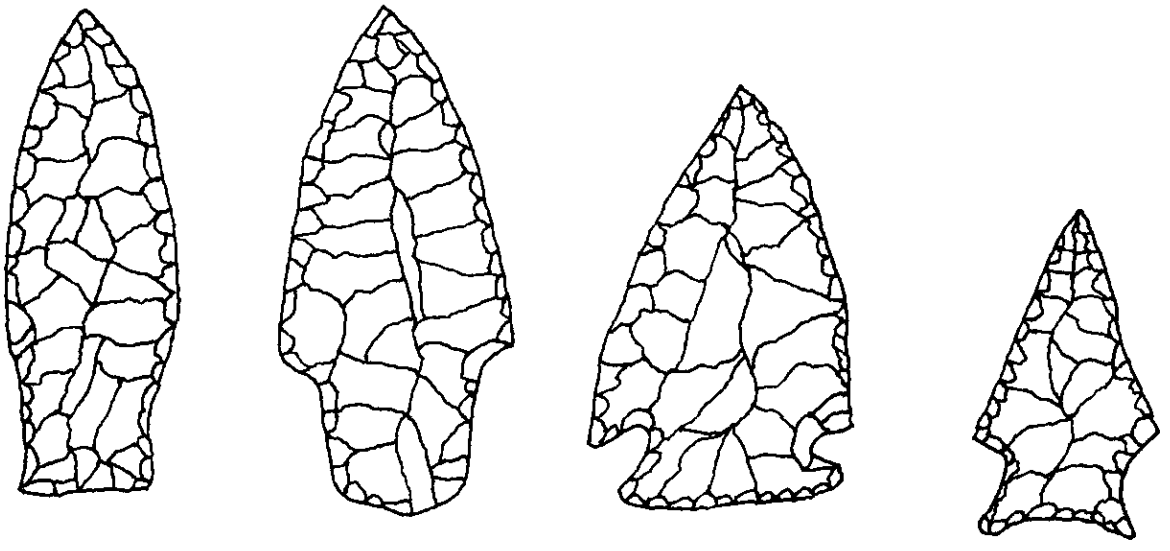
JOURNAL
HOUSTON ARCHEOLOGICAL SOCIETY

Number 125 December 1999



Travis Morhiss Marcos Fairland

Minor Point Types from Southeast Texas

Houston Archeological Society Journal

Number 125, December 1999

Contents

Houston Archeological Society

P.O. Box 6751, Houston, Texas 77265-6751

Membership, Meetings, and Publications

Membership in the Society is for the calendar year. Dues are as follows: Individual, $20; Family, $25; Contributing, $30 and above; Student, $10. Meetings are held the second Friday of every month except June at 7:30 PM in M. D. Anderson Hall at the University of St. Thomas. All members receive the Profile, issued monthly, and the Journal, published three times per year (student members do not receive the Journal). Contributors to the Journal should submit manuscripts to the Editor, Richard L. Gregg, at the Society address.

ISSN-8756-8071

Additional Excavations at 41WH77, Wharton Co., Texas

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

Introduction

This article presents the results of additional excavations at the Williams site, 41WH77, in Wharton County, Texas. Previous excavations at this site have been published (Patterson et al. 1995). The additional excavations were done as part of the one-day HAS field school on May 2, 1998. The 1998 field school consisted of a morning class given by Sheldon Kindall, followed by afternoon excavations at 41WH77. There was an attendance of 41 persons, including some students from the University of St. Thomas and Wharton Junior College. A lecture on lithic technology was given in the field by Lee Patterson. Several members of the HAS assisted with fieldwork instruction. Field work was directed by Joe Hudgins, the HAS Field Director. Sheldon Kindall handled site records.

Site 41WH77 has an occupation sequence in the Early Ceramic (AD 100-600) and Late Prehistoric (AD 600-1500) time periods. A deep pit of the additional excavations may also indicate site occupation in the Archaic period, before AD 100. This location was a campsite of nomadic hunter-gatherers. Data from excavations indicate that site occupation events were only for short time periods, perhaps scheduled on a seasonal basis. Artifact types found here are typical for 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.

Excavation Details

A total of seven additional one-meter square pits were excavated, Pits AN to GN, as shown in the excavation layout in Figure 1. All soil was processed through 1/4-inch (6 mm) mesh screens. Because excavations were done in only one afternoon, excavation depths were only in strata in the Late Prehistoric period, except for Pit BN. Pit BN was a deep test, with a few artifacts recovered from depths of 95 to 115 cm. In previous excavations, it was judged that the Late Prehistoric period was represented in excavation depths of 0-35 cm, and the Early Ceramic period materials were from excavation depths of 35-50 cm (Patterson et al. 1995:2).

