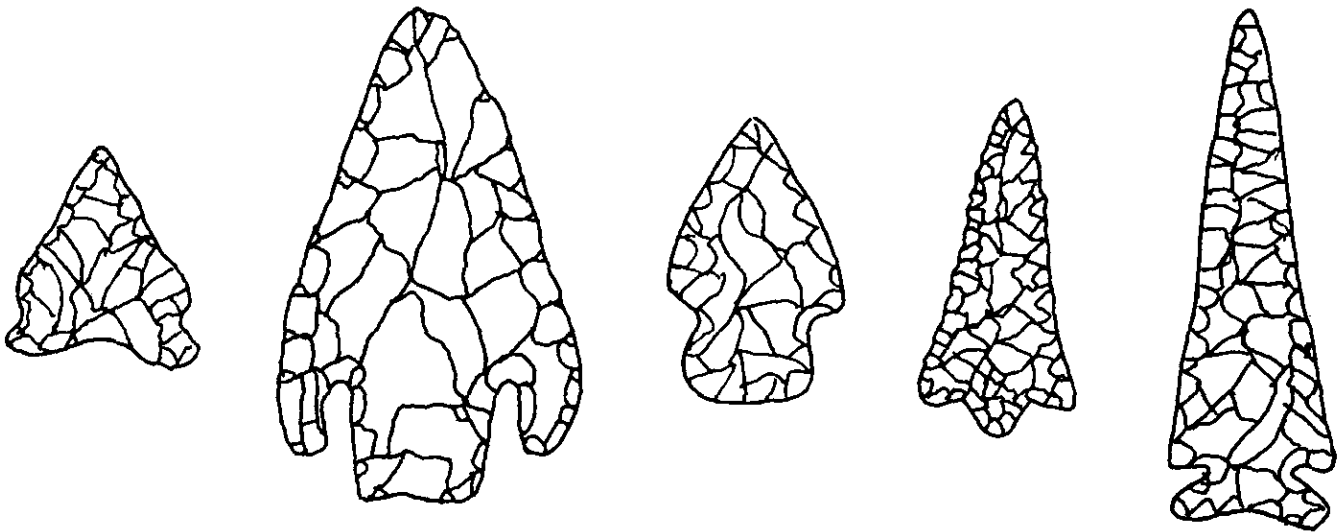




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Points from San Jacinto Bay Sites

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Some Archeological Sites on Upper San Jacinto Bay

L. W. Patterson and M. A. Marshall

Introduction

This article describes collections of lithic artifacts made by Mike Marshall at seven prehistoric sites on upper San Jacinto Bay. Varying amounts of ceramics were also found on all of these sites, but ceramics will be the subject of a separate analysis.

Projectile point types indicate that some of these sites had long occupation sequences, from the Late Paleo-Indian period through the Late Prehistoric. As will be further discussed, occupations at these sites occurred under varying environmental conditions, with earlier periods in a freshwater environment and later periods in a brackish water environment. Several of these sites had significant occupations during the Paleo-Indian, Middle Archaic and Late Prehistoric periods. Only one site has projectile point types that indicate Early Archaic occupation. All of these sites had occupations during some portion of the Late Archaic and/or Early Ceramic time periods, but interpretation of occupations during these time periods at these specific sites is difficult with presently available data.

Environmental considerations

The sea level was increasing during much of the Holocene period, with stabilization to its present level about 3500 years ago (Aten 1983:124). Therefore, the formation of San Jacinto Bay and the present coastline of the Gulf of Mexico was completed at this time, approximately 1500 B.C. Sites on upper San Jacinto Bay were in a freshwater environment of the San Jacinto River during the Paleo-Indian, Early Archaic and much of the Middle Archaic periods, before formation of San Jacinto Bay was completed by rising sea level. Archeological sites in this area need special consideration because they were inland sites before the Late Archaic period and coastal margin sites during later time periods.

Some changes in subsistence patterns came with the change in environment. Marine food resources, especially brackish water *Rangia* shellfish, were used after this area became part of the coastal margin, but terrestrial faunal resources were also used in the same manner as in earlier periods when there was a freshwater environment (Dillehay 1975). There are few radiocarbon dates for coastal margin shell middens earlier than 500 B.C., with most radiocarbon dates for *Rangia* shell middens falling after the start of ceramics at A.D. 100 (Aten 1983:Table 14.1). The use of shellfish on the coastal margin does not appear to have been intensive until after the Late Archaic, in ceramic periods (Aten 1983:158). Most of the shell middens at coastal margin sites start at various times during the Early Ceramic and Late Prehistoric time periods, some as late as the Early Historic period.

Chronology and projectile point typology

The chronological periods (Patterson 1979) and related projectile point types (Patterson 1983:Table 1) used here are from previous publications. At sites discussed here, the Late Paleo-Indian period (8000 to 5000 B.C.) is represented by San Patrice, Early Notched, Plainview and Angostura point types. The Early Archaic period (5000 to 3000 B.C.) is represented by Bell and Carrollton points. All Paleo-Indian and Early Archaic points from these sites have ground stem edges. The Middle Archaic period (3000 to 1500 B.C.) is represented by Bulverde and Williams points. The

Late Archaic (1500 B.C. to A.D. 100) and Early Ceramic (A.D. 100 to 600) periods seem to share many projectile point types, such as Gary, Kent, Ellis, Ensor and Darl. Some Gary and Kent points occur as early as the Middle Archaic period. Because projectile point types overlap the Late Archaic and Early Ceramic periods, it is difficult to estimate the exact time intervals of occupations during these time periods using projectile point typology. The Late Prehistoric (A.D. 600 to 1500) is represented by Perdiz, Alba, Catahoula, Edwards and unclassified arrow point types at these sites.

Projectile points found on sites discussed here are summarized in Table 1. Some of these points are illustrated in Figures 1 to 7. Table 2 gives a summary, based on projectile point typology, of occupation periods for the seven sites. Five sites have Late Paleo-Indian occupation components, one site has an Early Archaic component, and four sites have Middle Archaic components. All seven sites have occupation components during some portion of the Late Archaic and/or Early Ceramic periods. All seven sites have definite occupation components in the Late Prehistoric period.

The occupation sequence of site 41HR618 is especially difficult to interpret. The bottom layer of Rangia shell at this site has a radiocarbon date of 450 ± 80 years B.P. (A.D. 1500, I-15,275). Use of Rangia shellfish did not start here until the beginning of the Historic period. There may have been an occupation time gap at this site during some portion of the Late Archaic and Early Ceramic periods. There may have been similar occupation time gaps at some of the other six sites discussed here as well. Regardless of any possible occupation time gap at site 41HR618, the presence of Gary and Kent points might indicate some use of this site during the Late Archaic and/or Early Ceramic periods before use of Rangia shellfish at this location.

Other artifact types

A hollow bone projectile point was found on site 41HR618 (Figure 6). Bone points have previously been found at sites on the coastal margin of Southeast Texas (Aten 1983:Figure 13.3). A large bifacial perforator (drill) and a side-notched stemmed side scraper were found on site 41HR233 (Figure 5). Side-notched stemmed side scrapers have been associated with San Patrice and Early Notched Late Paleo-Indian points (Webb et al. 1971). A Williams-like point base found on site 41HR618 (Figure 6) may have been reworked as a stemmed side scraper. A Catahoula perforator (Patterson 1987) and a thick bifacial perforator were found on site 41HR45 (Figure 1). Many of the lithic specimens from these sites show evidence of heat treating.

Summary

Lithic collections from seven prehistoric sites on upper San Jacinto Bay have been summarized. Occupations in several prehistoric time periods are indicated at each of these sites, with some sites having occupations as early as the Late Paleo-Indian time period. The San Patrice point of the Late Paleo-Indian period is particularly well represented. These data are a significant addition to the data base of prehistoric sites in Southeast Texas. These sites are of special interest since they are located in an area of Late Holocene transition from a freshwater environment of the San Jacinto River to a brackish water environment of upper San Jacinto Bay.

