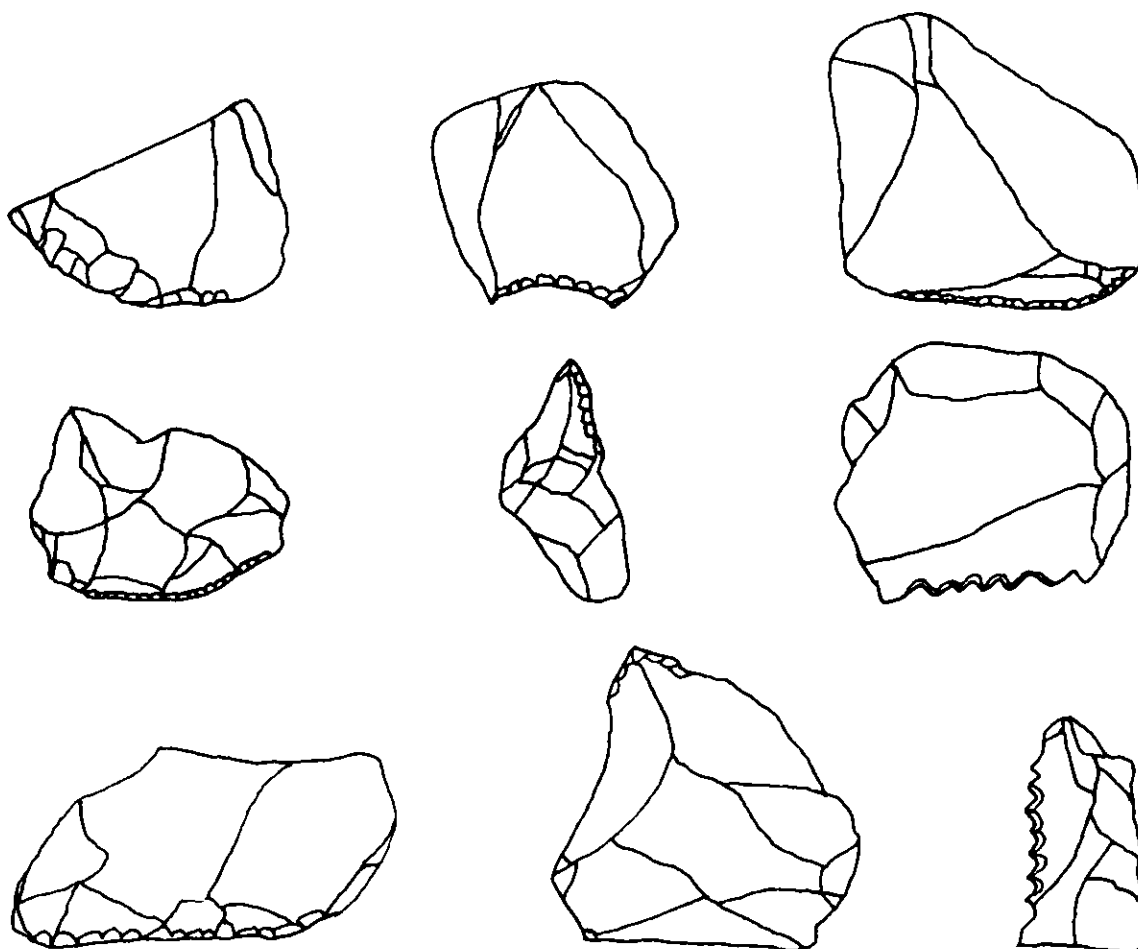




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Excavations at the Marik Site, 41WH38, Wharton Co., Texas

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

Introduction

This paper describes the results of excavations by the Houston Archeological Society at pre-historic site 41WH38 in Wharton County, Texas. This site was recorded for state records by Joe Hudgins. Work at this site was possible through the courtesy of the landowners, Gene and Pati Marik.

Work at site 41WH38 was supervised by HAS Field Director Joe Hudgins. Sheldon Kindall directed mapping and site records. Melissa May directed laboratory processing of artifacts. Persons who participated in the field work included Karen Acker, Melissa Brown, Bill Csanyi, Richey Ebersole, Cheryl Faber, Dick Gregg, Joe Hudgins, Bill Just, Sheldon Kindall, Ray McCausland, Don McReynolds, Bev Mendenhall, Bernard Naman, Allen Oravetz, Lee Patterson, Lenore Psencik, Gary Ryman, Steve Sebesta, Bob Shelby, Jeanette Siciliano, Randy Spalinger, Dudgeon Walker, and Muriel Walker.

This is a multi-component site with occupations in the Late Paleo-Indian (8000-5000 B.C.) and Early Ceramic (A.D. 100-600) time periods. Therefore, this site was occupied during two widely separated time periods. There is a possibility the site was also occupied in the intermediate Archaic period, but diagnostic artifacts for the Archaic period have not yet been found. Site 41WH38 is a campsite of nomadic Indians who practiced a hunting and gathering lifeway. The types of artifacts found here are typical for this type of site in inland Southeast Texas.

One day's work at this site also served as field instruction for the HAS "mini" field school, conducted by Sheldon Kindall.

