 4 tiny unidentified fragments, 1 gar (*Lepisosteus* sp.) bone, 1 scale and 1 bone of unidentified Teleost fish, and a fragment of enamel of a deer tooth.

Because of the paucity of faunal remains, the only conclusion that can be reached is that mussels, fish, turtles, and mammals were probably part of the diet of the site occupants.

Summary

41WH77 is a prehistoric site with an occupation sequence in the Early Ceramic and Late Prehistoric time periods. Data from excavations indicate that the site was reused frequently with short time occupation events. Artifact types at 41WH77 are typical of sites in the general area of eastern Wharton County and western Fort Bend County. This site was used by nomadic hunter-gatherers over a time interval of roughly 1000 years or more. Data obtained from excavations here are another contribution of an HAS project to the archeological data base of inland Southeast Texas.

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Table 1. Projectile Points

type	pit	level, cm	L	W	T	Fig.
Scallorn	G	5-10	26.4	11.6	4.6	2A
arrow pt. preform frag	BB	5-10		17.2	3.0	2H
flake, impact fracture	BB	5-10		13.3	2.4	2I
Scallorn	A	15-20	28.2	13.5	3.9	2B
unifacial arrow point	B	15-20	17.1	7.2	1.6	2G
Scallorn	CC	20-25	22.5	14.1	5.3	2C
unifacial arrow point (Scallorn-like)	BB	20-25		12.5	2.0	2E
Scallorn	CC	30-35	17.6	13.5	3.2	2D
unifacial arrow point	CC	35-40	31.4	9.7	2.8	2F
Kent	CC	45-50	46.7	17.1	9.5	2K

Table 2. Chert Flake Counts

level, cm	pit										total
	A	B	C	D	E	F	G	AA	BB	CC	
0-5	8		2	8		2	24			1	45
5-10	11	14	23	9	3	18	12	19	7	14	130
10-15	22	10	26	4	26	27	12	8	11	13	159
15-20	13	20		9	19	22		11	13	20	127
20-25	4	20		7	13			9	18	9	80
25-30	11			7				3	15	9	45
30-35				8				16	14	16	54
35-40				9				9	14	17	49
40-45				9					17	6	32
45-50									19	16	35
50-55									12	16	28
	69	64	51	70	61	69	48	75	140	137	784

Table 3. Flake Size Distributions
(percent of flakes)

level, cm	flake-size, mm-square					
	<15	15-20	20-25	25-30	30-35	35-40
0-5	75.6	20.0	2.2	2.2		
5-10	69.2	25.4	4.6	0.8		
10-15	71.7	22.6	5.7			
15-20	71.6	24.4	2.4	0.8		0.8
20-25	78.7	18.8	2.5			
25-30	60.0	26.7	11.1	2.2		
30-35	50.0	35.2	11.1	3.7		
35-40	63.3	30.6	4.1	2.0		
40-45	59.4	21.9	12.5		3.1	3.1
45-50	57.1	34.3	2.9	5.7		
50-55	46.4	39.3	10.7	3.6		

Table 4. Sherd Counts

level, cm	pit										total
	A	B	C	D	E	F	G	AA	BB	CC	
0-5	1		4 1 B			1		1			7
5-10	1 B	5 2 B	1	1		1 I	5	4		2	20
10-15	4		2		4	3	4	2	1		20
15-20		3 2 B		1	1 B			6 1 B	2	2	15
20-25		6		2	2			3	3 1 B		16
25-30				1				2	2 B	1	6
30-35									1 B	3	4
35-40				3					9 4 B	7	19
40-45				3 1 B					14	13	30
45-50										6	6
50-55										1	1
	6	14	7	11	7	5	9	18	32	35	144

B - bone-tempered
I - incised

Table 5. Clayball Counts

level, cm	pit									total	
	A	B	C	D	E	F	G	AA	BB		CC
0-5			2				23				25
5-10		5	24		7		17	1		1	55
10-15			19		10	4	25			7	65
15-20		7								2	9
20-25		15						2	4		21
25-30				5					3		8
30-35								11	2	2	15
35-40				8				1	4	4	17
40-45				12							12
45-50									3	2	5
50-55										2	2
	<u>0</u>	<u>27</u>	<u>45</u>	<u>25</u>	<u>17</u>	<u>4</u>	<u>65</u>	<u>15</u>	<u>16</u>	<u>20</u>	<u>234</u>

Table 6. Clayball Data

level, cm	no.	wt., gm	size range mm diam.	avg. wt., gm
0-5	25	89	15-35	3.6
5-10	55	121	15-35	2.2
10-15	65	141	15-30	2.2
15-20	9	31	15-25	3.4
20-25	21	48	15-30	2.3
25-30	8	44	15-30	5.5
30-35	15	51	15-30	3.4
35-40	17	161	15-40	9.5
40-45	12	54	15-35	4.5
45-50	5	45	15-40	9.0
50-55	2	5	15-25	2.5
	<u>234</u>	<u>790</u>	<u>15-40</u>	<u>3.4</u>