Table 1. Projectile Point Summary

<u>Point Type</u>	<u>HR45</u>	<u>HR172</u>	<u>HR173</u>	<u>HR174</u>	<u>HR233</u>	<u>HR618</u>	<u>HR619</u>
Arrow Points							
Perdiz	3	26	1	1	1	1	6
Alba	1	7	1			2	
Catahoula		1	2			1	
Edwards		1	1				
unclassified		4					3
preform		1					
Dart Points							
San Patrice		4	5		3	3	1
Bulverde	2		1			1	
Carrollton					1		
Williams	2		1			1	1
Plainview						1	
Plainview-like					1		
Early Notched					3	1	
Bell					1		
Angostura-like					1		
Gary	6	2		2	4	1	
Kent	7	1	4	1	11	2	1
triangular	1						
Darl	1		1		2		
Ellis	3		1		2		
Ensor							1
Wells					1		
leaf-shaped	1	1				1	1
unclassified	2				2		1
preform	1	3	2		4		
bone						1	
Total	30	51	20	4	37	16	15

Table 2. Summary of Time Periods

<u>Site</u>	<u>Paleo-Indian</u>	<u>Early Archaic</u>	<u>Middle Archaic</u>	<u>Late Archaic</u>	<u>Early Ceramic</u>	<u>Late Prehist.</u>
41HR45			X	?	X	X
41HR172	X			?	X	X
41HR173	X		X	?	X	X
41HR174				?	X	X
41HR233	X	X		?	X	X
41HR618	X		X	?	?	X
41HR619	X		X	?	X	X

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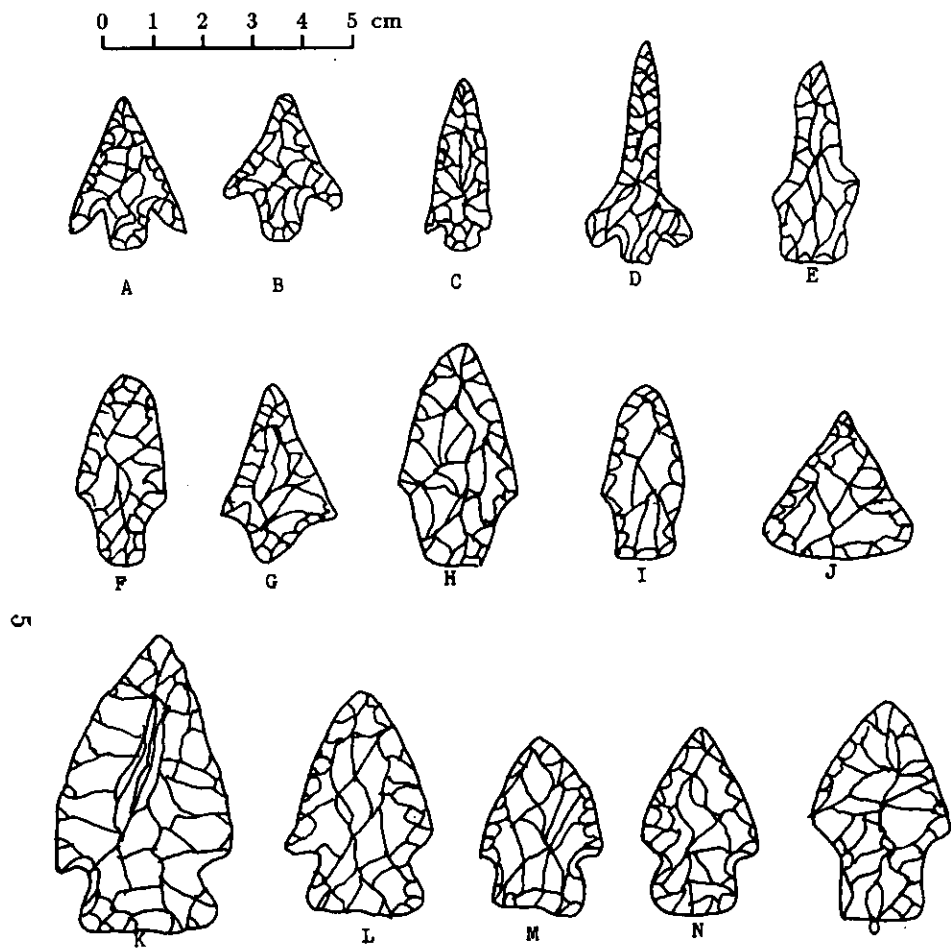
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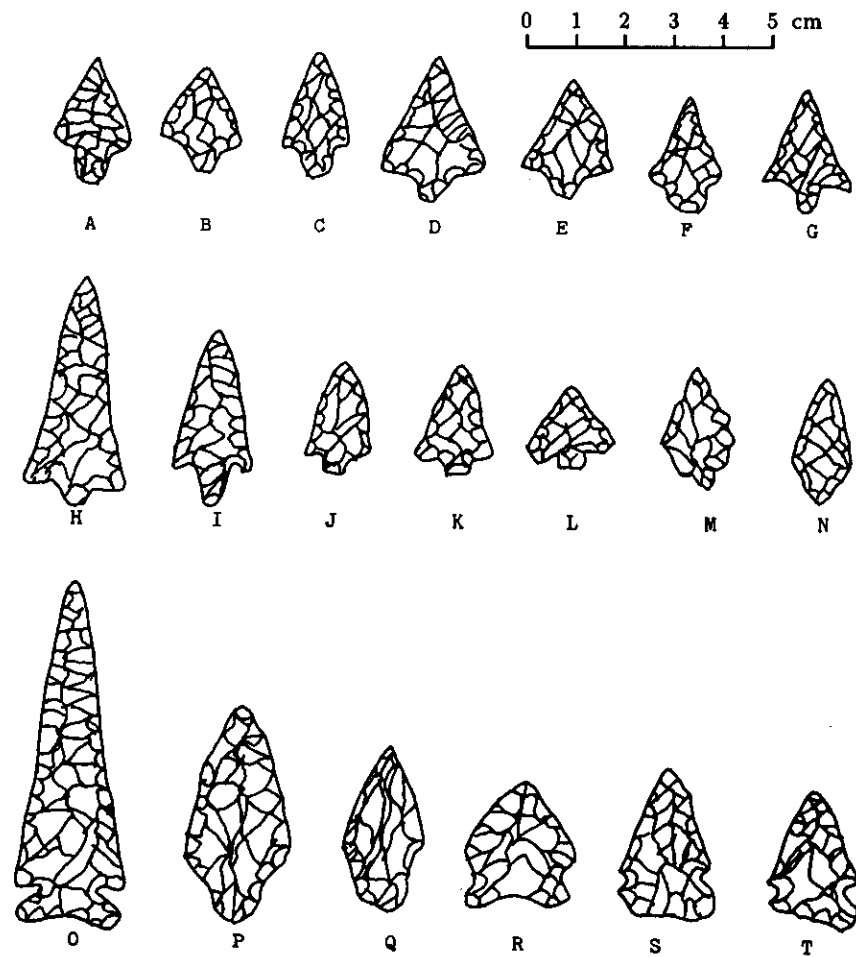
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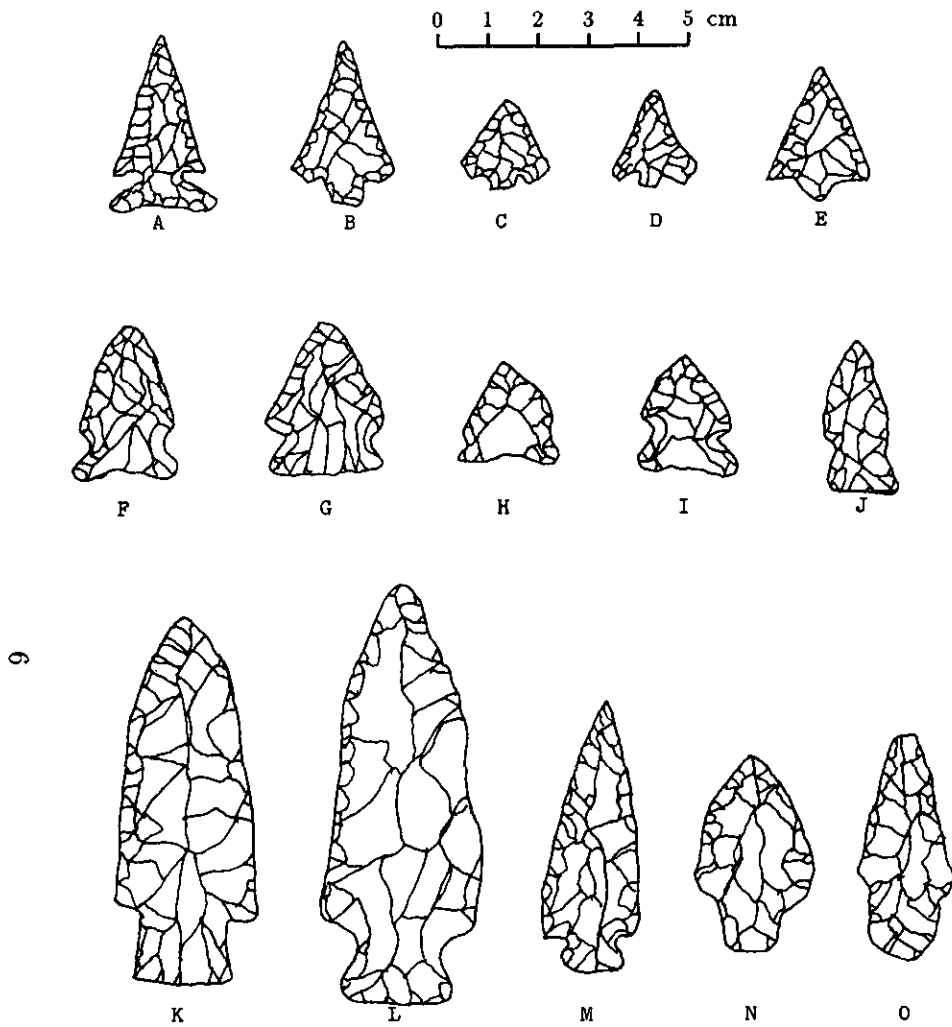
A,B - Perdiz points; C - Alba point; D - Catahoula perforator; E - bifacial perforator; F - Kent point; G,H - Gary points; I - Darl point; J - triangular point; K,L - Williams points; M,N - Ellis points; O - Bulverde point