Most pits of the previous excavations yielded only Late Prehistoric materials. However, pits on the north side of the excavations also contained an Early Ceramic component. The deep test of Pit BN of the additional excavations indicates that there may also be an earlier Archaic period component on the north side of the excavations.

Projectile Points

In the additional excavations, a Perdiz arrow point (Figure 2A) made in a unifacial manner was found in Pit AN (10-15 cm), and a Scallorn arrow point (Figure 2B) was found in Pit EN (10-15 cm). It is fairly common for Perdiz and Scallorn points to be found at the same excavation level at sites in Southeast Texas. Unlike the Scallorn-Perdiz sequence in Central Texas, Perdiz and Scallorn arrow points were both used in Southeast Texas during most of the Late Prehistoric period (Patterson 1996:23). Previous excavations yielded 4 Scallorn arrow points, a Scallorn-like unifacial arrow point, 3 other unifacial arrow points, and a Kent dart point (Patterson et al. 1995: Table 1).

General Lithic Materials

No formal stone tools were found by the additional excavations. One flake has unifacial edge-wear typical of scraping (Figure 2C).

Chert flake counts are given in Table 1. A total of 132 chert flakes were recovered. There were 784 chert flakes found by previous excavations. Flake quantities from the various strata at site 41WH77 are rather small for the number of excavation pits involved. This may indicate that there were only short-time occupation events at this site.

Flake size distributions are given in Table 2. Flake size distributions for strata from 5 to 20 cm are similar to those for the same Late Prehistoric strata from previous excavations (Patterson et al. 1995: Table 3). Most chert flakes are probably from the manufacture of arrow points from flake blanks. As observed for previous excavations, heat treatment was used to improve knapping properties of chert, as indicated by flakes with waxy luster, reddish coloration, or small potlid surface fractures.

The small proportion of flakes with remaining cortex apparently indicates that no primary reduction of chert cobbles was done here. For the additional excavations, there were no primary flakes (covered with cortex), 25.7% secondary flakes (partially covered with cortex), and 74.3% interior flakes (no remaining cortex).

Ceramics

Sherd counts are shown in Table 3. Only 10 sherds were found by additional excavations, including 2 bone tempered and 8 Goose Creek Plain. Previous excavations recovered 144 sherds, including 126 Goose Creek Plain, 1 Goose Creek Incised, and 17 bone tempered (Patterson et al. 1995:3).

Most of the sherds at this site contain coarse sand. However, this may not indicate intentional addition of sand temper, because all of the fired clayballs here also contain coarse sand.

Modern Materials

A piece of metal wire was found in pit FN (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 80 fired clayballs were found by additional excavations at site 41WH77, as summarized in Table 4. There were 234 fired clayballs found by previous excavations. The modest number of clayballs indicates that clayballs were occasionally used as heating elements for earth ovens. Hudgins (1993) has experimentally demonstrated the use of earth ovens with clayballs for cooking meat. Use of earth ovens was widespread in Southeast Texas (Patterson 1995). It cannot be determined what types of food were cooked in earth ovens at this site, because of poor preservation of organic materials.

Faunal Analysis

Previous excavations revealed that bone preservation was poor with very few remains of vertebrates being recovered. This condition was unchanged by the materials recovered during the additional excavations. Previously it was determined that bones of deer, raccoon, turtle, gar, and

other fishes were incorporated into the soil along with the artifacts. The additional excavations added only a tooth fragment and a fragment of leg bone that are probably from deer.

Thus it can be safely reported that the occupants were not vegetarians and they used various vertebrates in their subsistence activities.

Summary

Site 41WH77 is a prehistoric campsite of nomadic hunter-gatherers, with an occupation sequence in the Early Ceramic and Late Prehistoric time periods. A deep test in one pit indicates that there also may have been occupation events here in the Archaic period, before AD 100. Additional excavations have recovered more artifacts from the Late Prehistoric period. Occupation events at this site appear to have been of a short-time nature, based on the modest amounts of artifacts found in each excavated strata.

References Cited

Hudgins, J. D.

1993 Cooking with Clay Balls. The Cache 1:47-52, Texas Historical Commission

Patterson, L. W.