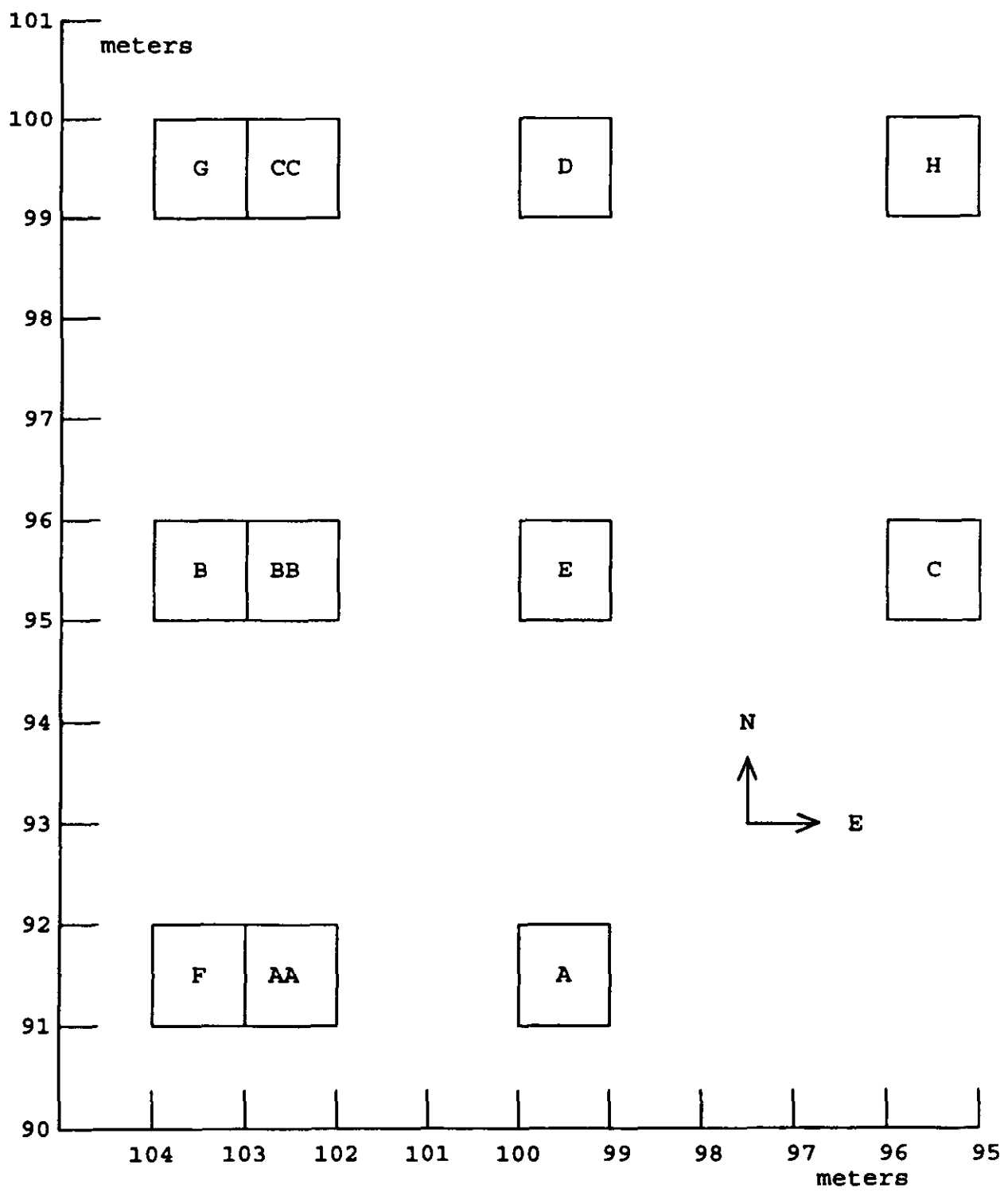
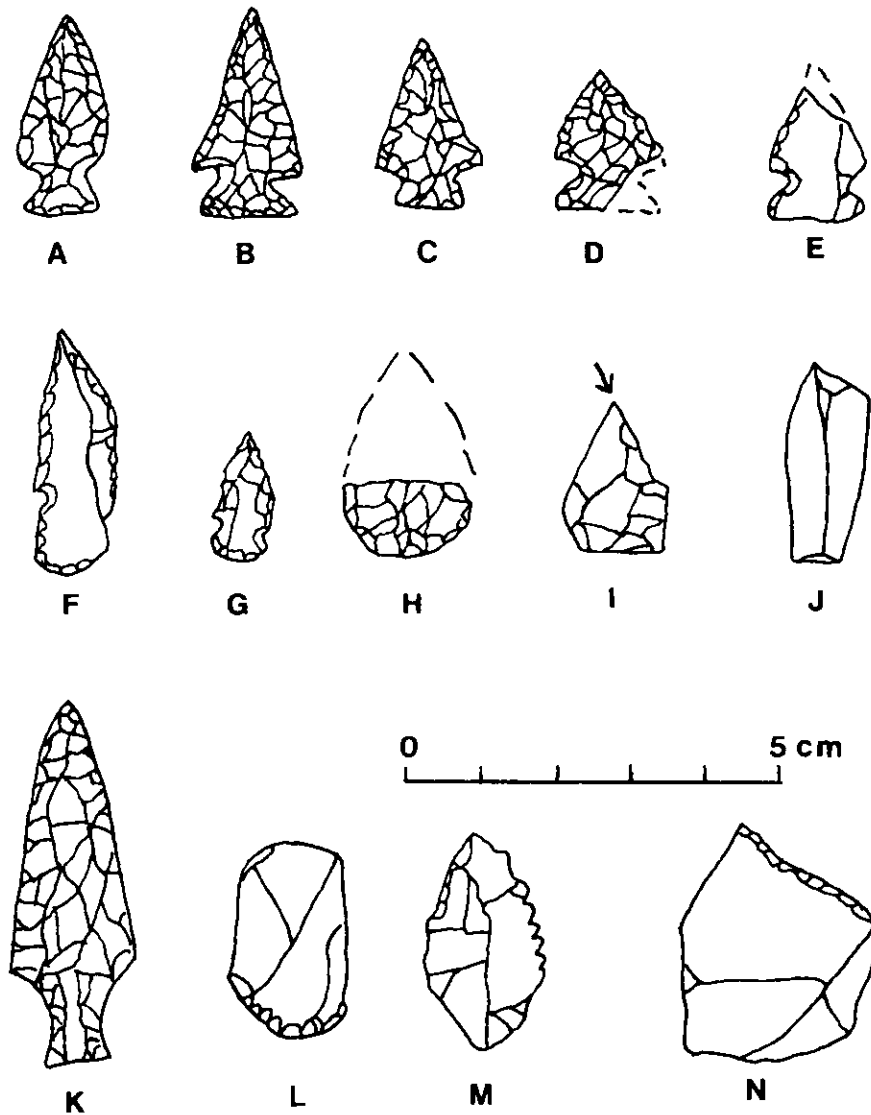