Site setting and geology

Site 41WH38 is located on a high terrace above the Middle Bernard River near the town of East Bernard. The general area is a mixture of woodlands and coastal prairie. This location would have been a productive area for floral and faunal food resources, especially because there is a variety of ecological zones in the area. The soil is too acidic to allow good preservation of faunal remains, and floral remains are seldom preserved at sites in this region.

This site is located on a stable landform, with depths of only 30 to 55 cm of Holocene deposits above culturally sterile Pleistocene clay, based on various excavation pits, as shown in Table 1. Artifacts from different time periods are often mixed at sites on stable landforms, because of slow buildup of soil. At this site, there has been even more stratigraphic disturbance from modern plowing and trash dumping. As shown in Tables 1 and 2, modern materials were found as deep as 10 to 35 cm in various excavation pits. Table 2 gives a tabulation of modern materials that were found in the excavations. Disturbance by gophers could also be present. The most noticeable displacement of artifacts is four potsherds at depths that contain Late Paleo-Indian projectile points. Small potsherds, less than 20 mm square, could easily be displaced, especially because modern disturbance is so deep at this site, and the total excavation depth is shallow. Data from these excavations indicate that larger objects such as dart points are not as easily displaced as small objects.

There is little apparent natural stratigraphic change in the sandy soil at this site, and excavations were therefore done by 5 cm arbitrary levels. The soil is somewhat lighter in color near the clay,

and there are no sudden color changes in the sandy soil above the clay level. The soil type in the excavated levels is classified as sandy loam.

Excavation details

Excavations were done for 21 one-meter square pits, in levels of 5 cm. All soil was put through 1/4-inch (6-mm) mesh screen. An excavation layout is shown in Figure 1. Pit P, near the terrace edge, was shallow and did not yield many artifacts. Most significant artifacts came from pits located at least 10 meters from the terrace edge. The highest artifact yields came from the cluster of Pits G,H,I,J,L,M,N,O,U in an area of 4 by 5 meters. This limited area also has most of the pits with the deepest excavation levels. Excavation results show that the site is over 25 meters in diameter, but the maximum site area was not determined.

There appears to be a trend toward the west for thinner Holocene deposits above the Pleistocene clay layer, as shown by Pits R,S,T, which all have depths of 35 cm or less. There may be more soil erosion on the western part of the site, where fewer artifacts were recovered.

Ceramics

A total of six small potsherds were recovered at 41WH38, as shown in Table 3. One Goose Creek Plain sandy paste sherd was found in the 0-5 cm excavation level of Pit T. The other five sherds were O'Neal Plain, variety Conway, found at levels of 25 to 45 cm. This pottery type has coarse sand temper. Aten (1983: Figure 14.1) places this pottery type in the Early Ceramic period (A.D. 100-600) in the Galveston Bay area. The exact starting time of ceramics in the western part of inland Southeast Texas has not yet been determined. O'Neal Plain pottery from the Early Ceramic period is consistent with Ensor points (Figure 2A,B) found at this site, since Ensor points are found in the Late Archaic and Early Ceramic periods in Southeast Texas (Patterson 1991). The use of pottery does not appear to have been too important at this site.

It might be significant that the only Goose Creek Plain sherd was found at a shallower level than the O'Neal Plain sherds. Also, all of the O'Neal Plain sherds were in the cluster of pits with the highest artifact yields, but the Goose Creek sherd was located in Pit T, the pit farthest from the main cluster of pits.

Projectile points

Nine diagnostic dart points and three nondiagnostic dart point fragments were found during the excavations, as shown in Table 4. The diagnostic dart points are illustrated in Figure 2, and the nondiagnostic point fragments are shown in Figure 3. There is also an Angostura-like dart point blade fragment shown in Figure 3. Although there has been stratigraphic disturbance, dart point types are clustered stratigraphically, with later dart point types near the surface, and earlier types below 30 cm. Two Ensor points were found in the 0-5 cm excavation level. These specimens could be from the Late Archaic (1500 B.C.-A.D. 100) or Early Ceramic (A.D. 100-600) periods (Patterson 1991). With the presence of pottery and the shallow stratigraphic placement, it seems most likely that the Ensor points are from the Early Ceramic period.

Three Early Side-Notched points were found below 30 cm. These specimens resemble Ensor points, but have well-ground basal edges that are an attribute of Early Notched points from the Late Paleo-Indian period (8000-5000 B.C.). These specimens are similar to specimens from other sites of the Late Paleo-Indian period. One Early Side-Notched specimen from this site (Figure 2G) is similar to Early Side-Notched points found with San Patrice points at the Pearce site in Louisiana

(Webb et al. 1971: Figure 6). This specimen is also similar to a specimen from the Yarbrough site in Northeast Texas that Johnson (1961: Figure 7I) has called Edgewood, variety Dixon. Two of the Early Side-Notched specimens from 41WH38 are similar to specimens found at 41WH19 (Patterson et al. 1987: Figure 9) from the Late Paleo-Indian period.