1995 Prehistoric Earth Ovens in Southeast Texas. Houston Archeological Society Journal 111:17-20

1996 Southeast Texas Archeology. Houston Archeological Society, Report No. 12

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

1995 Excavations at the Williams Site, 41WH77, Wharton Co., Texas. Houston Archeological Society Journal 113:1-10

Table 1. Chert Flake Counts

level, cm	pit							total
	AN	BN	CN	DN	EN	FN	GN	
5–10			10	2	7	13	10	42
10–15	8		7	14	12	3	8	52
15–20	18				11			29
95–100		2						2
105–110		4						4
110–115		3						3
	26	9	17	16	30	16	18	132

Table 2. Flake Size Distributions

level, cm	flake size, mm square < 15 no.	< 15 %	15-20 no.	15-20 %	20-25 no.	20-25 %	25-30 no.	25-30 %
5–10	31	73.8	9	21.4	2	4.8		
10–15	38	73.1	8	15.4	5	9.6	1	1.9
15–20	21	72.4	7	24.1	1	3.5		
95–100	2	100.0						
105–110	2	50.0	2	50.0				
110–115	2	67.0	1	33.0				

Table 3. Sherd Counts

pit	level, cm 5–10	10–15	15–20
AN			1 (1)
DN		3	
EN	1	1	
FN	1 (1)		
GN		1	
	3	5	2

numbers in parentheses are bone tempered;
other numbers are Goose Creek Plain

Table 4. Fired Clayball Counts

pit	level, cm 5–10	10–15	15–20	95–100	total
AN	1		10		11
BN				2	2
CN	1				1
DN	2	27			29
EN	31		6		37
	35	27	16	2	80

diameter range 15-35 mm

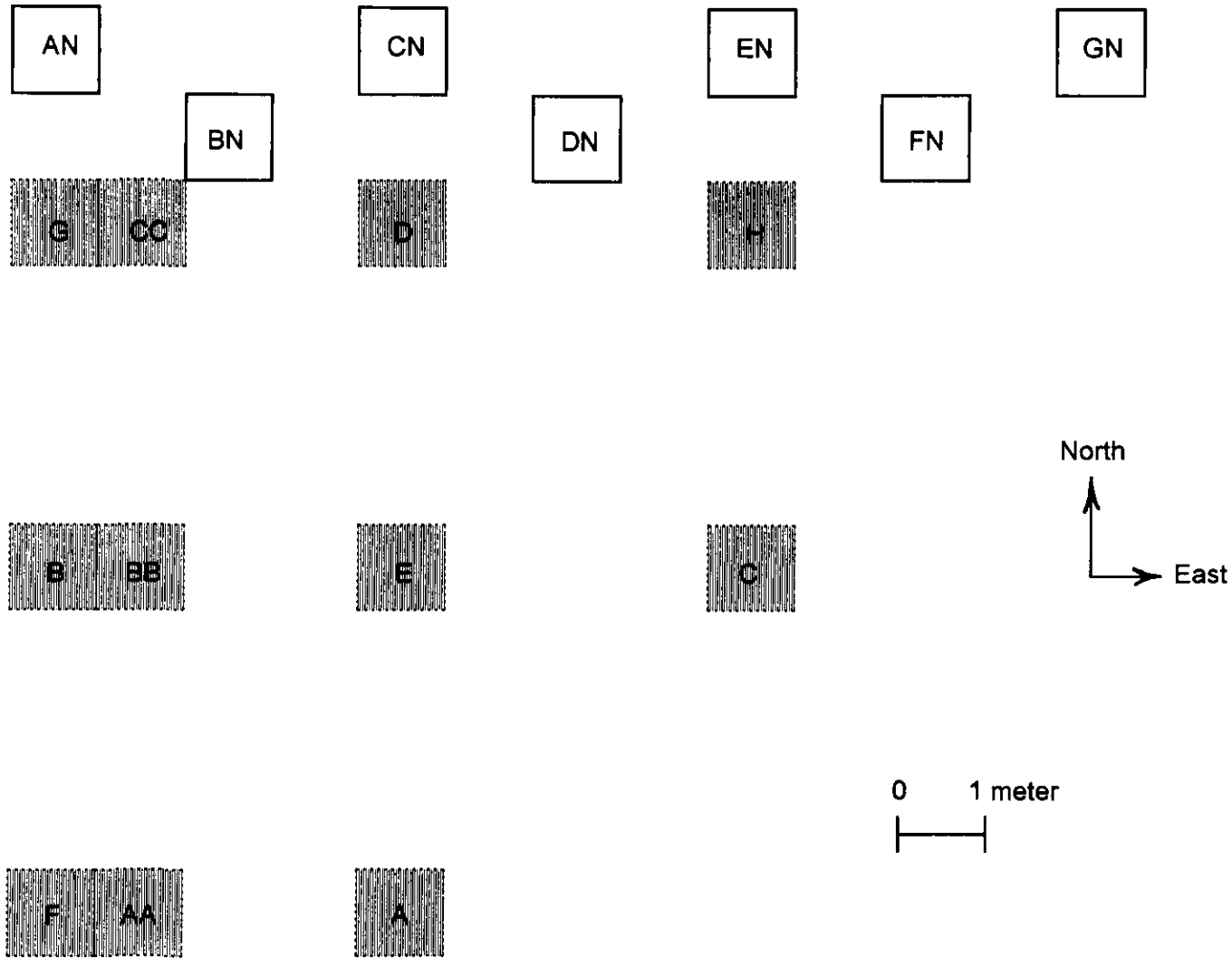
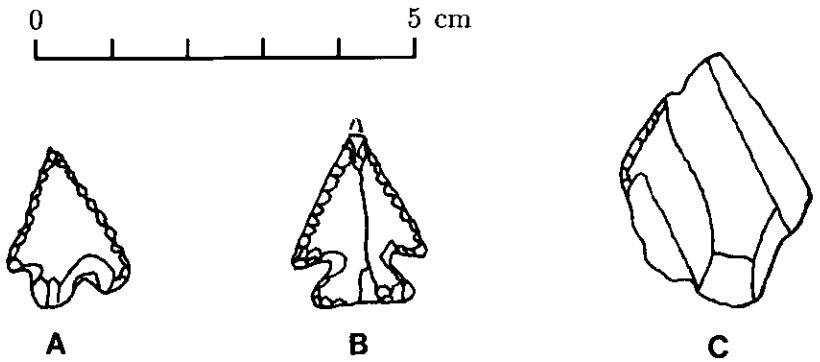