Figure 1. Excavation Layout



A to D – Scallorn points; E – Scallorn-like unifacial point; F,G – unifacial arrow points; H – arrow point preform; I – flake with impact fracture; J – prismatic blade; K – Kent point; L – end scraper; M – denticulate; N – scraper-graver

Figure 2. Lithic Artifacts

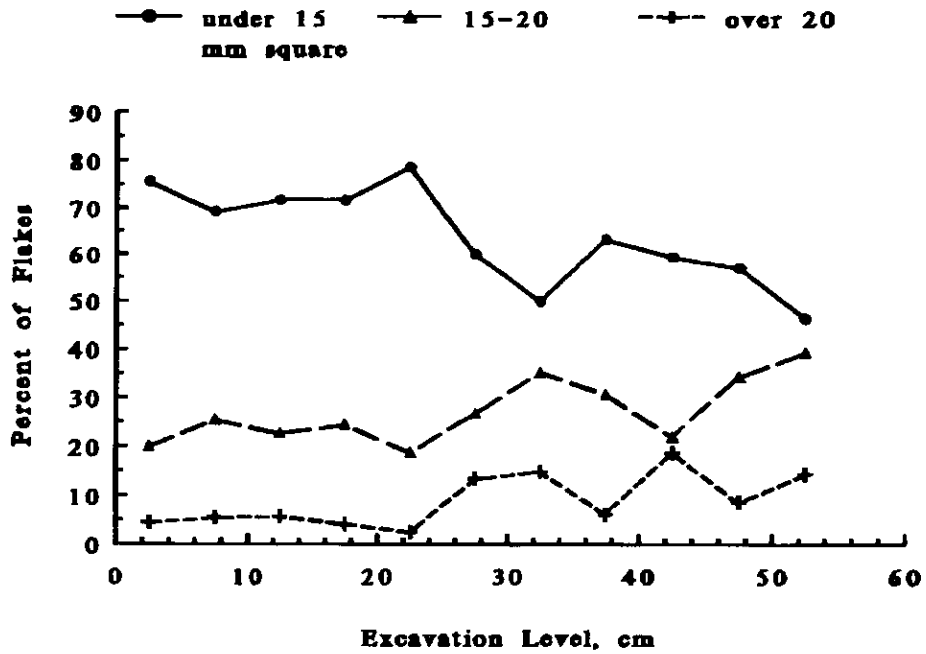


Figure 3. Flake Size Distribution by Excavation Level

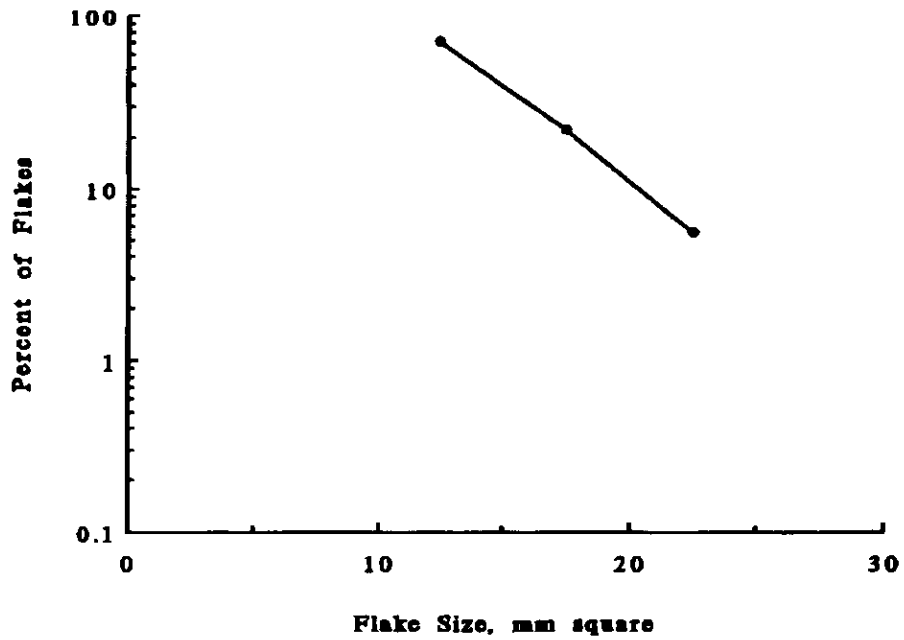


Figure 4. Flake Size Distribution, 10-15 cm level

Excavations at Site 41WH24, Wharton Co., Texas

L. W. Patterson, J. D. Hudgins, S. M. Kindall, W. L. McClure, and S. D. Pollan

Introduction

This paper summarizes the results of excavations by the Houston Archeological Society in the spring of 1996 at site 41WH24 in Wharton County, Texas. This site was originally discovered and recorded for state records by Joe Hudgins. Work at this site was possible through the courtesy of the landowner, Sloan Williams.