Two Early Corner-Notched points with ground basal edges were found at 41WH38. One specimen (Figure 2H) found at the 30-35 cm excavation level resembles a Yarbrough point, but is also similar to Early Corner-Notched points at 41WH19 (Patterson et al. 1987: Figure 9) from the Late Paleo-Indian period. The other Early Corner-Notched specimen (Figure 2I) was found at the 15-20 cm excavation level of Pit H, but could easily have been displaced from a lower level, because there was modern disturbance in Pit H at least down to 30 cm (Table 2).

A small Early Stemmed point was found at the 30-35 cm excavation level. This specimen is similar to an Early Stemmed point from 41WH19 (Patterson et al. 1987: Figure 7G). Early Stemmed points occur in both the Late Paleo-Indian and Early Archaic (5000-3000 B.C.) periods (Patterson 1991). The specimen from 41WH38 may be from the Late Paleo-Indian period because it was in the same excavation level as some Late Paleo-Indian point types.

A specimen that appears to be an unfinished Angostura point was found at the 30-35 cm excavation level. Angostura points are from the Late Paleo-Indian period. An Angostura-like blade fragment with a missing basal end was found at the 35-40 cm excavation level.

In summary, two Ensor points were found that are judged to be from the Early Ceramic period. Three Early Side-Notched points, two Early Corner-Notched points, and an unfinished Angostura point are from the Late Paleo-Indian period. An Early Stemmed point is also judged to be from the Late Paleo-Indian period at this site. There may have been a long time interval in the Archaic period when this site was not used.

A possible unifacial arrow point (Figure 3A), made as a marginally retouched prismatic blade, was found at the 15-20 cm excavation level. The stratigraphic placement is consistent with unifacial arrow points found in the Early Ceramic period at other sites (Patterson and Hudgins 1992: Figure 2; Patterson 1992: Table 1). As an alternate explanation, this specimen may have been intended for use as a perforator, although there is no edge wear pattern present consistent with this function.

General lithics

Site 41WH38 is fairly near to good lithic resources in the form of large chert cobbles. The nearest lithic source is the Eagle Lake Area, about 15 miles to the west of this site.

A few formal unifacial stone tools were found during the excavations, including 3 graters, 4 scrapers, a perforator, and a denticulate. A bifacial perforator was also found in Pit U at 25-30 cm. These specimens are illustrated in Figure 4, and unifacial tools are summarized in Table 5. In this region, the utilized flake was the dominant tool type. Some flakes from this site have cutting and scraping types of edge wear.

Aside from chert flakes, manufacture of dart points at 41WH38 is indicated by the presence of bifacial preforms. Preforms found here are listed in Table 6, and some are illustrated in Figure 3. A large biface edge spall found in Pit M at the 25-30 cm excavation level also indicates dart point manufacture.

A total of 1633 flakes were recovered during the excavations, which indicate lithic manufacturing activities. Flake size distributions for each level are given in Table 7. It may be seen that there are higher percentages of flakes over 20 mm square in excavation levels deeper than 30 cm compared to excavation levels shallower than 30 cm. This may reflect the change from the lower level occupations during the Late Paleo-Indian period to the upper level occupations during the Early Ceramic period. The flake size distributions of the 30-35 cm and 35-40 cm levels at 41WH38 are similar

to the Stratum 4 flake size distribution of site 41WH19 (Patterson et al. 1987: Table 11) from the Paleo-Indian period.

The percent of flakes over 20 mm square increases even more below the 40 cm excavation level at site 41WH38. This might be explained by an increase in primary reduction of chert cobbles at the site or by use of larger flakes for tools and projectile point manufacture. The latter explanation seems to fit better with the remaining cortex on flakes, shown in Table 8. There is a decrease in the percent of primary flakes (completely covered with cortex) from the 30-40 cm levels to the 40-55 cm levels. This would indicate that there was not an increase in primary reduction of chert cobbles at levels below 40 cm. The remaining cortex on flakes from a chert cobble flaking experiment (Patterson 1981) is also shown in Table 8 for comparison. The very high percentage of flakes over 20 mm square in excavation levels below 40 cm is not usual for sites in Southeast Texas. Another explanation for this high proportion of large-size flakes could be that this represents a lithic work area in the central part of the site where large-size flakes were stored for tool and dart point manufacture. This explanation may be supported by the very low percentage of flakes under 15 mm square, compared to levels above 40 cm, showing a low amount of final-stage reduction for finishing of projectile points. The remaining cortex on flakes from the 30-40 cm levels of 41WH38 is similar to the second stage experimental results which simulate use of flake blanks at a campsite, with the flake blanks produced at a remote lithic source. Remaining cortex on flakes from the 0-30 cm levels is lower than second stage experimental results, which may indicate trimming of flake blanks at the lithic source before transport to the campsite.

Aside from the presence of preforms, bifacial reduction at a site can be shown by flake size distribution. Bifacial reduction generally gives a flake size distribution that is a straight line on a semi-log plot of percent of flakes versus flake size (Patterson 1990). Semi-log plots of flake size distributions are fairly linear for excavation levels 0-5 cm, 5-10 cm, 10-15 cm, 15-20 cm, 30-35 cm, 35-40 cm, and 45-50 cm. As an example, the plot for the 10-15 cm level is given in Figure 5. Semi-log plots of flake size distribution are not linear for excavation levels 20-25 cm, 25-30 cm, and 40-45 cm. This may indicate more primary reduction of chert cobbles at these levels, or stratigraphic mixing.