Figure 1. Site 41HR45 Artifacts



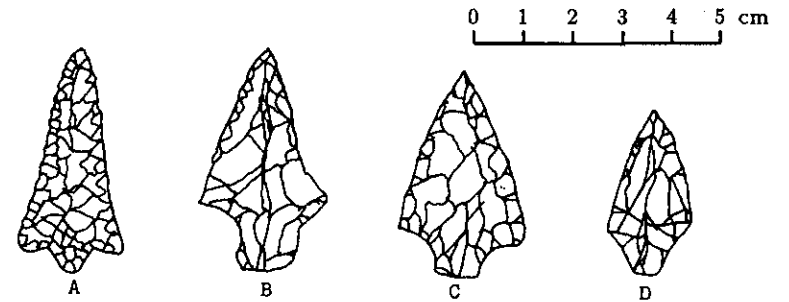
A to I - Perdiz points; J,K - Alba points; L - Catahoula point; M,N - unclassified points; O - Edwards point; P,Q - Gary points; R,S,T - San Patrice points

Figure 2. Site 41HR172 Artifacts



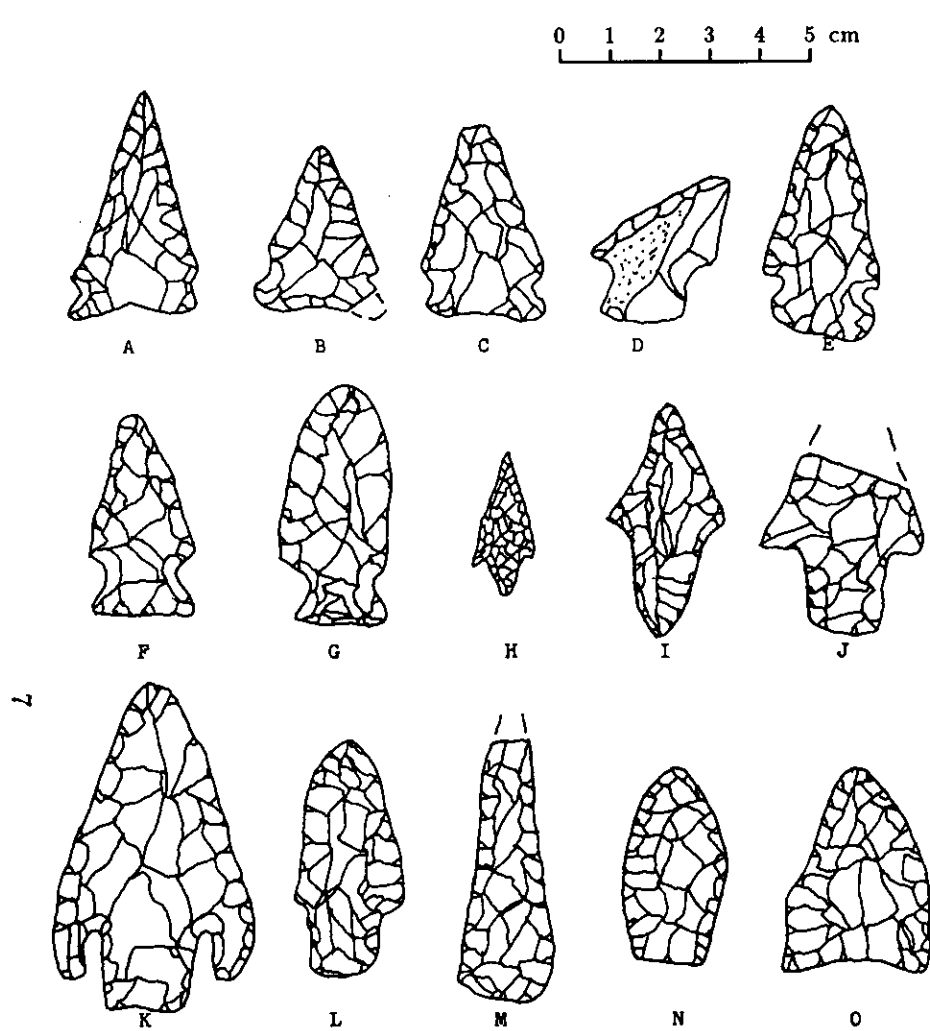
A - Edwards point; B - Alba point; C,D - Catahoula points; E - Perdiz point; F to I - San Patrice points; J - Darl point; K - Bulverde point; L - Williams-like point; M - Ellis-like point; N,O - Kent points

Figure 3. Site 41HR173 Artifacts



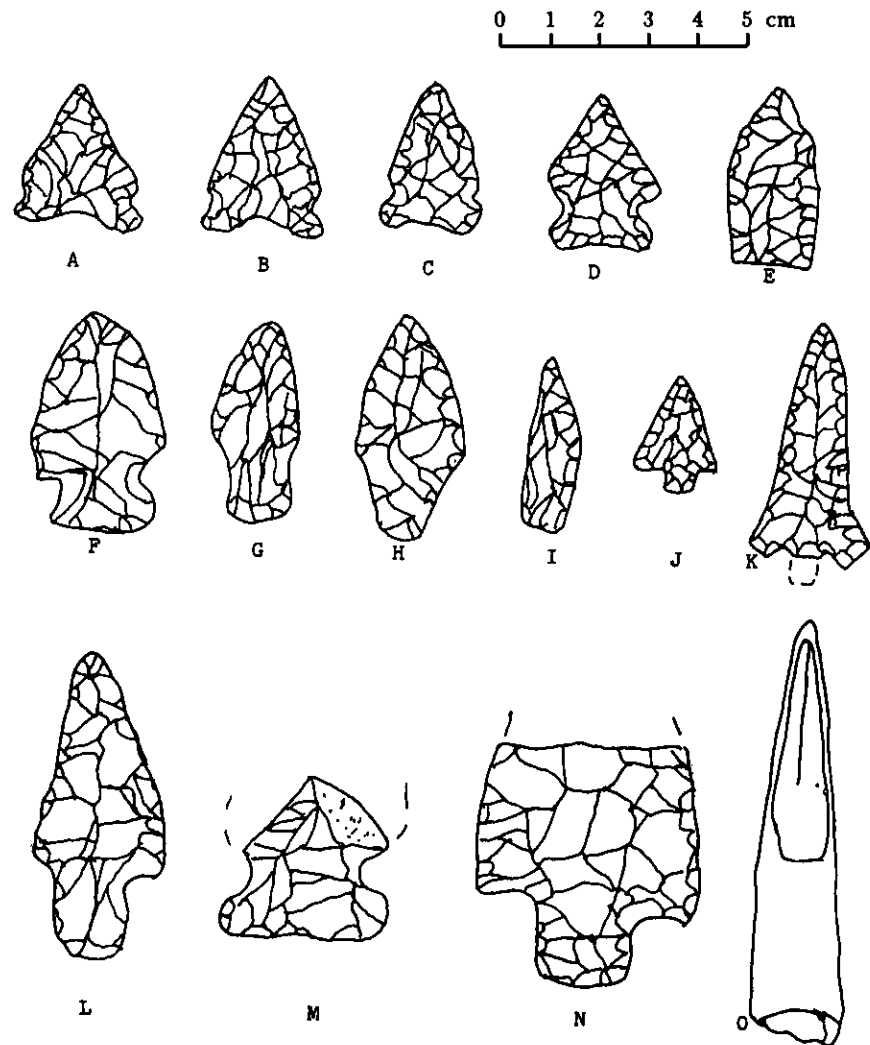
A - Perdiz point; B - Kent point; C,D - Gary points