Excavations at 41WH24 were started as part of the 1996 HAS one-day field school, and later continued so that some of the excavation pits could be completed. Individuals who participated in excavation work at this site include Bill Csanyi, Richey Ebersole, Dick Gregg, Joe Hudgins, Sheldon Kindall, Dick Lane, Mike Marshall, Ray McCausland, Don McReynolds, Tommy Nuckols, George Owens, Etta Palmer, Tom Palmer, Lee Patterson, Gary Ryman, Bob Shelby, and Roy Whitney. The names of field school students are not included. Field work was supervised by Joe Hudgins. Sheldon Kindall handled site records and mapping. Analysis of faunal remains was done by Bill McClure. Sandra Pollan analyzed historical ceramics from this site. Sheldon Kindall conducted the HAS field school.

Site 41WH24 is a multicomponent site with a prehistoric occupation sequence from the Early Archaic through the Late Prehistoric time periods, covering a time interval of perhaps 6000-7000 years. Some modern materials were also found here. This location was probably a seasonal campsite that was reused on many occasions by nomadic Indians with a hunting and gathering lifeway. This site is located at the edge of an oxbow lake that was formed by an old channel of West Bernard Creek.

Site 41WH24 is located in a farm field. The general area is a mixture of woodlands and coastal prairie. This area would have had a variety of floral and faunal food resources. Deer are still hunted in this area. A variety of nut trees occur in this general area, such as pecan, walnut, and pignut. Data on faunal remains from sites in Southeast Texas show that Indians utilized a wide range of animals, from small types such as rat and rabbit to large types including deer and bison.

Excavation Details

Because of a long dry period, excavation work at this site was difficult. Water was used to soften the almost rock-hard soil. The layout of excavation pits is shown in Figure 1. A total of ten excavation pits were started on the day of the HAS field school to give instruction to 41 students. Only five of these pits were completed, down to culturally sterile soil, during later field sessions.

All soil from excavations was processed through 1/4-inch (6-mm) mesh screens. Soil samples were taken for OCR soil dating, with results given below. The soil here is a brown silty loam in all of the strata that contain cultural materials. Little natural stratification is apparent, and therefore excavations were done in arbitrary strata thicknesses of 5 cm. In each completed excavation pit, soil color became more reddish and clay content increased when the excavation depth reached culturally sterile soil.

Prehistoric Ceramics

Prehistoric ceramics found in excavations at 41WH24 are shown in Table 1. A total of 26 Goose Creek Plain sandy paste sherds and 8 bone-tempered sherds were recovered. It is judged by

ceramic types that the Late Prehistoric period (A.D. 600-1500) is represented in excavation depths of 0-10 cm, and the Early Ceramic period (A.D. 100-600) is represented in excavation depths of 10-20 cm. The bone-tempered pottery of 0-10 cm is found only in the Late Prehistoric period in the western part of Southeast Texas, at sites such as 41WH12 (Patterson and Hudgins 1989) and 41FB224 (Patterson et al. 1996:Table 3). Bone-tempered pottery at this site may be of the Leon Plain type which is found along the Colorado River Basin in Southeast Texas (Patterson and Hudgins 1989) and Central Texas (Suhm and Jelks 1962:95). Bone-tempered pottery is a minor ceramic type in Southeast Texas, with uneven temporal and geographic distributions in this region (Patterson 1993). Goose Creek pottery was used in both the Early Ceramic and Late Prehistoric periods (Aten 1983:Figure 14.1).

The relatively small amount of pottery found here may indicate short-time occupation events. Large amounts of pottery would be expected only at sites where relatively long occupation events occurred. Pottery is bulky and heavy, and therefore not easily transported by mobile bands of hunter-gatherers.

Projectile Points

Projectile points from 41WH24 are summarized in Table 2 and illustrated in Figure 2. A Scallorn bifacial arrow point found in an eroded area at the lake edge represents the Late Prehistoric period. A Kent dart point recovered in Pit H (5-10 cm) may also be from the Late Prehistoric period. However, Pit H is the only excavation pit where there was a significant amount of modern materials below 10 cm, in the Early Ceramic strata (10-20 cm). Therefore, there is a question about the original stratigraphic position of this Kent specimen. In inland Southeast Texas, the bow and arrow and spear/spearthrower weapon systems were used concurrently in the Late Prehistoric period, after the bow and arrow became the dominant weapon system (Patterson 1995a:254; Aten 1983:306).

It should be noted that all dart point specimens are basal fragments. This likely indicates that these specimens were broken during hunting trips. The spears with broken bases of dart points were then brought back to the campsite for refitting with new dart points. The basal fragments represent discard at the campsite (Patterson 1980).

A Kent dart point preform made of dark color chert was found in the 10-15 cm stratum from the Early Ceramic period. This specimen has extensive thermal damage on only one face. The thermal damage probably occurred internally in the flake blank during heat treatment, but was not apparent until manufacture of the dart point preform was well advanced. Patterson (1995b:Figure 6B) has experienced this same situation during experimental flintknapping.