Reduction of some chert cobbles at this site is shown by the presence of cores, listed in Table 9. The distance of a site from a lithic source may influence the number of chert cobbles brought to a site in addition to flake blanks. In the case of 41WH38, there is only a moderate distance to a lithic source. The production of flake blanks at the lithic source is an efficient lithic procurement method. This procedure allows for testing of material and minimizes weight and volume for transport to a remote campsite. The small number of thick chert pieces other than cores found at 41WH38 (Table 9) is another indication that primary lithic reduction at this site was done at a fairly low level, compared to a higher level of reduction of flake blanks.

Another indication of lithic manufacturing activity at this site is the presence of quartzite hammerstones and hammerstone fragments, as listed in Table 9. Heat treatment of chert is indicated at this site by specimens with waxy luster, reddish coloration, and potlid surface fracture scars. A sandstone abraded found in Pit G at the 35-40 cm excavation level may have been used for edge preparation in biface manufacture.

Possible archeological feature

In the 40-50 cm excavation levels of Pit O, a total of 67 iron concretions were found, having diameters of 20 to 35 mm. Perhaps this represents a collection of this type of material for use in cooking, in the manner that fired clayballs were used at other sites, such as 41WH19 (Patterson et al. 1987).

Faunal remains

As noted in the Introduction, preservation of faunal remains was not good at this site. One of the authors (McClure) analyzed faunal remains from fine-screen processing of soil from Pit O and a few possible faunal remains from the 1/4-inch (6-mm) screens. There were only a fish vertebrae, a gar scale, and two enamel fragments from deer teeth.

Summary

This paper has presented the results of excavations at prehistoric site 41WH38. Data obtained by this work indicate site occupation during the Late Paleo-Indian and Early Ceramic periods. Occupations during the intermediate Archaic time period are possible, perhaps in the 10-30 cm levels, but no diagnostic artifacts were found to confirm this. In any event, it is unusual for a site in this region to have a large time gap in the occupation sequence.

Artifact types found at 41WH38 are typical of types found at sites of inland Southeast Texas. Apparently, the use of pottery was not very important at this site, possibly because of high mobility of hunter-gatherer groups. The amount of artifacts found here indicates that this was not an intensely used site. Occupations may have been by small groups for short time periods, on a seasonal basis. Available types of data are not sufficient to allow determination of seasonal mobility-settlement patterns for nomadic hunter-gatherers of this region.

Data from site 41WH38 contributes to the regional archeological data base, especially for the Late Paleo-Indian period.

Acknowledgement:

Appreciation is expressed to Elton Prewitt for advice on projectile point typology.

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Table 1. Site Excavation Depths

pit	depth, cm	
	deepest excavation level	deepest modern material
A	35	25
B	40	15
C	40	20
D	40	10
E	40	5
F	40	15
G	55	20
H	50	30
I	45	20
J	50	20
K	45	10
L	50	30
M	45	20
N	45	20
O	50	20
P	30	10
Q	45	20
R	30	15
S	35	
T	30	30
U	45	35

Table 2. Modern Materials from Excavations

pit	level, cm	material type
A	20-25	plastic
B	10-15	iron ring, 45 mm diameter
C	15-20	plastic
D	5-10	2 plastic, aluminum can
E	0-5	2 can tabs, 3 plastic, 2 barb wire
F	0-5	lead, 2 glass, 5 plastic
F	5-10	metal, guitar pick, glass, plastic
F	10-15	2 asphalt roofing, shotgun shell, iron staple

Table 2. (Continued)

pit	level, cm	material type
G	0-5	glass, iron
G	5-10	can tab, glass, metal
G	10-15	2 glass, 2 iron, plastic
G	15-20	paint glob, glass
H	5-10	plastic
H	10-15	aluminum can
H	20-25	plastic
H	25-30	plastic
I	0-5	metal
I	5-10	4 plastic, glass
I	10-15	can tab, glass
I	15-20	glass
J	5-10	3 metal
J	15-20	rifle shell, plastic
J	20-25	plastic
K	0-5	nail, glass, can tab
K	5-10	can tab, plastic, iron, asphalt roofing
L	10-15	iron, plastic, glass
L	15-20	glass
L	20-25	plastic, can tab, shotgun shell
L	25-30	can tab
M	0-5	glass
M	15-20	metal
N	5-10	2 glass
N	10-15	lead bullet, asphalt roofing
N	15-20	lead bullet, glass
O	5-10	metal
O	10-15	can tab
O	15-20	modern finished wood
P	0-5	bullet
P	5-10	tire part, 2 glass, 12 slate
Q	0-5	15 metal
Q	5-10	12 metal
Q	15-20	3 metal
R	10-15	glass
T	5-10	plastic
T	25-30	metal
U	5-10	plastic
U	10-15	2 glass, plastic
U	30-35	plastic, very small piece