Figure 4. Site 41HR174 Artifacts



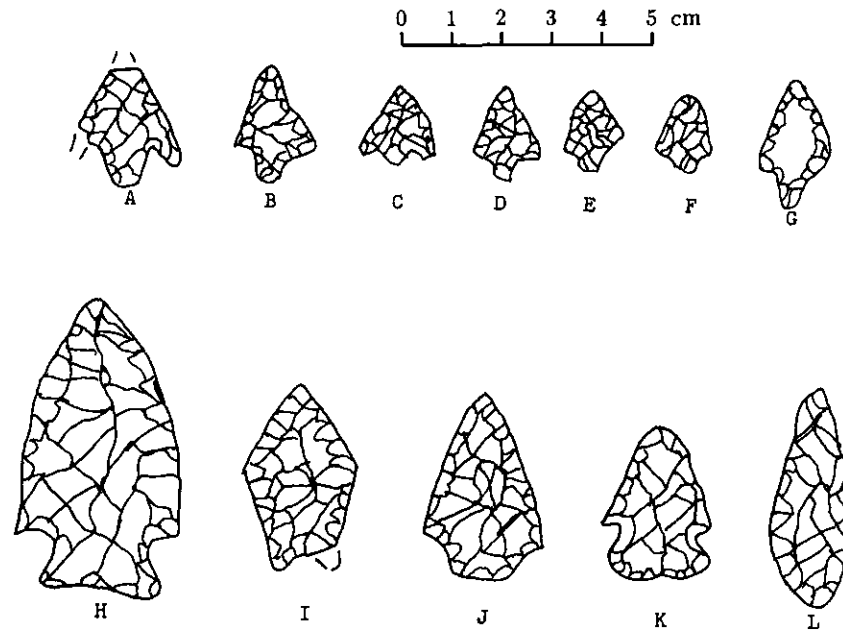
A,B,C - San Patrice points; D - stemmed side scraper; E - Ellis point;
 F,G - Early Notched points; H - Perdiz point; I - Wells point;
 J - Carrollton point; K - Bell point; L - Kent point; M - drill;
 N - Angostura-like point; O - Plainview-like point

Figure 5. Site 41HR233 Artifacts



A,B,C - San Patrice points; D - Early Notched point; E - Plainview point;
 F - Williams point; G - Kent point; H - Gary point; I - leaf-shaped point;
 J - Alba point; K - Catahoula point; L - Kent point; M - Williams-like base;
 N - Bulverde-like point; O - bone point

Figure 6. Site 41HR618 Artifacts



A to F - Perdiz points; G - unclassified point; H - Williams point;
 I - San Patrice point; J - Kent point; K - Ensor-like point;
 L - leaf-shaped point

Figure 7. Site 41HR619 Artifacts

Site 41WH5, Another Long Occupation in Wharton Co., Texas

L. W. Patterson and J.D. Hudgins

Introduction

This article describes a surface collection from archeological site 41WH5 in Wharton County, Texas. The site was originally found and recorded by Joe Hudgins. Access to the site was made possible through the courtesy of the Lloyd Rust estate.

Site 41WH5 is located about 3.5 miles north of Wharton, Texas on the north bank of a relic stream bed. The site is about 150 feet long, parallel to the stream, and is about 60 feet wide. At some time in the past the relic stream bed was a route of Peach Creek flowing to the southwest into the Colorado River. The soil survey map of Wharton County shows this stream bed entering the Colorado River at the town of Glen Flora. The upper end of this relic stream bed connects with the present location of Peach Creek about 300 yards north of site 41WH5. The site is in an area of the county known locally as the Colorado River Valley. The soil in this area consists of deep alluvial deposits resulting from years of flooding of the Colorado River. The area of the site has been cleared and is used for farming, but previously was dense woodland consisting mainly of native pecan and cedar elm.

The artifact types in this collection indicate a long occupation sequence, from the Late Paleo-Indian period to the Historic Indian period. This site is an addition to the increasing list of sites in Southeast Texas with long occupation sequences (Patterson 1983). Materials collected show that this was a campsite with a complete sequence of lithic manufacturing activities, from primary raw material reduction to the manufacture of finished stone tools.

Projectile points and chronology

Projectile point types indicate a long occupation sequence for this site. The Late Paleo-Indian period of about 10,000 to 7000 years ago is represented by 2 Early Notched points (Figure 1A,B), with ground basal edges, similar to specimens found at site 41WH19 (Patterson et al. 1987). Two Trinity points (Figure 1C,D) indicate an Early Archaic component (7000 to 5000 years B.P.). The Middle and Late Archaic periods (5000 to 1900 years B.P.) are represented by 3 Bulverde, 1 large Gary and 1 large Kent point (Figure 1E to I). A smaller Kent point (Figure 1J), 2 Ensor points and 1 Ellis point relate to both the Late Archaic (3500 to 1900 years B.P.) and the Early Ceramic (1900 to 1400 years B.P.) time periods. The Late Prehistoric period (1400 to 500 years B.P.) is indicated here by 1 Scallorn, 4 Perdiz and 1 Alba arrow point (Figure 2). The Historic Indian period (500 to 200 years B.P.) may be represented by a Cuney arrow point (Figure 2H).

One unclassified dart point fragment and one unclassified arrow point fragment were also found. All projectile points are made from local types of chert. Three dart point preforms and eight preform fragment were found at this site, indicating that projectile points were manufactured here.

Ceramics

Fourteen potsherds of the Goose Creek Plain sandy paste variety were recovered. Thicknesses ranged from 6 to 9 mm with an average thickness of 7 mm. This pottery type occurs in both the Early Ceramic and Late Prehistoric time periods in this region.

Faunal remains

A small amount of faunal material was found on the surface of this site. This included 9 freshwater clam shells and 17 pieces of deer bone. Deer bones are the most common type of faunal remains found on Indian sites in Southeast Texas and clam shells are fairly common at sites located on the western end of Southeast Texas.

General lithic materials

A few formal types of unifacial stone tools were found. Three large, thick scrapers (Figure 2) are of the type usually associated with the Late Paleo-Indian period (Patterson et al. 1987) in this region. One graver and one small perforator were found.

Chert raw materials can be found fairly locally in this area. Lithic materials found at this site indicate that not much effort was expended to trim raw materials for easier transport. Items found here that indicate use of primary raw materials include 7 chert nodules, 33 thick chert pieces and 15 miscellaneous cores, many of which have remaining cortex.

Two quartzite hammerstones and 3 quartzite flakes indicate the use of hard percussors for lithic manufacturing activities. Fourteen limestone pieces found here may indicate that soft percussors were also used. There is an advantage in using soft percussion in bifacial thinning to make thin projectile points.

The lithic flake collection also shows the use of primary raw materials. There are 9.7% primary flakes (completely covered with cortex) and 41.3% secondary flakes (partially covered with cortex). These high percentages of flakes with remaining cortex indicate the use of primary raw materials without much trimming at source locations. Even though bifacial projectile points were manufactured here, the flake size distribution shown in Table 1 is not an exponential curve that would be expected from bifacial reduction (Patterson 1982). This indicates that other primary lithic reduction activities were also being done here. Many lithic flakes show evidence that heat treating of chert was being used.

There is evidence of a minor industry at this site for the manufacture of small prismatic blades. Three views of a prepared blade core are shown in Figure 2A,B,C. Seven small blades and blade-like flakes were found, with widths of 11 to 15 mm. Other Indian sites in this county with evidence of small blade manufacture include 41WH10 (Patterson and Hudgins 1980) and 41WH37 (Patterson and Hudgins 1989)

Eight sandstone abraders were found, including two with wear grooves.

Summary

This article has described the general nature of site 41WH5 as determined by a surface collection of artifacts. It was a campsite with a long occupation sequence, probably used on a seasonal basis. Primary lithic reduction activities were present as well as the manufacture of finished stone tools and projectile points. Data from this site is another basic addition to the regional archeological data base.