A Pedernales dart point (Figure 2A) from the 20-25 cm stratum is judged to be from the Late Archaic period (1500 B.C.-A.D. 100), because this stratum is adjacent to strata of the Early Ceramic period. Pedernales points occur in both the Middle Archaic (3000-1500 B.C.) and Late Archaic periods in Southeast Texas (Patterson 1995a:Table 3). Another Pedernales point (Figure 2B) from the 25-30 cm stratum is judged to be from the Middle Archaic period because of ground stem edges. Pedernales points with ground stem edges occur early in the time interval of this point type (Patterson 1989; Preston 1969). Two more Pedernales point bases were found in eroded areas at the lake edge during previous surveys.

An Early Stemmed dart point from the Early Archaic period (5000-3000 B.C.) was found in the 35-40 cm stratum. This specimen has a slightly expanding stem. A variety of Early Stemmed points occur in the Early Archaic period, at sites such as 41WH19 (Patterson et al. 1987) and 41FB223 (Patterson et al. 1994).

A unifacial arrow point specimen found in the 25-30 cm stratum seems to be from the Middle Archaic period. This specimen has shaping retouch on one lateral edge and burination impact damage on the other lateral edge. Use of the bow and arrow in Southeast Texas started about 2000 B.C., with use of unifacial arrow points (Patterson 1992). The use of standardized bifacial arrow point types started at the beginning of the Late Prehistoric period, about A.D. 600 (Aten 1983:306).

OCR Soil Dating

Three soil samples from 41WH24 were dated by the new Oxidizable Carbon Ratio (OCR) method (Frink 1994). Soil from 20 cm depth gave a date of A.D. 125 (Early Ceramic), soil from 25 cm depth gave a date of 648 B.C. (Late Archaic), and soil from 33 cm depth gave a date of 1882 B.C. (Middle Archaic). These three OCR dates are in good agreement with the chronological sequence of projectile point types, and support the long occupation sequence judged for this site. The OCR dating method is much less expensive than radiocarbon dating, and can be used where carbon samples are not available for radiocarbon dating.

Chronological Summary

A summary of the chronological sequence of the strata with cultural materials at this site can be given based on the above data. Time periods represented are Late Prehistoric (0-10 cm), Early Ceramic (10-20 cm), Late Archaic (20-25 cm), Middle Archaic (25-30+ cm), and Early Archaic (30+-40cm). Thus, the occupation sequence starts in the Early Archaic period (5000-3000 B.C.) and continues through the Late Prehistoric period (A.D. 600-1500), within a time interval of 6500 years. Sites with long occupation sequences are fairly common in Southeast Texas.

Even though this site is located on a fairly stable landform and cultural stratigraphy is not deep, the good chronological sequence of artifact types indicates that there has been little soil disturbance here. Joe Hudgins thinks that this land may never have been plowed.

General Lithics

Lithic manufacturing at this site seems to have been done at a modest level. A total of 377 chert flakes were found in excavations as shown in Table 3. Dart point preforms (Table 2, Figure 2) are another indication of lithic manufacturing here. Heat treatment of chert is indicated by reddish coloration, waxy luster, and small potlid surface fracture scars on some flakes. Little primary reduction of chert cobbles is noted at this site. Lithic raw materials were probably brought to this site mainly in the form of flake blanks for projectile point manufacture. The only indication of primary reduction of lithic raw materials was one small chert core with a diameter of 23 mm. Remaining cortex on flakes includes 2.2% primary flakes (covered with cortex), 7.5% secondary flakes (partially covered with cortex), and 90.3% interior flakes (no remaining cortex). The small percentage of flakes with remaining cortex is another indication that little primary reduction of chert cobbles was done at this site.

Only a few formal types of unifacial stone tools were found. These include a denticulate (Pit I, 10-15 cm), a graver (Pit D, 15-20 cm), and a perforator (Pit F, 20-25 cm). As at most prehistoric sites in Southeast Texas, the utilized flake was the dominant stone tool type at 41WH24. Five small prismatic blades with widths of 9.0 to 11.5 mm were found at various excavation depths. This quantity is too small to indicate that prismatic blades were being purposefully made at this site.

Flake size distributions are shown in Table 4 for each stratum where the quantity of flakes is statistically significant enough to study the characteristics of flake size distribution. None of these samples are very large, however, indicating that there was not much lithic manufacturing activity. Bifacial reduction of flake blanks tends to give straight lines when percent of flakes is plotted with a logarithmic scale versus flake size with a linear scale (Patterson 1990). Straight lines occur on the main sections of this type of plot for the 10-15 cm and 15-20 cm strata, as shown in Figure 3 for the 10-15 cm stratum. However, this type of plot does not give straight lines for the 20-25 cm and 25-30 cm strata. Because flake sample sizes are fairly small for each stratum, there is a possibility that some of the samples are not representative.

Fired Clayballs

Fired clayballs found at sites in Southeast Texas were used as heating elements for earth ovens (Patterson 1995c). Hudgins (1993) has demonstrated experimentally that clayballs heated over a wood fire retain heat well for cooking meat. A summary of fired clayball counts from each excavation pit at 41WH24 is given in Table 5. Clayball counts, weights, and size ranges are shown in Table 6 for each excavation stratum. A total of 367 fired clayballs were recovered in excavations at this site.