Table 3. 41WH38 Ceramics

no. of sherds	pit	level, cm	type
1	T	0-5	Goose Creek Plain
1	J	25-30	O'Neal Plain, var. Conway
1	O	30-35	O'Neal Plain, var. Conway
2	I	35-40	O'Neal Plain, var. Conway
1	J	40-45	O'Neal Plain, var. Conway

Table 4. Projectile Points

pit	level	type	dimensions, mm			fig.
			L	W	T	
U	0-5	Ensor	38.2	24.0	6.2	2A
J	0-5	Ensor	35.9	19.3	8.4	2B
H	15-20	Early Corner-Notched			7.2	2I
H	30-35	Early Side-Notched	54.8	21.5	9.5	2D
M	30-35	Early Corner-Notched	46.7	22.5	8.3	2H
O	30-35	Early Stemmed	26.2	17.1	6.2	2F
O	30-35	unfinished Angostura	83.0	25.8	9.5	2E
M	35-40	Early Side-Notched	51.2	24.2	7.5	2C
G	45-50	Early Side-Notched	32.0	19.6	5.9	2G
E	15-20	dart pt. blade frag.			6.1	3D
I	30-35	dart pt. blade frag.		28.9	7.8	3B
H	35-40	Angostura-like blade		20.0	10.3	3E
L	40-45	dart pt. blade frag.		29.8	8.6	3C
R	15-20	unifacial arrow point	22.1	12.0	2.7	3A

Table 5. Unifacial Tools

pit	level, cm	type	fig.
H	20-25	graver	4F
N	20-25	scraper	4J
O	25-30	perforator	4H
K	25-30	graver	4E
O	30-35	denticulate	4I
G	40-45	graver	4D
G	40-45	scraper	4B
L	40-45	scraper	4C
U	40-45	scraper	4A

Table 6. Dart Point Preforms

pit	level, cm	condition	stage	fig.
O	0-5	fragment	advanced	3J
O	10-15	fragment	advanced	3K
J	10-15	fragment	early	
I	20-25	fragment	advanced	3H
G	25-30	fragment	advanced	3I
F	20-25	fragment	advanced	3G
D	30-35	whole	early	3F
D	35-40	fragment	early	
M	35-40	whole	early	
J	35-40	fragment	advanced	
N	40-45	whole	thinning reject	
Q	40-45	fragment	early	
N	40-45	fragment	early	

Table 7. Flake Size Distributions

flake size, mm sq.	percent of flakes by excavation level					
	0-5	5-10	10-15	15-20	20-25	25-30
under 15	61.3	58.2	62.1	64.1	69.9	64.7
15-20	22.7	24.0	22.6	24.0	16.3	15.8
20-25	10.7	9.2	8.5	8.3	6.5	10.2
25-30	5.3	4.1	4.0	2.8	3.7	5.1
30-35		2.0	1.2	0.4	2.8	3.3
35-40		2.0	1.6	0.4	0.4	0.9
40-50		0.5			0.4	
	100.0	100.0	100.0	100.0	100.0	100.0
% over 20 mm	16.0	17.8	15.3	11.9	13.8	19.5
no. of flakes	75	196	248	217	246	215

flake size, mm sq.	percent of flakes by excavation level				
	30-35	35-40	40-45	45-50	50-55
under 15	53.0	50.8	31.8	33.3	
15-20	17.4	22.2	20.9	19.0	11.1
20-25	12.1	12.7	16.4	16.8	22.2
25-30	7.4	7.9	8.2	14.3	44.5
30-35	3.4	2.4	12.8	9.5	11.1
35-40	2.0	4.0	4.5	7.1	11.1
40-50	4.7		4.5		
50-60					
60-70			0.9		
	100.0	100.0	100.0	100.0	100.0
% over 20 mm	29.6	27.0	47.3	47.7	88.9
no. of flakes	149	126	110	42	9

Table 8. Cortex on Flakes
(flakes over 20 mm square)

flake type	excavation level, cm			experimental		
	0-30 %	30-40 %	below 40 %	2nd stage %	1st stage % used	1st stage % total
primary	6.1	7.2	4.9	7.1	15.7	13.3
secondary	23.8	32.8	46.1	33.6	51.2	40.3
interior	70.1	60.0	49.0	59.3	33.1	46.4