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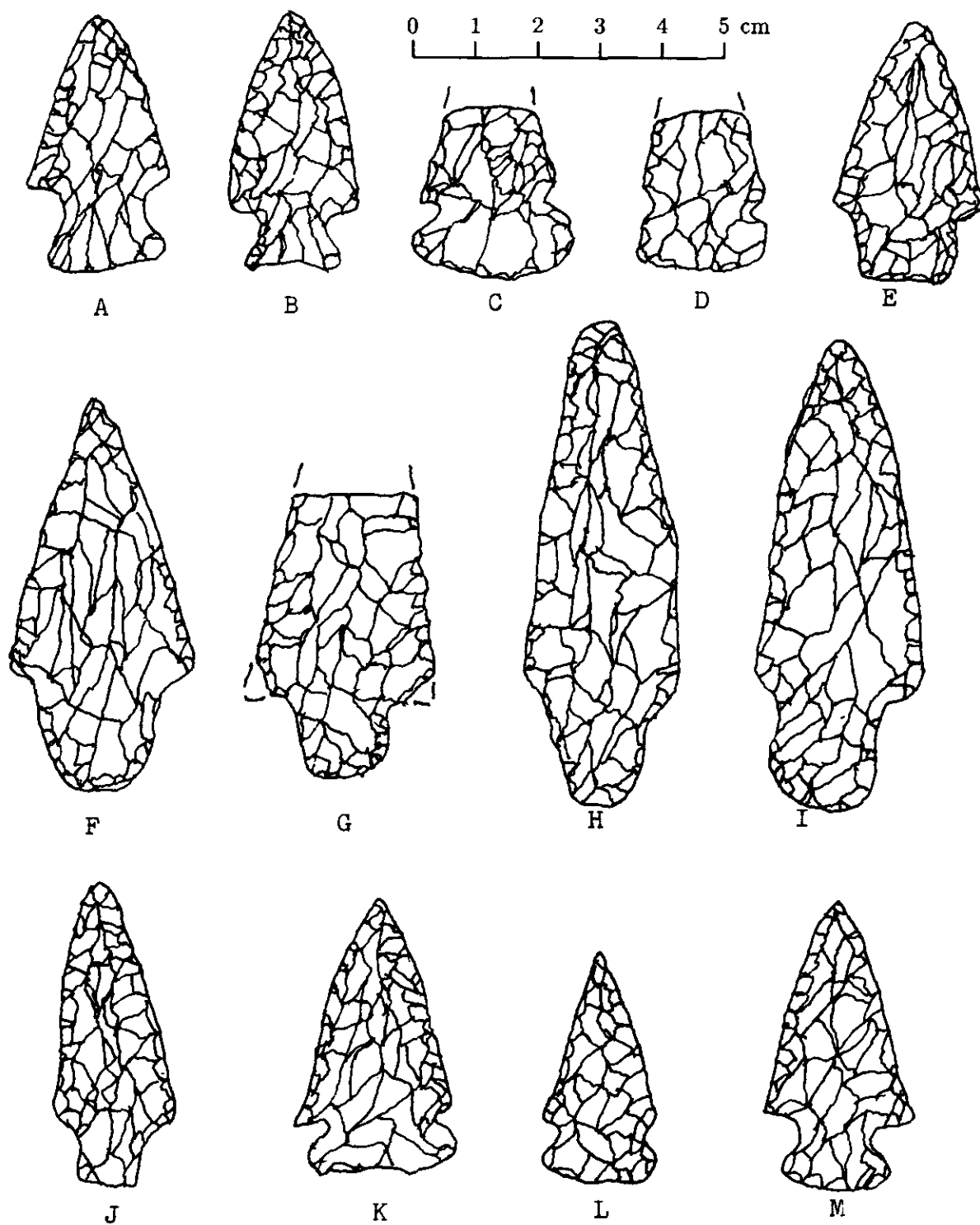
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Table 1. Flake Size Distribution

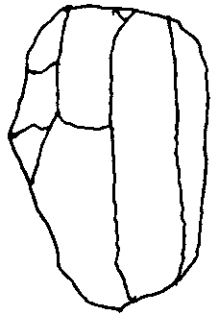
<u>size,</u> <u>mm square</u>	<u>number</u>	<u>%</u>
under 15	3	1.4
15-20	41	19.6
20-25	69	33.1
25-30	60	28.7
30-35	32	15.3
35-40	4	1.9
total	209	100.0



A,B - Early Notched; C,D - Trinity; E,F - Bulverde; G - Bulverde-like;
 H - Gary; I,J - Kent; K,L - Ensor; M - Ellis

Figure 1. Site 41WH5 Dart Points

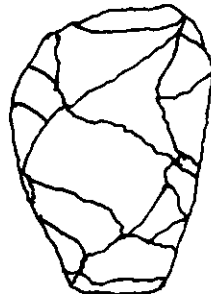
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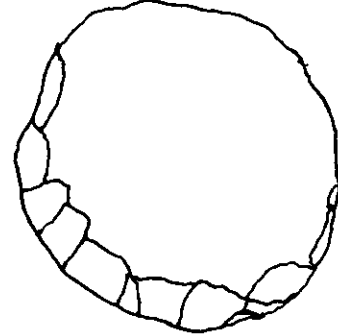
A



B



C



D



E



F



G



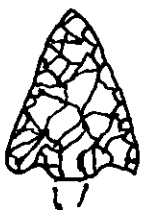
H



I



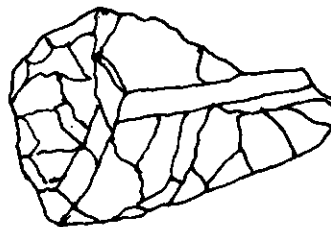
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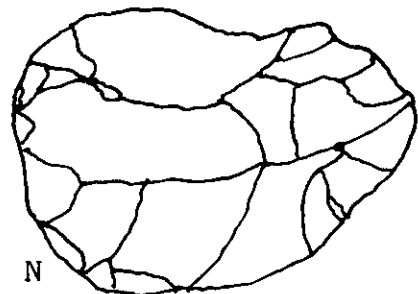
K



L



M



N

A,B,C – blade core views; D,M,N – scrapers; E – Scallorn point; F – Alba point;
G – unclassified arrow point; H – Cuney point; I to L – Perdiz points

Figure 2. Site 41WH5 Lithic Artifacts

Chronological Placement of Late Archaic and Early Ceramic Dart Point Types in Southeast Texas

Leland W. Patterson

Introduction

It has previously been noted (Patterson 1983:Table 1) that several dart point types occur in both the Late Archaic and Early Ceramic time periods in Southeast Texas. This conclusion was based on data from some excavated sites, such as 41HR5 (Wheat 1953:Table 5) and 41HR315 (Patterson 1980:Table 3). Additional data have been compiled (Patterson 1989) that have been used here to reexamine this conclusion regarding chronological placement of relatively late dart point types. This new study supports the previous conclusion that several dart point types cannot be used as chronological markers to distinguish between the Late Archaic and Early Ceramic time periods. As Shafer (1975) has noted, the introduction of pottery did not have a significant effect on other technological traits of the Indians of this region, who can be characterized as practicing a hunting and gathering lifeway. Dart point types studied include Darl, Ellis, Ensor, Gary, Kent, Palmillas and Yarbrough.

Additional data

Additional data from a data base for published sites of inland southeast Texas (Patterson 1989) have been used to tabulate dart point types at sites that have Late Archaic but not Early Ceramic components, and at sites that have Early Ceramic but not Late Archaic components. Results of this study are summarized in Table 1. It may be seen that all seven types of dart points that have been considered have similar numbers of sites in both the Late Archaic and Early Ceramic categories. The previous conclusion (Patterson 1983:Table 1) that these dart point types occur in at least portions of both time periods is supported by this new study.

Discussion

It is likely that not all dart point types being discussed have the same time intervals. More precise chronological placement of these dart point types will depend on future development of more detailed data from excavation of well-stratified sites and new radiocarbon dates. As previously noted (Patterson 1983:Table 1), Gary and Kent points have especially long time intervals, from the Middle Archaic through the Late Prehistoric, which includes the Late Archaic and Early Ceramic time periods.

There are a number of possible reasons for several dart point types occurring in the same time period on the same site. These reasons can include: (1) individual preference, (2) concurrent use of different hafting techniques, (3) exchange of band members, (4) trade, (5) interaction of different cultural groups, and (6) use of the same site at different times by different cultural groups. It should also be apparent, of course, that different cultural groups in the same region can have different types of projectile points at different sites.

In Southeast Texas, dart points tend to be smaller in the Early Ceramic period than in the Late Archaic, possibly reflecting a change in lithic procurement patterns. I had previously considered the possibility that some small dart points in the ceramic period were actually transitional arrow points (Patterson 1980:15). An additional study (Patterson 1985) showed, however, that there are good criteria for distinguishing between arrow points and small dart points, and that the concept

of transitional arrow points does not seem to be valid for this region. Arrow points have a separate development history in this region, with the introduction of the bow and arrow starting with unifacial arrow point types, such as at site 41HR315 (Patteron 1980). It can be asked whether the size of dart points in this region can be used to distinguish between the Late Archaic and Early Ceramic periods. This will probably never be possible for individual specimens, since a small-size dart point could have been made during any time period. A possibility remains that additional study of groups of dart points might produce some criteria that would be useful for determining time periods by use of dart point sizes in samples that are sufficiently large to have statistical significance. My opinion from previous studies (Patterson 1980,1985) is that dart point groups with weights under 3 grams for many specimens are good candidates for placement in the Early Ceramic period. Excavations by Texas A&M at site 41HR273 in Harris County (report in preparation) have yielded a large collection of small dart points from the Early Ceramic period. Data such as this will be useful in determining if dart point size can be used for chronological placement in this region.