Historical Ceramics

Twelve historical ceramic sherds recovered at site 41WH24 represent a minimum of six vessels including a cup and saucer (matching), an edgeware plate, a muffineer or small castor (Coysh and Henrywood 1982:255) for shaking salt or sugar over food, one pearlware cup or bowl, and a single stoneware bottle, possibly a flask (Ketchum 1994). With the exception of the bottle, all are made of refined white-bodied earthenware whose decorative styles fall into the least expensive decorated whiteware available from about 1800 to 1870 (Miller 1991a, 1991b, 1993). The three sherds without diagnostic attributes no doubt represent undecorated portions of the five whiteware vessels. Essentially, these vessels represent a place setting (as we know it today) for one person: a plate, cup and saucer, a bottle or flask, a bowl, and a sugar shaker. At a time when a soup plate, mug, and knife sufficed for many, the addition of a bowl and sugar shaker add an air of sophistication to the owner of these vessels.

The ceramics are consistent with the period during which Texas was colonized. Too little data are available to draw any further temporal conclusions. Pollan's impression is that either these vessels were discarded in transit, or excavations have been undertaken on the fringes of a historical occupation. Two of the six vessels (the saucer and castor) have been moderately burned. No other historical artifacts exhibit evidence of fire. Is there any correlation between these burned items and the aboriginal artifacts found in the vicinity? At that time, burning was not the disposal method of choice. Discards usually wound up filling an old privy hole or well, lining the floor of a waterway, or in trash heaps. Naturally, everything was recycled until it could no longer be of use.

The ceramics indicate the presence of at least one person using imported English dishes. Whether this person was passing through or lived in the area, his dishes were one of the economy lines available at the time, and there were too few ceramics to suggest any structure in the near vicinity.

Miscellaneous Modern Materials

Table 7 is a list of miscellaneous modern materials that occurred in the upper excavation levels of this site. Modern materials were found only in the Late Prehistoric strata (0-10 cm), except for Pits F and H. In Pit F, there are two small modern items in the 10-15 cm stratum, which could easily have gotten there by biodisturbance. Only Pit H has many modern items below 10 cm, in the Early Ceramic strata (10-20 cm). Therefore the original stratigraphic location of a Kent point (Figure 2C) may be in question. In general, the stratigraphic positions of modern materials do not indicate any deep disturbance that would affect conclusions regarding the occupation sequence of this site.

Faunal Analysis

Very few remains of animals were recovered during excavations at this site. Single shell fragments of unidentified turtle were found in Pit A (0-5 cm), Pit I (5-10 cm), and Pit H (25-30 cm). A peripheral of a slider turtle was in Pit D (0-5 cm), and a pleural was in Pit F (10-15 cm). An incomplete ulna of a deer was in Pit I (0-5 cm). A few fragments of bones of unidentifiable mammals were in various levels of Pits B, C, D, H, and I.

The paucity of faunal remains does not give much information about the food habits of people at this site. As is common at prehistoric sites in Wharton County, turtle and deer are prominent. These two taxa are the only identified vertebrates in the assemblage.

Summary

Results of excavations at site 41WH24 indicate a long occupation sequence from the Early Archaic through the Late Prehistoric periods, in a time interval of perhaps 6000-7000 years. Artifact quantities at this site are not large. This may indicate a series of short-time occupation events, or perhaps that Indians camped around the lake in a dispersed manner. While artifact quantities are not high, there are sufficient data to make this excavation work a significant contribution to the regional archeological data base. This was also a good site for training given at the HAS 1996 one-day field school.

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Table 1. Sherd Counts

excavation level, cm	pit										total
	A	B	C	D	E	F	G	H	I	J	
0-5	1		(3)	2					1		4 (3)
5-10				3			1 (4)				4 (4)
10-15		3		2 (1)		3		1			9 (1)
15-20				1		2		3		2	8
20-25						1					1
total	1	3	(3)	8 (1)	0	6	1 (4)	4	1	2	26 (8)

Numbers in parentheses indicate bone-tempered sherds;
other numbers are for Goose Creek Plain

Table 2. Projectile Points

type	pit	level, cm	dimensions, mm			figure
			L	W	T	
Pedernales		surface				
Pedernales		surface				
Scallorn		surface	19.8	14.1	4.4	2D
Kent	F	5-10		21.1	8.0	2C
Kent preform	I	10-15				2F
Pedernales	F	20-25		27.8	6.3	2A
dart point preform	B	20-25		37.1	13.2	2G
Pedernales	D	25-30			6.8	2B
dart point preform	H	25-30			8.2	2H
unifacial arrow point	H	25-30		12.6	2.2	2I
Early Stemmed	H	35-40			5.8	2E

Table 3 Chert Flake Counts

level, cm	pit										total
	A	B	C	D	E	F	G	H	I	J	
0-5	13		1	2	1	2	1		6		26
5-10		3		2		6	2		5		18
10-15		13		6		6		3	15	1	44
15-20		30		7		17		12	19	1	86
20-25		6		16		32		27	5		86
25-30		3		21		17		44	7		92
30-35				5				17			22
35-40				1				2			3
total	13	55	1	60	1	80	3	105	57	2	377

Table 4. Flake Size Distributions
(in percent by level)

flake size mm sq.	excavation level, cm			
	10-15	15-20	20-25	25-30
under 15	65.9	63.5	61.6	62.0
15-20	20.5	23.5	29.1	28.3
20-25	9.0	8.2	2.3	4.3
25-30	2.3	1.2	2.3	2.1
30-35	2.3	2.4	2.3	3.3
35-40		1.2	1.2	
40-50			1.2	
no. of flakes	44	86	86	92