Table 9. Miscellaneous Lithic Artifacts

pit	level, cm	item
C	25-30	core, 50 mm diameter
G	50-55	3 cores, 50, 50, 60 mm diameters
H	45-50	core, 40 mm diameter
I	30-35	core, 30 mm diameter
J	30-35	core, 60 mm diameter
J	40-45	core, 50 mm diameter
J	45-50	thick chert piece
M	5-10	core, 35 mm diameter
M	15-20	core, 60 mm diameter
M	25-30	biface edge spall
M	25-30	core, 35 mm diameter
M	30-35	core, 50 mm diameter
M	35-40	core, 60 mm diameter
M	40-45	core, 40 mm diameter
N	5-10	core, 50 mm diameter
O	0-5	thick chert piece
O	25-30	3 thick chert pieces
O	40-45	core, 60 mm diameter
O	40-45	2 thick chert pieces
O	45-50	core, 70 mm diameter
P	20-25	2 thick chert pieces
Q	30-35	core, 30 mm diameter
U	30-35	thick chert piece
U	30-35	core, 50 mm diameter
U	40-45	thick chert piece
G	35-40	sandstone abrader
G	40-45	whole chert cobble, 50 mm diam.
G	50-55	whole chert cobble, 40 mm diam.
E	25-30	hammerstone fragment
G	50-55	hammerstone fragment
H	40-45	hammerstone fragment
I	25-30	hammerstone fragment
I	35-40	2 small hammerstones, 35 mm diameters
N	30-35	hammerstone fragment
O	45-50	hammerstone fragment