Summary

The results of this study support the previous conclusion that several dart point types occur in both the Late Archaic and Early Ceramic periods, and that these point types are useful only for broad chronological placement. Future research may show that the sizes of specimens of these dart point types may be useful for determining more specific chronological placement.

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Table 1. Chronological Distribution of Dart Point Types

Point Type	No. of Sites	
	Late Archaic Only	Early Ceramic Only
Darl	3	2
Ellis	5	4
Ensor	4	3
Gary	12	14
Kent	7	13
Palmillas	3	4
Yarbrough	4	4

Prehistoric Site 41WH36, Wharton Co., Texas

L. W. Patterson and J. D. Hudgins

Introduction

This article describes the results of excavations made by Joe Hudgins at site 41WH36 in Wharton County, Texas to determine the nature of the site. Site 41WH36 was originally found and recorded by Hudgins. In April 1989, he excavated four 0.25-meter-square test pits at this location.

This site is located about 3 miles east of Hungerford, Texas on a tributary stream of the San Bernard River, and is about 100 feet in diameter. The site is in a wooded area, near open coastal prairie. A variety of faunal and floral natural food resources would have been available to Indians in this area.

Results of excavations indicate occupation components at site 41WH36 in the Late Archaic, Early Ceramic and Late Prehistoric time periods.

Excavation details

Four 0.25-meter-square test pits were excavated to a depth of 100 cm, where culturally sterile soil was found. Excavation was done in 10 cm levels, with soil put through a 1/4-inch mesh screen. Some soil from the various levels of each test pit was put through a 1/16-inch mesh screen using water, to recover small-size faunal materials. Soil was a black clay loam from the surface to 80 cm. From 80 to 100 cm the soil was a lighter brown loam. At 100 cm, the soil contained many small caliche nodules. There has been much armadillo disturbance of the soil at this location, but time-diagnostic artifact types seem to occur in the stratigraphic sequence that would be expected.

Site chronology

Artifact types of the Late Prehistoric period (A.D. 600 to 1500) are present from the surface to a depth of approximately 30 cm, including pottery, arrow points and one small dart point. Artifact types of the Early Ceramic period (A.D. 100 to 600) are present at excavation levels from 30 to 80 cm, including pottery and small dart points. Excavation levels from 80 to 100 cm were without pottery and appear to represent occupations in the Late Archaic period (1500 B.C. to A.D. 100), with culturally sterile soil below 100 cm. No time-diagnostic artifacts were found below 80 cm. The chronological periods used here are the same as from a previous review of this region (Patterson 1979).

Projectile points

Arrow points representing the Late Prehistoric period include a Perdiz point (Figure 1D) from the surface, a Scallorn point (Figure 1E) from the 10-20 cm level (Pit A) and an unclassified arrow point fragment from the 20-30 cm level (Pit A).

Small dart points occur in both the Early Ceramic and Late Prehistoric time periods at inland sites in Southeast Texas. All of the dart points found at site 41WH36 are fairly small, as shown in Figure 1. A Kent point was found at the 20-30 cm level (Pit D), an Ensor point was found at the 40-50 cm level (Pit B), and a Gary point was found at the 50-60 cm level (Pit D). A biface fragment that may be part of a dart point preform was found at the 20-30 cm level. All projectile point types found here are common in this region (Turner and Hester 1985).

Ceramics

All pottery found at this site can be classified as the Goose Creek Plain sandy paste variety, which is found in both the Early Ceramic and Late Prehistoric time periods in this region (Aten 1983). Potsherds were found as deep as 80 cm. Three sherds were found on the surface, one with brushed surfaces and a notched rim. Another sherd with a notched rim was found at the 60-70 cm level in Pit A. The thicknesses of sherds ranged from 4 to 10 mm, with an average of 6 mm. A summary of potsherds from the excavated pits is given in Table 1. The thickness range for potsherds was about the same for all excavation levels.

General lithic materials

A summary of chert flakes recovered in the excavations is given in Table 2. A relatively small number of flakes were found at each level. This indicates only a small amount of lithic manufacturing activity at this site. This conclusion is supported by a lack of cores and projectile point preforms. Heat treating of chert was done, as indicated by potlid surface fractures, reddish coloration and waxy luster on many flakes.

Only 21.1% of flakes over 15 mm square in size had remaining cortex, including 5.5% primary flakes (covered with cortex) and 15.6% secondary flakes (partially covered with cortex). This indicates that mostly trimmed lithic materials were brought to this site.

One piece of sandstone was found in Pit B at each of the 10-20 cm and 30-40 cm levels. A sandstone abrader, with a flat surface, was found at the 40-50 cm level in Pit A.

Faunal remains

The collection of faunal remains from site 41WH36 will be analyzed by W. L. McClure for a separate report.

A tool made from a freshwater clam shell (Figure 1F) was found at the 10-20 cm level of Pit A. Some of the edges are highly smoothed, which might indicate use as a pottery smoothing tool. A pointed bone tool (Figure 1G) was found at the 50-60 cm level of Pit D. There are two longitudinal grooves that appear to be man-made.

Clayballs

A summary of fired clayballs recovered in the excavations is given in Table 3. Diameters ranged from 15 to 50 mm. This is a common type of artifact at prehistoric sites in Southeast Texas, and is usually assumed to be associated with cooking functions (Patterson 1986).

Summary

This article has described the results of excavations to determine the nature of prehistoric site 41WH36. Occupation components are present for the Late Archaic, Early Ceramic and Late Prehistoric time periods. This was probably a campsite, occupied seasonally by Indians with a hunting and gathering lifestyle. Artifact types found here are typical for this region in the time periods represented.

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Turner, E. S. and T. R. Hester

1985 A Field Guide to Stone Artifacts of Texas Indians. Texas Monthly Press

Table 1. Summary of Sherds

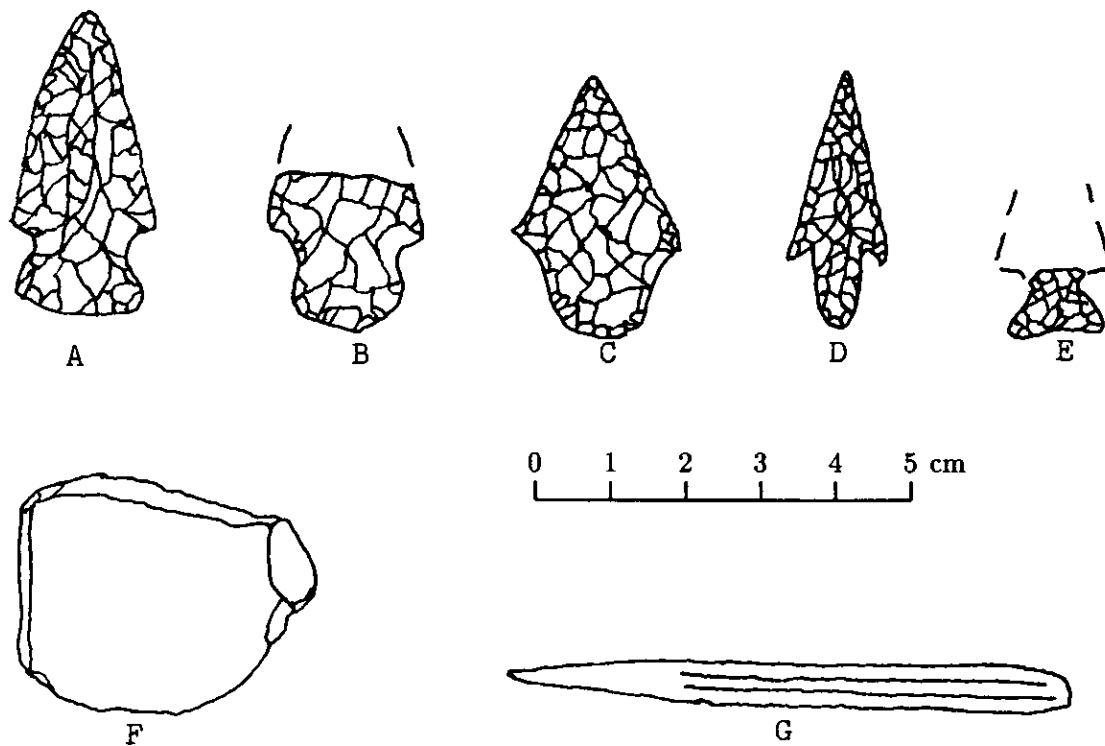
<u>Level, cm</u>	<u>Pit A</u>	<u>Pit B</u>	<u>Pit C</u>	<u>Pit D</u>	<u>total</u>
0-10	2			3	5
10-20	7	7	14	13	41
20-30	12	5	7	13	37
30-40	4	6		3	13
40-50	3	6	1	1	11
50-60	1	1			2
60-70	3	2			5
70-80		1		1	2
total	32	28	22	34	116