Table 5. Clayball Counts

level, cm	pit										total
	A	B	C	D	E	F	G	H	I	J	
0-5	3							1			4
5-10		6				2	2		4		14
10-15		14				2		2	16		34
15-20		33		8		4		7	16		68
20-25		26		35		20		40	1		122
25-30		19		34		27		29	2		111
30-35		1		1				10			12
35-40				1				1			2
total	3	99	0	79	0	55	2	90	39	0	367

Table 6. Clayball Data

level, cm	no.	wt., gm	average wt. per ball, gm	size range, diameter, mm
0-5	4	11	2.8	15-25
5-10	14	86	6.1	15-40
10-15	34	113	3.3	15-70
15-20	68	342	5.0	15-50
20-25	122	766	6.3	15-50
25-30	111	560	5.0	15-50
30-35	12	44	3.7	15-35
35-40	2	8	4.0	20-25
total	367	1930	5.3	

Table 7. Miscellaneous Modern Materials

pit	level, cm	item(s)
A	0-5	wire
D	0-5	nail, barbed wire
F	0-5	barbed wire, aluminum can fragment
H	0-5	1 glass fragment
I	0-5	16 glass fragments
D	5-10	1 glass fragment
F	5-10	large staple, barbed wire
H	5-10	9 glass fragments
F	10-15	38 cal. pistol shell
H	10-15	1 nail, 1 metal fragment, 1 metal rod, 4 brick fragments

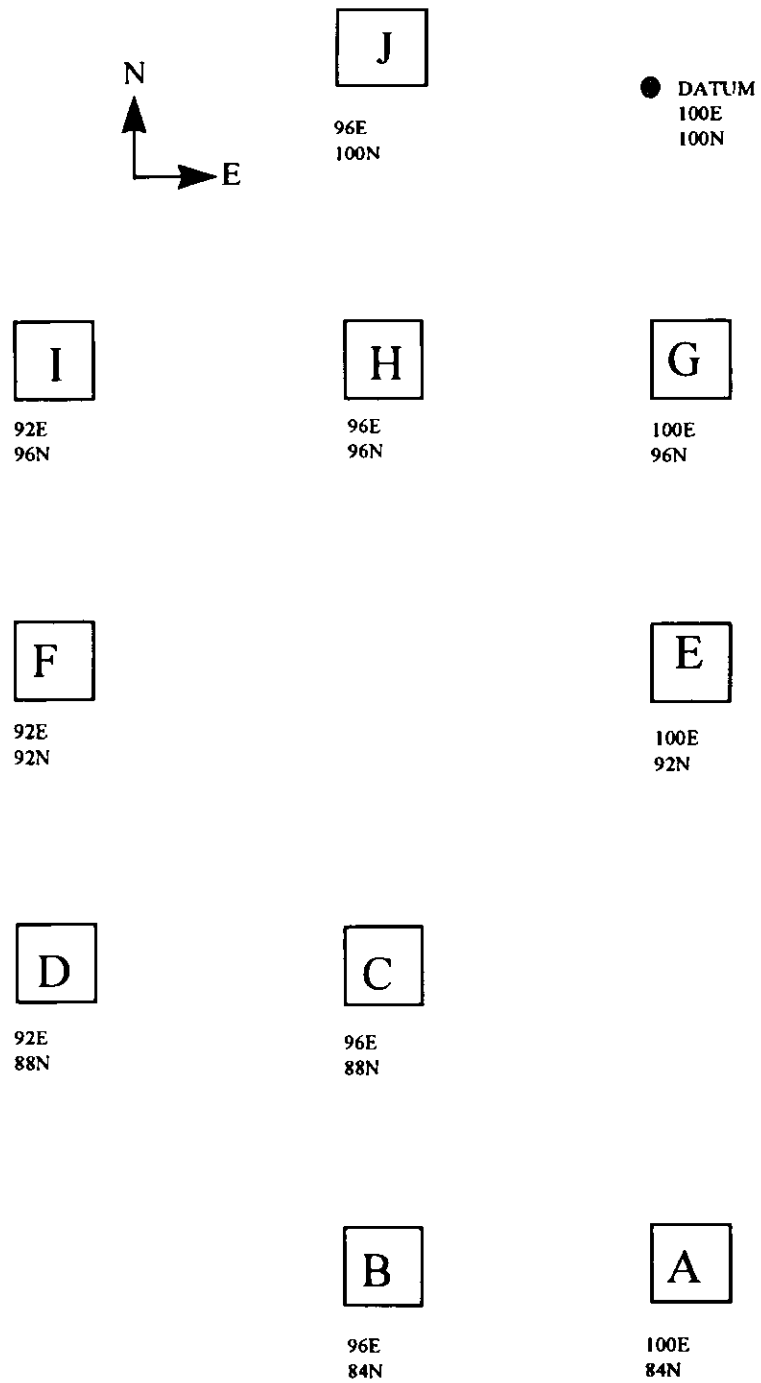
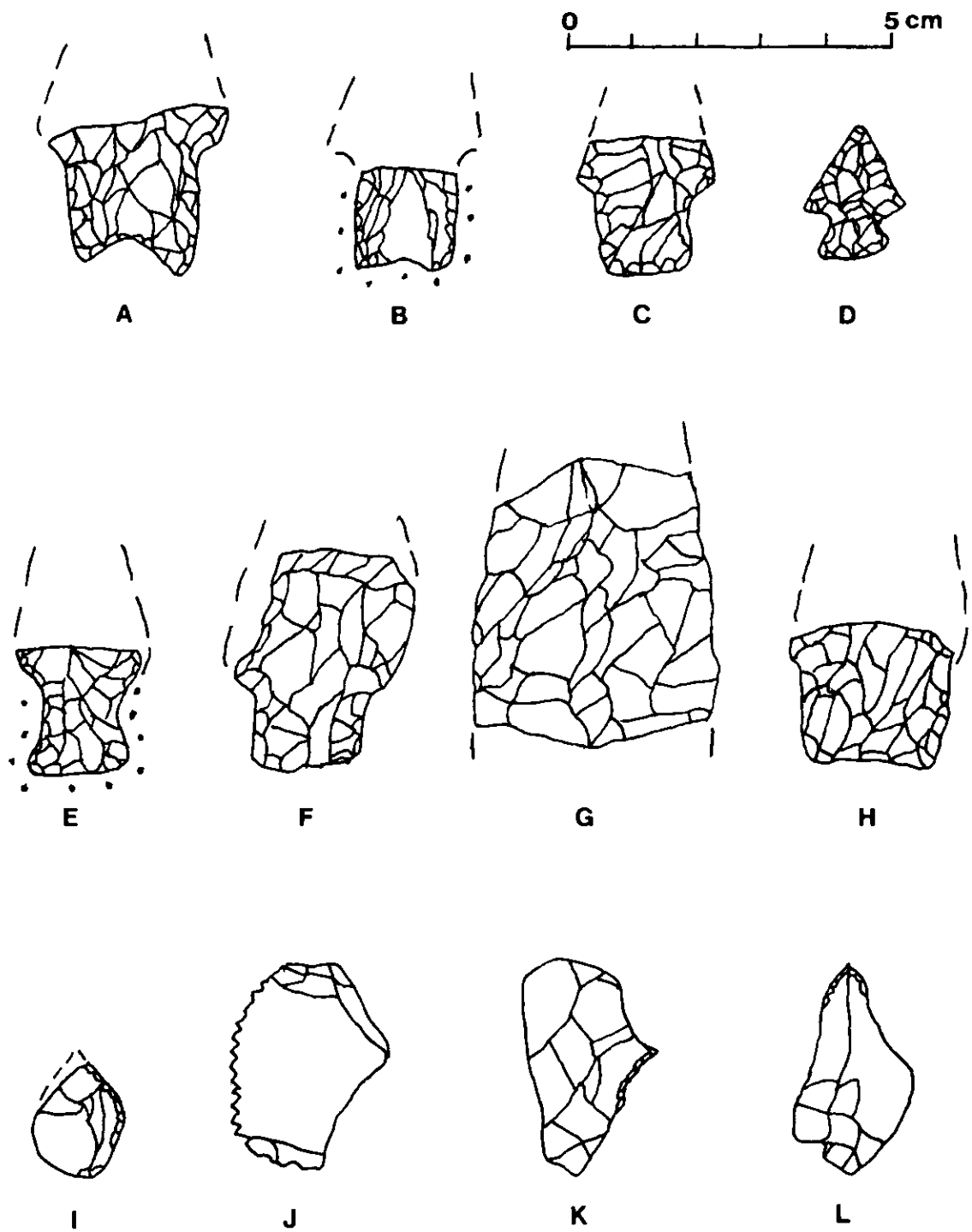