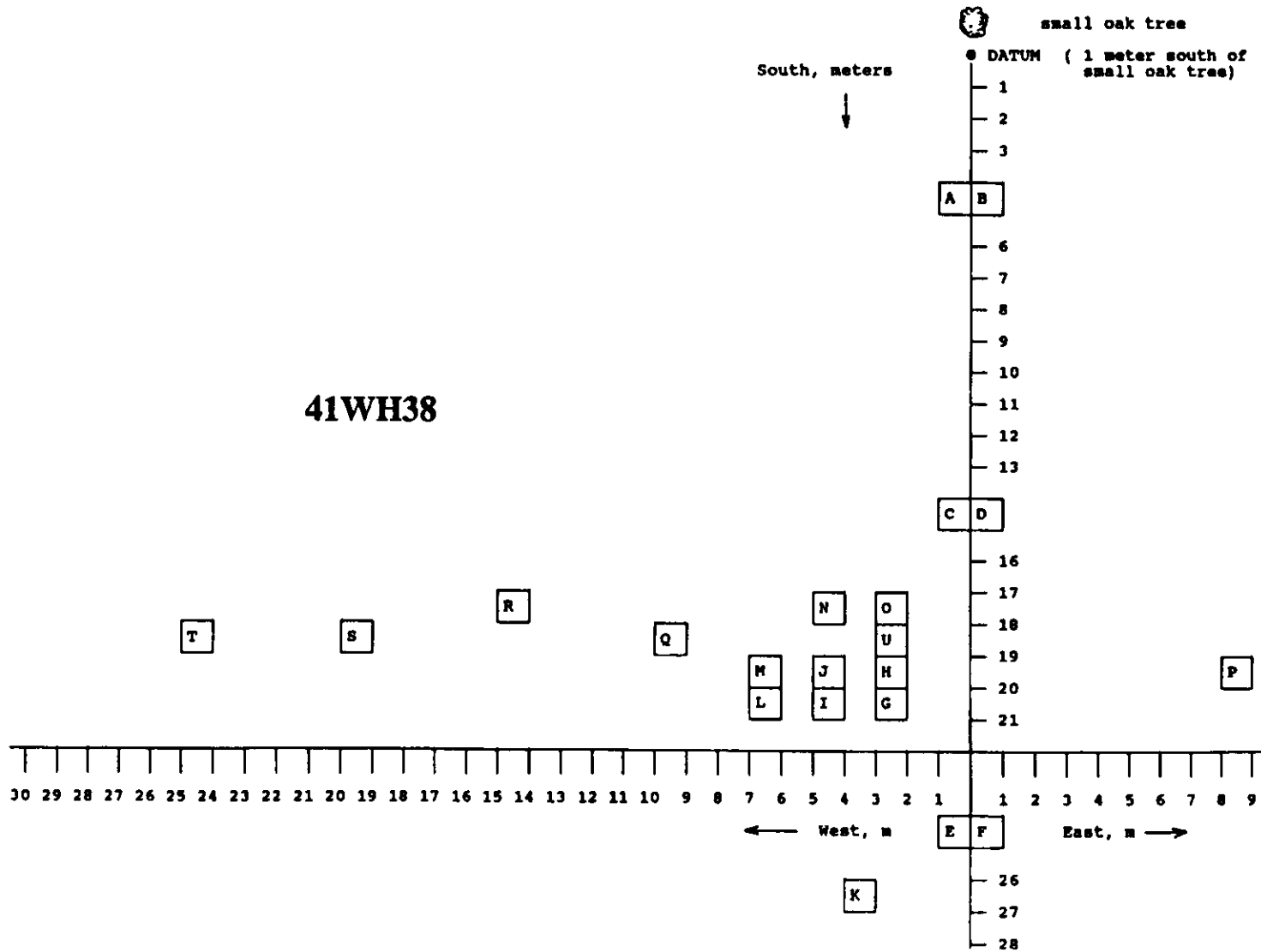
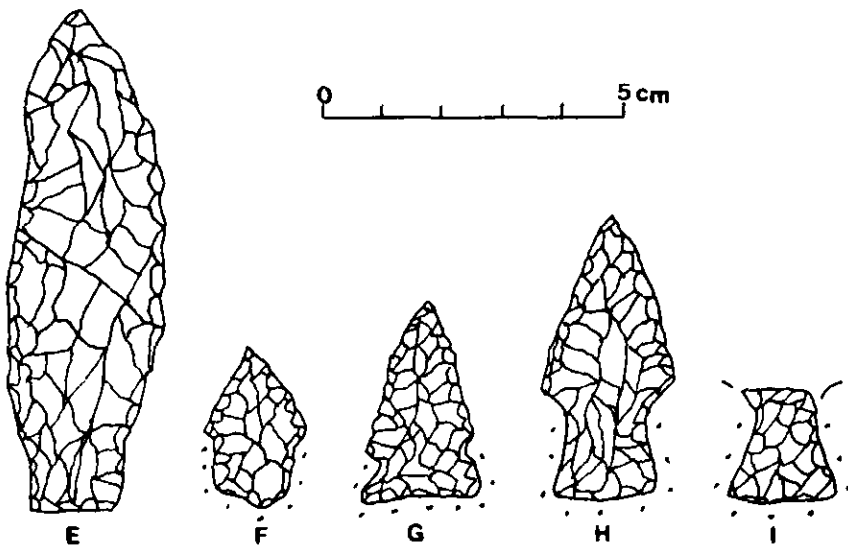
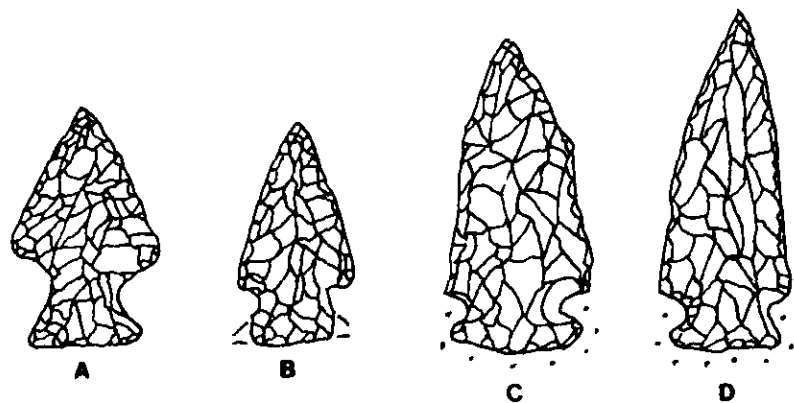
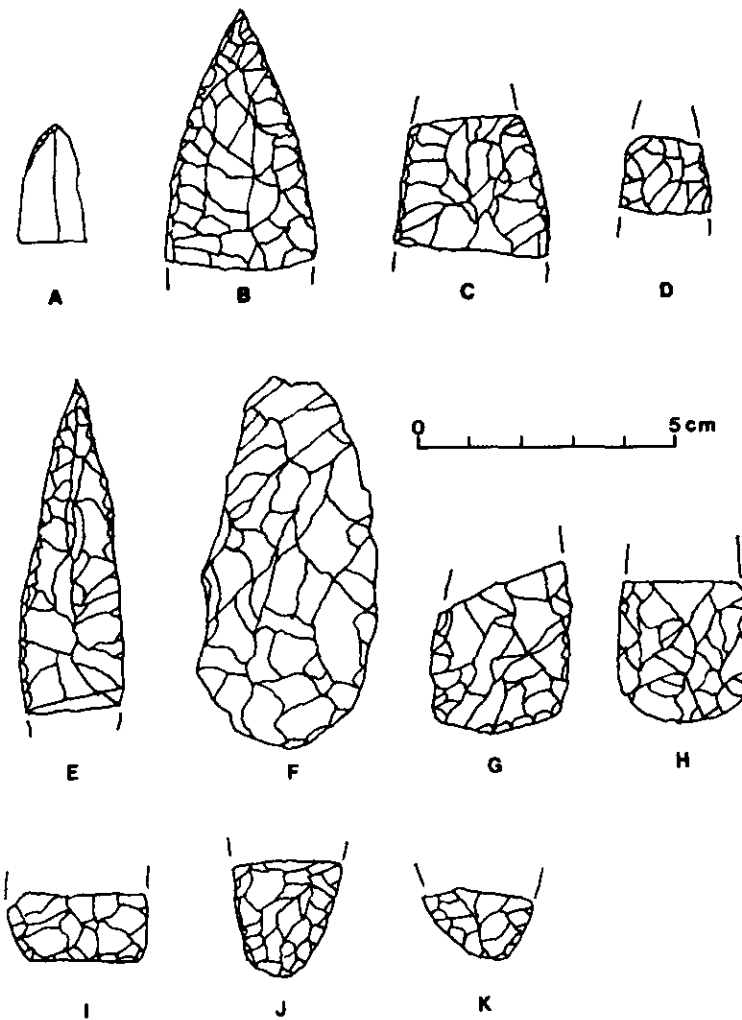