Table 2. Summary of Chert Flakes

<u>Level, cm</u>	<u>Pit A</u>	<u>Pit B</u>	<u>Pit C</u>	<u>Pit D</u>	<u>total</u>
0-10	2	6		1	9
10-20	3	11	25	11	50
20-30	12	11	8	15	46
30-40	18	8	12	7	45
40-50	12	6	10	6	34
50-60	15	5	19	10	49
60-70	7	16	7	7	37
70-80	4	7	2	13	26
80-90	7	8	2		17
90-100		10		1	11
total	80	88	85	71	324

Table 3. Summary of Clayballs

<u>Level, cm</u>	<u>Pit A</u>	<u>Pit B</u>	<u>Pit C</u>	<u>Pit D</u>	<u>total</u>
0-10	3	6			9
10-20	5	5	16	10	36
20-30	10	9	13	10	42
30-40	14	13	14	3	44
40-50	11	16	19	13	59
50-60	12	21	56	30	113
60-70	19	12	19	11	61
70-80	7	7	10	20	44
80-90	3	41		13	57
90-100		14		5	19



A - Ensor point; B - Kent point; C - Gary point; D - Perdiz point;
E - Scallorn point; F - shell tool; G - bone tool

Figure 1. Site 41WH36 Artifacts

Prehistoric Site 41WH37, Wharton Co., Texas

L. W. Patterson and J. D. Hudgins

Introduction

This article describes a surface collection from prehistoric site 41WH37 in eastern Wharton County, Texas. This site was originally found and recorded by Joe Hudgins. Sufficient cultural materials have now been found to define the general nature of this site.

Site 41WH37 is located in a cultivated farm field on the bank of Peach Creek, a few miles from Hungerford, Texas. The site area is about 70 by 75 feet. This location was originally at the boundary of tall grass prairie to the north, consisting mainly of native blue stem grass, and heavy timber to the south (native pecan and cedar elm) stretching about 3 miles to the Colorado River. Row crop farming has displaced the native plants at this location.

Lithic raw materials are available in this general area in the form of chert cobbles; these were extensively used by prehistoric inhabitants. A variety of floral and faunal food resources would have been available to prehistoric Indians in this area.

Judged by artifact types, site 41WH37 appears to have an occupation sequence from the Middle Archaic through the Late Prehistoric time periods. This was a campsite with extensive lithic manufacturing activities.

Projectile points and chronology

The estimated chronology of this site is based on projectile point types and the presence of pottery. The Middle Archaic period (5000 to 3500 B.P.) is represented by a Marshall dart point (Figure 1A) and a Morrill dart point (Figure 1C). Turner and Hester (1985) assign both of these dart point types to the Middle Archaic. The Marshall point specimen is similar to an example illustrated by Suhm and Jelks (1962:Plate 106B). An Ensor point (Figure 1B) possibly represents either the Late Archaic (3500 to 1900 B.P.) or Early Ceramic (1900 to 1400 B.P.) period (Patterson 1983:Table 1). The presence of pottery indicates that the Early Ceramic and/or the Late Prehistoric periods are represented. Two Perdiz arrow points (Figures 1E,F) represent the Late Prehistoric period.

The triangular dart point (Figure 1D), or preform, is not particularly time-diagnostic. A unifacial point (Figure 1G) weighing 2.0 grams may represent early use of the bow and arrow. Some unifacial arrow points occur in this region before the general use of standardized bifacial arrow point types (Patterson 1980). One expanding dart point stem was also found.

Ceramics

A total of 37 potsherds were found, with one specimen having a drilled lace hole. All sherds are of the Goose Creek Plain sandy paste type. Thicknesses of sherds range from 3.8 to 9.0 mm, with an average of 6.6 mm. This thickness range is fairly typical for Goose Creek pottery (Patterson 1985:12). Goose Creek pottery is found throughout the Early Ceramic and Late Prehistoric periods.

General lithic materials

Lithic raw materials are available in this area in the form of chert cobbles, as can be observed at local modern sand and gravel extraction pits. Indians used these lithic materials extensively at site 41WH37 for a variety of manufacturing activities. The general lithic collection described here

represents only a portion of materials occurring on the surface of this site. Large quartzite pebbles which could be used as hammerstones were also available in this area.

All stages of lithic manufacturing are found at this site, as might be expected, since it was not necessary to import trimmed pieces of raw material from long-distance sources. The lithic collection from this site has 20 whole chert cobbles, with diameters of 45 to 100 mm, and 3 split chert cobbles. Forty-nine miscellaneous chert cores were found with diameters of 45 to 120 mm, consistent with the sizes of available chert cobbles. No standardized reduction pattern is evident in the geometry of these cores. Early stages of lithic reduction are also represented by 14 thick chert pieces. The high proportion of flakes with remaining cortex is another indication that early stages of lithic reduction were done at this site. Over half (52.1%) of the chert flakes in this collection have some remaining cortex. There are 8.6% primary flakes (completely covered with cortex), 43.5% secondary flakes (some remaining cortex) and 47.9% interior flakes (no remaining cortex). The use of heat treating is shown on many flakes, by waxy luster, potlid surface fractures or reddish coloration. Twenty-five pieces of very coarse chert were found, some of which appear to have been burned.

The use of quartzite hammerstones is shown at this site by 30 quartzite flakes from hammerstone wear, and by 5 large broken quartzite pebbles with diameters of 35 to 55 mm. Eight large whole quartzite pebbles were also found.

The presence of 16 dart point preform fragments and 1 arrow point preform demonstrate that bifacial projectile points were being manufactured at this site. The flake size distribution shown in Table 1 does not represent a true exponential curve, however, that would be characteristic of bifacial reduction (Patterson 1982). This flake size distribution represents a mixture of bifacial reduction and other types of lithic reduction.

The purposeful manufacture of small prismatic blades appears to have been present. One semi-conical blade core (Figure 1J) and 10 small blades were found. The small blades have a width range of 8.2 to 13.2 mm, with an average width of 10.8 mm. This is the second site with polyhedral blade cores to be found in this general area. Two blade cores were found at nearby site 41WH10 (Patterson and Hudgins 1980:Figure 4).

The only formal unifacial stone tools found were 6 scrapers, such as the specimen shown as Figure 1K. A bifacial stemmed scraper with a graver point (Figure 1H) was found that may have been made from a thick dart point preform reject. One miscellaneous bifacial tool with 2 graver points was found (Figure 1I).

Faunal remains

A few faunal remains were found at this site in the form of 3 deer teeth and 6 pieces of bone that may also represent deer.

Summary

This is another site in Southeast Texas with a long occupation sequence, as now appears to be fairly common (Patterson 1983). In this case the occupation sequence is from the Middle Archaic through the Late Prehistoric. Site 41WH37 was used as a campsite and as a lithic manufacturing workshop. Significant amounts of all stages of lithic manufacturing activities were facilitated by the local availability of chert raw materials. As is usual in this region, this site was probably used as a seasonal campsite by nomadic Indians practicing a hunting and gathering lifeway. The use of this site as a lithic workshop may have been more frequent than on a seasonal basis.