Figure 1. Excavation Layout



A – Perdiz point, B – Scallorn point, C – flake with scraping edge-wear

Figure 2. Lithic Artifacts

Some Minor Dart Point Types in Southeast Texas

Leland W. Patterson

Introduction

This article presents data on some minor dart point types in Southeast Texas, including Travis, Marcos, Fairland, and Morhiss. All of these point types represent technological influences from adjacent areas of Texas during various parts of the Archaic period.

All of these point types have been described by Turner and Hester (1993) and Suhm and Jelks (1962). The Travis point has a triangular body, a straight stem, and rounded shoulders. Some Travis specimens resemble the Angostura point in outline, but generally have more prominent stems, cruder workmanship, and do not have ground stem edges (Suhm and Jelks 1962:251). The Marcos point has a broad, triangular body, an expanding stem, and barbed shoulders. This point type is deeply corner notched. The Fairland point has a triangular body, and long notches that produce a flaring base. The basal edge is concave and as wide as the shoulders. The Morhiss point has a lanceolate or triangular body, a broad, rectangular stem, and a convex basal edge. Examples of these point types are shown in Figure 1.

Chronologies

The chronology of the Travis point has not been established for Southeast Texas, because published specimens are from surface collections. Turner and Hester (1993:189) place the Travis point in the Middle Archaic period in Central Texas, with an estimated time range of 2650-2050 BC.

The Marcos point has not been dated in Southeast Texas, because published specimens are from surface collections. Turner and Hester (1993:147) place the Marcos point in the last part of the Late Archaic period in Central Texas, with a time range of 600 BC-AD 200.

The Fairland point has been found in the last part of the Late Archaic period with Group 2 burials at site 41AU36 (Hall 1981:Figure 35). Group 2 burials at 41AU36 have radiocarbon dates of 2460 ±70 BP (510 BC) and 1650 ±70 BP (AD 300).

The Morhiss point is placed in the Late Archaic period (1500 BC-AD 100) at excavated sites in Southeast Texas. Turner and Hester (1993:158) also place the Morhiss point in the Late Archaic in Central Texas. The Morhiss point is in the Late Archaic part of the stratigraphic sequence at site 41FB223 (Patterson et al. 1994:Table 3). At site 41FB3, Morhiss points can be associated with the stratigraphic sequence for both the Upper and Lower Burial Groups (Patterson et al. 1998). The Lower Burial Group is in the early part of the Late Archaic period, with radiocarbon dates of 3160 ±95 BP (1210 BC) and 3230 ±170 BP (1280 BC). The Upper Burial Group is in the last part of the Late Archaic period, with a radiocarbon date of 2580 ±130 BP (630 BC).