Figure 1. Excavation Layout



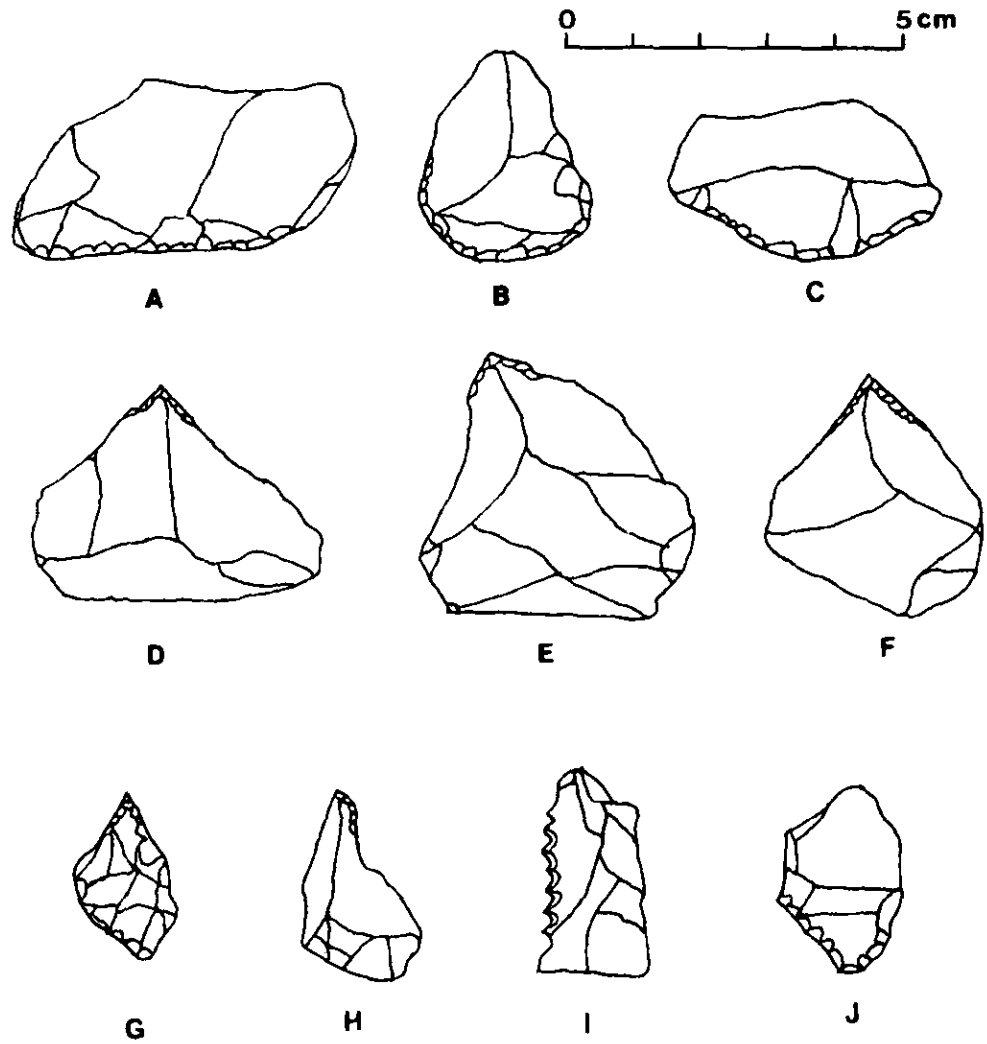
A,B - Ensor; C,D,G - Early Side-Notched; E - unfinished Angostura; F - Early Stemmed; H,I - Early Corner-Notched; dots show ground edges

Figure 2. Dart Points



A - unifacial arrow point; B,C,D - dart point fragments; E - Angostura-like blade; F to K - preforms

Figure 3. Projectile Points and Preforms



A,B,C,J - scrapers; D,E,F - graters; G - bifacial perforator;
H - unifacial perforator; I - denticulate

Figure 4. Lithic Tools

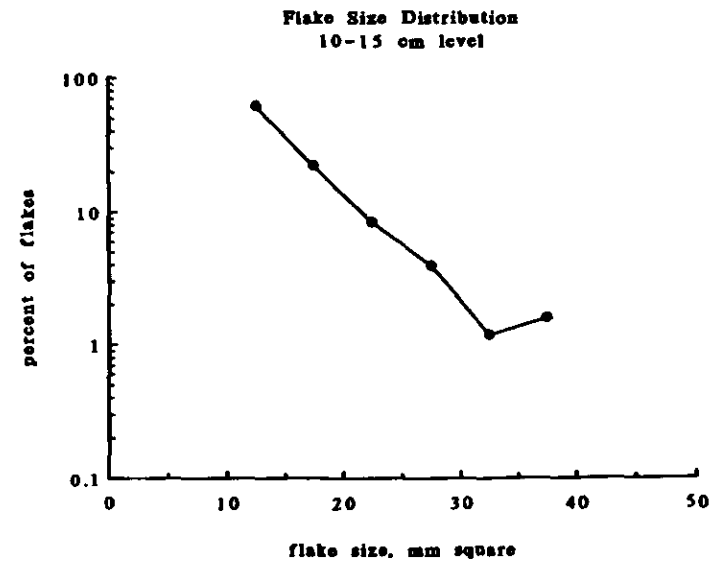


Figure 5. Flake Size Distribution, 10-15 cm level