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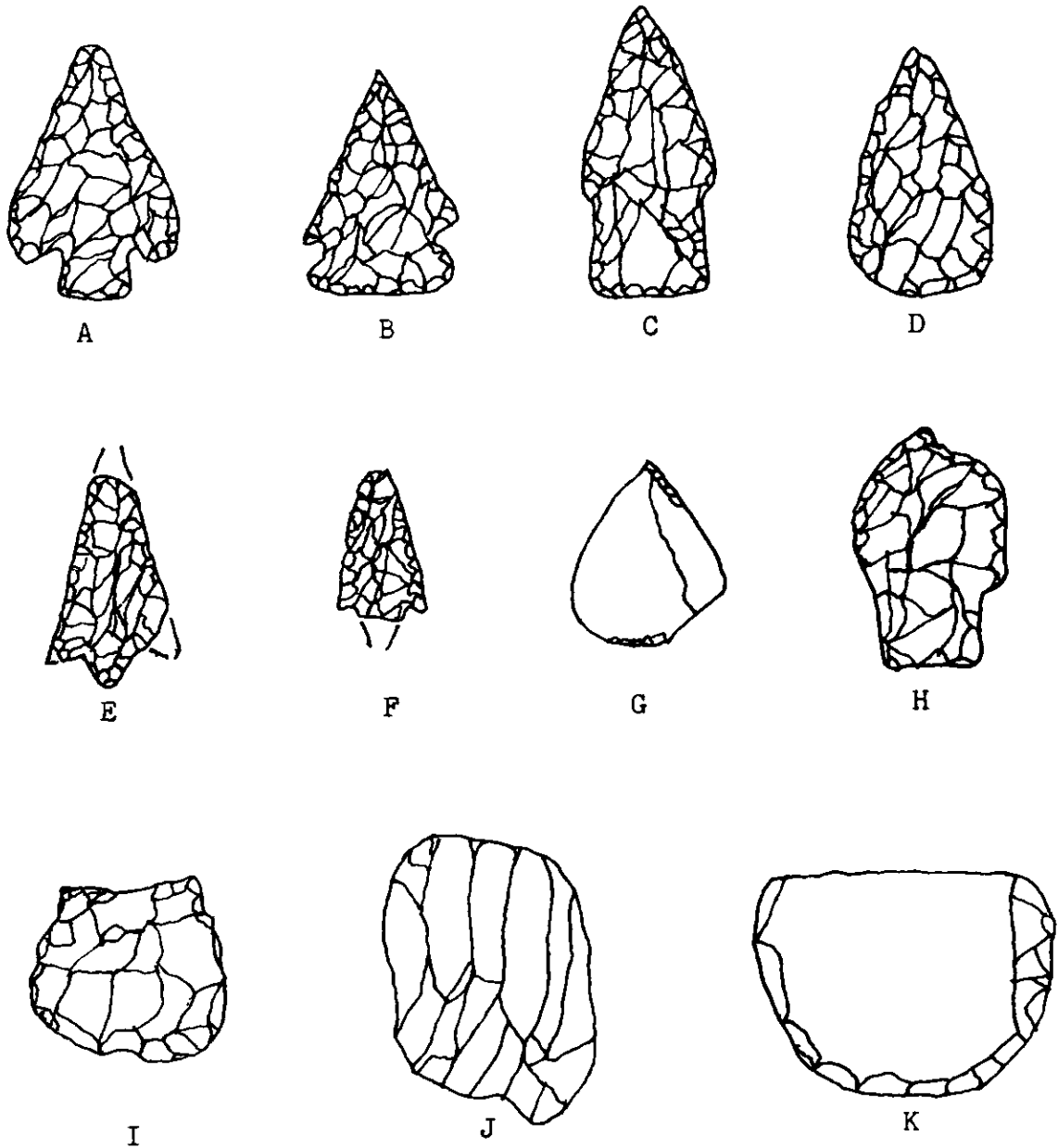
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Table 1. Flake Size Distribution

<u>Flake Size,</u> <u>mm square</u>	<u>No.</u>	<u>%</u>
under 15	55	10.8
15-20	205	40.4
20-25	138	27.2
25-30	59	11.6
30-35	36	7.0
35-40	11	2.2
40-50	4	0.8
total	508	100.0

0 1 2 3 4 5 cm



A - Marshall point; E - Ensor point; C - Morrill point; D - triangular point;
E, F - Perdiz points; G - unifacial point; H - stemmed scraper; I - bifacial tool;
J - blade core; K - scraper

Figure 1. Site 41WH37 Lithic Artifacts

Additional Comments on Fired Clayballs

Leland W. Patterson

Introduction

The occurrence of fired clayballs at prehistoric sites of inland Southeast Texas is well known, but the exact function of this type of artifact remains somewhat enigmatic. This situation is similar to the indefinite explanations of the function of burned rock middens in Central Texas. In both cases, a cooking function seems likely, but detailed explanations of this function are not available.

Comments previously given on fired clayballs in Southeast Texas (Patterson 1986) can be summarized as follows:

1. Fired clayballs are purposefully made objects, not simply fragments of baked clay from clay-lined cooking pits.
2. Fired clayballs have a wide geographic distribution at prehistoric sites throughout Southeast Texas.
3. This type of artifact represents a long technological tradition from the Late Paleo-Indian through the Late Prehistoric time periods, as shown at sites such as 41WH19 (Patterson et al. 1987) and 41FB42 (Patterson field notes).
4. A baking or roasting function seems likely for the use of fired clayballs at prehistoric sites in Southeast Texas.

This article gives some additional comments on fired clayballs at sites in Southeast Texas. A roasting or baking function still seems to be a likely explanation for the use of clayball hearths. As further detail, it seems possible that this type of hearth may have been used for the seasonal processing of plant food materials.

Hearth configuration

At excavated sites with intact clayball features, this type of feature has varied from about 0.5 to somewhat over 1.0 meters in diameter, and each feature can consist of several hundred clayballs (Patterson 1980; Patterson et al. 1987). Intact clayball features form convex mounds, rather than being concave pits lined with clayballs. The geometric configuration of a convex mound permits a greater mass of material to be used, compared to a flat or concave configuration. This would have been important for a roasting function, to maximize the mass of material that was used as a heat source.

A few clayballs from sites 41WH19 and 41FB42 had smooth rounded impressions that may have been formed by contact with firewood sticks during the initial firing period before the clay hardened. Fired clayballs found at various sites have a size range of about 15 to 100 mm in diameter, with sizes of 25 to 50 mm diameter being the most common.

Function of clayball hearths

There are some data that indicate that clayball hearths may have been used to process plant food materials. One indication is that intact clayball features are seldom associated with animal bones,

even at sites where animal bone preservation occurred. Clayballs generally occur with animal bones only where mixing of materials is indicated in excavated strata. Since there is little preservation of plant materials at archeological sites in Southeast Texas, but some preservation of animal bones, the lack of evidence of animal remains at intact clayball hearth features may indicate that processing of plant materials is the most likely function of a clayball hearth.

While fired clayballs have a wide geographic occurrence at prehistoric sites in Southeast Texas, the frequency of sites with clayballs is relatively low. There are 33 sites (18%) with clayballs of 183 sites in the published data base for archeological sites of inland Southeast Texas (Patterson 1989). As shown in Table 1, only a few of the sites with clayballs have large numbers of this type of artifact. The relatively low frequency of sites with clayballs fits well with the concept of seasonal processing of plant food materials. The locations of sites for seasonal processing of plant materials would probably have been limited to locations where desirable plant materials were available in significant quantities during any given year.

The relatively low frequency of prehistoric sites with clayballs indicates that cooking with clayball hearths was not a generally preferred cooking method. Many sites with faunal remains do not have fired clayballs. Meat can easily be cooked with an open fire, but cooking of some types of plant materials is probably better done by roasting over hot materials rather than over open flame.

Even if clayball hearths were used for processing plant food materials, a question still remains concerning which types of plant materials were utilized. Roots are one likely candidate. Cooking of roots, especially of small size, would be difficult with an open fire, but could be easily accomplished with a hot clayball hearth or the hot remains of a wood fire. The use of a clayball hearth would probably offer a more uniform heat source than the hot remains of a wood fire, and a clayball hearth could provide a large mass of hot material.

Summary

Prehistoric sites with fired clayballs have been found throughout Southeast Texas, but sites with clayballs do not occur with high frequency. The use of clayball hearths for the seasonal processing of plant food materials seems to be one likely explanation for the function of fired clayballs. Fired clayballs may be one of the few indications available for seasonal subsistence rounds of Indians of inland Southeast Texas.

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Patterson, L. W.; J. D. Hudgins; R. L. Gregg and W. L. McClure

1987 Excavations a Site 41WH19, Wharton County, Texas. Houston Archeological Society, Report No. 4

Table 1. Inland Southeast Texas Sites with Clayballs

<u>Site</u>	<u>no. of clayballs</u>
41AU1	1
41FB32	100
41FB34	688
41FB37	100
41FB42	15040
41FB43	24
41FB95	100
41HR6	21
41HR89	50
41HR139	10
41HR185	140
41HR206	113
41HR208	1
41HR210	8
41HR214	1
41HR215	5
41HR223	108
41HR226	10
41HR244	29
41HR246	3
41HR267	3
41HR273	5
41HR279	2
41HR315	1144
41LB2	11000
41SJ16	15
41SJ160	16
41WH19	4443
41WH20	157
41WH25	9
41WH36	484
41WH50	100
41WL15	20