Geographic Distributions

The distributions of Travis, Marcos, Fairland, and Morhiss points in Southeast Texas are given by county in Table 1. Table 2 gives the distributions of these point types for the western, central, and eastern zones of this region. A map of Southeast Texas showing these zones is illustrated in Figure 2. It may be seen in Table 2 that the largest numbers of these point types are in the western zone, with declining numbers in the central zone. This is consistent with the main geographic distributions of these point types. Turner and Hester (1993) state that Travis, Marcos,

and Fairland points are Central Texas types. Turner and Hester (1993:158) state that the Morhiss point is found mainly on the central coastal plain of Texas. All of these point types are from areas adjacent to Southeast Texas, with Southeast Texas being the eastern limit of geographic distributions of these dart point types.

Summary

This article has presented data that show that Travis, Marcos, Fairland, and Morhiss points are minor types in Southeast Texas, with small numbers of specimens of each type concentrated mainly in the western zone of Southeast Texas. These geographic distributions are consistent with Southeast Texas being the eastern limit of distributions of these point types. Travis, Marcos, and Fairland are basically Central Texas types, and the Morhiss point is found mainly on the central coastal plain of Texas. The geographic distributions of these point types are another indication that Southeast Texas is an interface between the Southern Plains and the Southeast Woodlands, with technological influences found in Southeast Texas from both eastern and western adjacent areas.

References Cited

Hall, G. D.

1981 Allens Creek: A Study in the Cultural Prehistory of the Lower Brazos River Valley, Texas. Texas Archeological Survey, Research Report No. 61

Patterson, L. W.

1989a A Data Base for Inland Southeast Texas Archeology. Houston Archeological Society, Report No. 6

1989b An Archeological Data Base for the Southeastern Texas Coastal Margin. Houston Archeological Society, Report No. 7

Patterson, L. W., J. D. Hudgins, S. M. Kindall, W. L. McClure, M. Marek, T. Nuckols, and R. L. Gregg

1998 Additional Excavations at the Bowser Site, 41FB3, Fort Bend County, Texas, Part 1: Archeology. Houston Archeological Society, Report No. 14

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

1994 Excavations at the Joe Davis Site, 41FB223, Fort Bend County, Texas. Houston Archeological Society, Report No. 11

Suhm, D. A., and E. B. Jelks

1962 Handbook of Texas Archeology: Type Descriptions. Texas Archeological Society, Special Publication No. 1

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

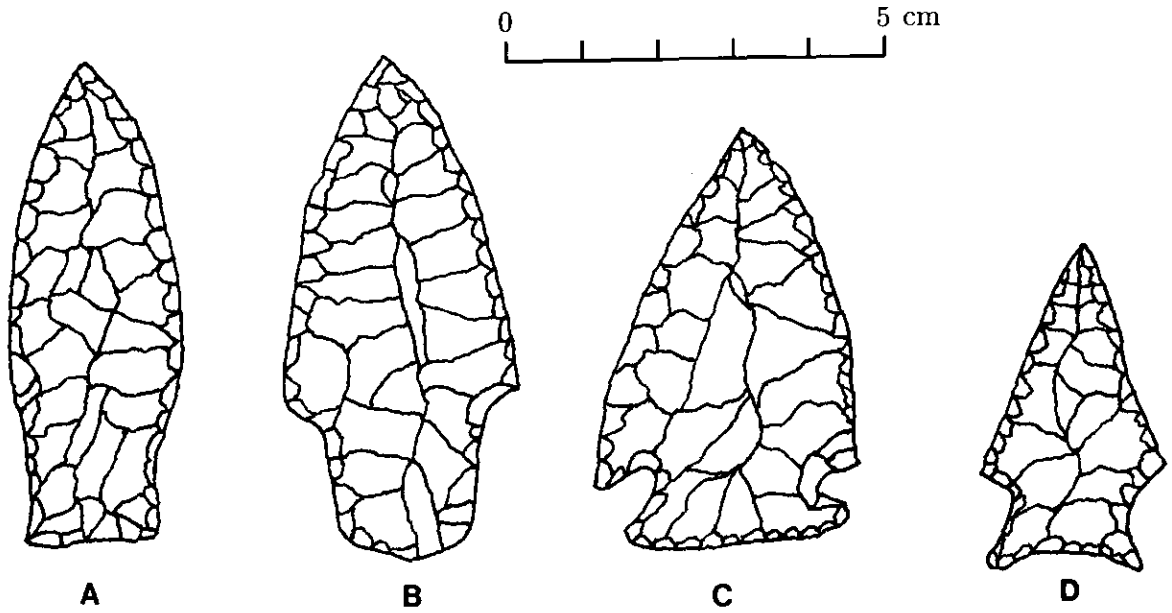
1993 A Field Guide to Stone Artifacts of Texas Indians, Second Edition. Gulf Publishing Co.