Figure 1. 41WH24 Excavation Layout



A,B - Pedernales points; C - Kent point; D - Scallorn point; E - Early Stemmed point; F - Kent point preform, G,H - preforms; I - unifacial arrow point; J - denticulate; K - graver; L - perforator; dots show ground edges

Figure 2. Lithic Artifacts

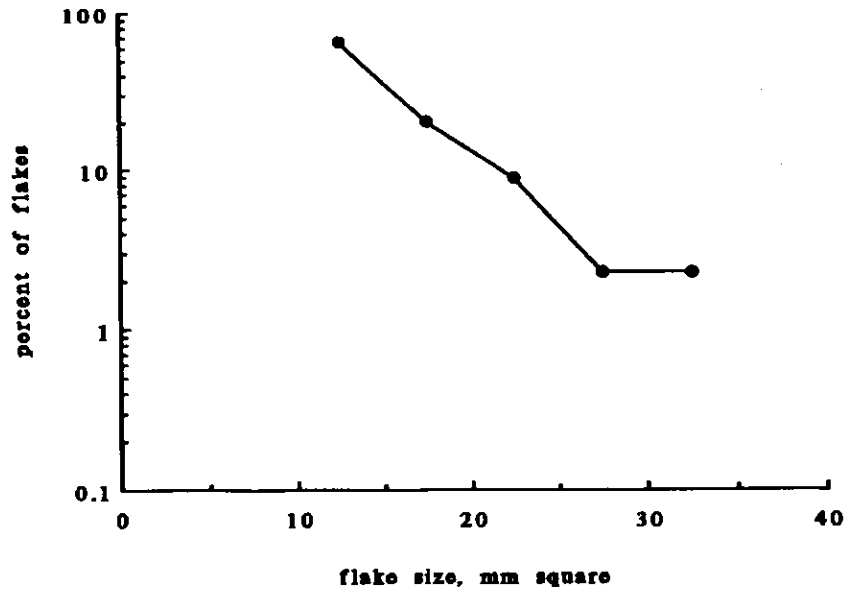


Figure 3. Flake Size Distribution, 10-15 cm stratum

Erratum

In the list on page 5 of Journal Number 111, in the article Excavations at Site 41WH72, Wharton Co., Texas, by L. W. Patterson, J. D. Hudgins, S. M. Kindall, and W. L. McClure, the generic name for the nine-banded armadillo should be *Dasypus novemcinctus* rather than *Didelphis virginiana*.