Table 1. Distributions of Point Types by County

county	Travis		Marcos		Fairland		Morhiss	
	sites	points	sites	points	sites	points	sites	points
Austin	4	5	2	3	1	6		
Brazoria							1	1
Fort Bend			3	4	2	4	3	4
Harris	1	1	3	4	2	2	4	5
Jefferson							1	1
San Jacinto							1	1
Wharton	2	7	2	2	2	2	1	1

Table 2. Distributions of Point Types by Zone

type	western		central		eastern	
	sites	points	sites	points	sites	points
Inland						
Travis	6	12	1	1		
Marcos	7	9	3	4		
Fairland	5	12	1	1		
Morhiss	5	6	2	2	2	2
Coastal Margin						
Fairland			1	1		
Morhiss			2	3		
Total						
Travis	6	12	1	1		
Marcos	7	9	3	4		
Fairland	5	12	2	2		
Morhiss	5	6	4	5	2	2



A – Travis, B – Morhiss, C – Marcos, D – Fairland

Figure 1. Dart Points

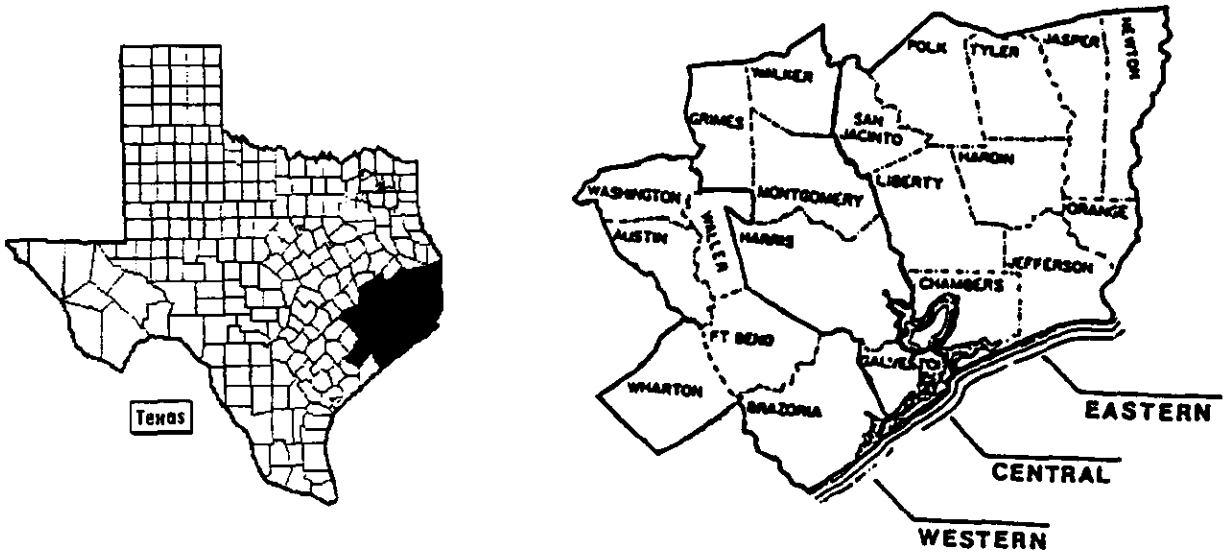


Figure 2. Southeast Texas Study Area

A "Cleaner" Bullet from Site 41GV140

Tom Nuckols

In the spring of 1984, the Anthropology Department of the University of Houston, with the assistance of the Houston Archeological Society (HAS), conducted an archeological excavation of the Maison Rouge site, 41GV140, on Galveston Island, Texas. Currently, HAS is cataloging and analyzing artifacts from this site. One of the artifacts is a Civil War era bullet.

The bullet found at the site, shown in Figure 1D, is a .58 caliber Williams patent Type III. It is called a Type III to distinguish it from Types I and II which preceded it. Williams patent bullets are common finds on Civil War era sites. They were designed by Elijah D. Williams of Philadelphia, Pennsylvania, and were used in muzzle-loading rifled muskets. Thomas (1993: 14-23) gives these descriptions of the three variations of the Williams patent type bullet:

> Williams patent Type I [Figure 1A, left]. This bullet was secured by Letters Patent No. 35,273 on May 13, 1862. The projectile was cast with the projecting "pin" as an integral part of the body. Two concavo-convex (having one concave side and one convex side) zinc discs [Figure 1A, center and right] with six slits were placed on the pin which was peened to hold them in place. Originally intended to increase accuracy in rifled muskets, the flattening of the zinc discs by the powder charge explosion "evidently keeps that part of the barrel through which the it passes free from foul and lead." The initial order for bullets was placed in December, 1861, and they were supplied to the federal arsenals to be made up into [paper] cartridges. ...These cartridges were fabricated in the same manner as the regulation .58's, and with the same powder charge. For identification they were often wrapped in other than the standard buff-colored paper, viz.: blue or red. Originally when adopted, one Williams cartridge was bundled with nine regulation .58's; however, by April 1863, the ratio was ordered increased to three Williams and seven regulation cartridges.
>
> Williams patent Type II [Figure 1B]. Modifications made by Williams to his Type I projectile led him to secure Patent No. 37,145 on December 9, 1862. Although both the Type I and II consisted of three pieces, Type II was quite different in appearance and construction. The pin of the Type II was cast of hardened lead as a separate piece and was "headed." Only one zinc disc, without slits, was held by the pin. The nose cast bullet body contained a small cavity into which the pin was placed, partially filling the cavity. In operation, the powder gases drove the pin forward into the body, flattening the zinc disc and expanding the bullet into the rifling. Williams claimed that "extreme accurate shooting is thus produced." The flattened zinc disc of both the Type I and II scraped away the fouling in the bore as they exited from the gun, hence the name "cleaner" bullets. It is interesting to note, however, that in neither Patent No. 35,273 nor No. 37,145 does Williams mention this feature. Nevertheless, the Federal government by its testing became well aware of this benefit.
>
> Williams patent Type III [Figure 1C]. These projectiles are shorter versions of the Type II and came into use some time in 1863. They are very uncommon finds in sites occupied prior to 1864.

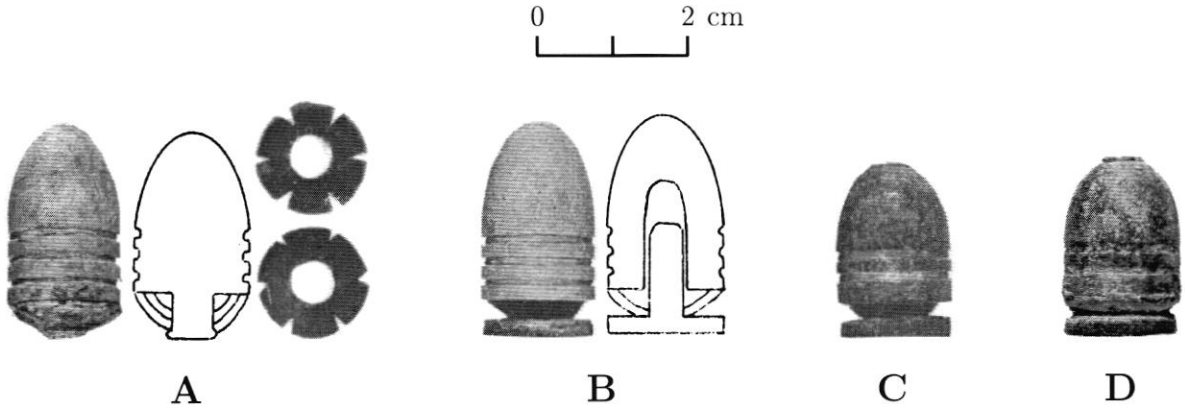
Just prior to and during the Civil War, firearms and ammunition experienced an evolution more rapid than at any time previous. In 1862 alone, 240 patents were issued for weapons. Williams

bullets were a part of this evolution. However, in 1866 the U.S. Army adopted breech-loading firearms (Peterson 1966), and so the era of the muzzle-loader as a military weapon and the use of Williams bullets came to an end.

References Cited

Peterson, H.L.
1966 Pageant of the Gun. DBI Books, Northbrook, IL

Thomas, D. S.
1993 Ready... Aim... Fire! Small Arms Ammunition in the Battle of Gettysburg. Thomas Publications, Gettysburg, Pennsylvania



A: Williams Patent Type I (Thomas 1993 p.17#12, p.14, p.15)
B: Williams Patent Type II (Thomas 1993 p.23#15, p.16)
C: Williams Patent Type III (Thomas 1993 p.23#16)
D: Bullet from Site 41GV140

Figure 1. Williams Patent Bullets and Bullet from Site 41GV140

Additional Data from 41FB90, Fort Bend Co., Texas

Leland W. Patterson

Introduction

This article presents the results of additional surface collecting and shovel tests at site 41FB90 in Fort Bend County, Texas, in 1997-98. Extensive shovel testing in October 1998 by the HAS shows that little intact stratigraphy remains at this site, due to erosion and soil disturbance caused by modern farming. Further excavation work at this site is not warranted. Access to 41FB90 was possible through the courtesy of the landowners, Harry and Nancy Fitze.

Surface collections from 41FB90 have been previously published (Patterson and Black 1991). It appears that occupations at 41FB90 were in some portions of the Middle Archaic (3000-1500 BC) and Late Archaic (1500 BC - AD 100) time periods, judged by the presence of Bulverde, Gary, and Pedernales dart points. No Indian ceramics were found to indicate occupations in later time periods. No additional time-diagnostic artifact types were found by the 1997-98 work, but additional artifact types show some activities here of nomadic hunter-gatherers.

Chipped Stone Materials

Only one formal unifacial tool has been found at 41FB90, a graver (Figure 1A). In the Archaic period of Southeast Texas, the unmodified utilized flake was the main stone tool type. All chipped stone artifacts at this site are made from chert.

A total of 211 chert flakes have been collected here, with flake size distribution shown in Table 1 and Figure 2. In Figure 2, the semilog plot for flake size distribution is roughly linear. Plots of this type would be expected to be linear for bifacial reduction of flake blanks to make dart points (Patterson 1990). The small deviation from linearity for flake size distribution of 41FB90 is probably due to the primary reduction of small chert cobbles from the nearby Brazos River, in addition to the bifacial reduction of flake blanks to make dart points. Two cores made from small chert cobbles were found. Two thick chert pieces also indicate primary reduction of small chert cobbles.

Heat treatment of chert to improve knapping quality was used at this site, as shown by flakes with waxy luster, reddish coloration, or small potlid surface fractures.

In addition to flake size distribution, the manufacture of dart points is shown by dart point preforms of the previous collections (Patterson and Black 1991:23), and three small biface edge fragments from the additional collections.

For chert flakes over 15 mm square, the total flake collection has 0.8% primary flakes (covered with cortex), 35.6% secondary flakes (partially covered with cortex), and 63.6% interior flakes (no remaining cortex). The low percentage of primary flakes indicates that the primary reduction of small chert cobbles was a minor activity at this site, compared to the bifacial reduction of flake blanks to make dart points. Flake blanks were made at lithic sources and then brought to site 41FB90 for manufacture of bifacial dart points.

Modern Materials

Much modern material was found here, as would be expected from farming operations and modern occupation for many years. Modern materials found at 41FB90 include pieces of glass, metal, brick, and ironstone pottery.

Sandstone Tools

Two sandstone abrading tools were found by the additional work here. One specimen is a flat slab with dimensions of 31 mm by 28 mm by 11 mm. The other specimen is a well-used, rounded piece with dimensions of 28 mm by 17 mm by 13 mm.

Prismatic Blade Technology

The purposeful manufacture of small prismatic blades at this site is indicated by 4 small prismatic blades (Figure 1C,D), a polyhedral blade core (Figure 1E), and 2 blade core trim flakes (Figure 1B). A prismatic blade is a specialized flake with length at least twice the width, parallel lateral edges, and at least one ridge on the dorsal surface parallel to the lateral edges. Prismatic blades found here have widths of 11, 11, 11, and 13 mm. There is also a prismatic blade industry at nearby site 41FB3 (Patterson et al. 1998).

Earth Ovens

The use of earth ovens for cooking at 41FB90 is indicated by two fired clayballs, with diameters of 25 mm and 35 mm. Fired clayballs were used as heating elements in earth ovens in Southeast Texas (Patterson 1995).

Faunal Remains

Four bone fragments were found here. Analysis by Bill McClure shows that these specimens can be classified as unidentified animal bone. A small piece of freshwater mussel shell was also found.

Summary

Site 41FB90 is a campsite with occupations in some portions of the Middle and Late Archaic time periods. Artifact types at this site are typical of artifact types at Archaic period sites in the western part of Southeast Texas. Data from this site are another contribution to the regional archeological data base for inland Southeast Texas.

References Cited

Patterson, L. W.
1990 Characteristics of Bifacial Reduction Flake Size Distribution. American Antiquity 55(3):550-558

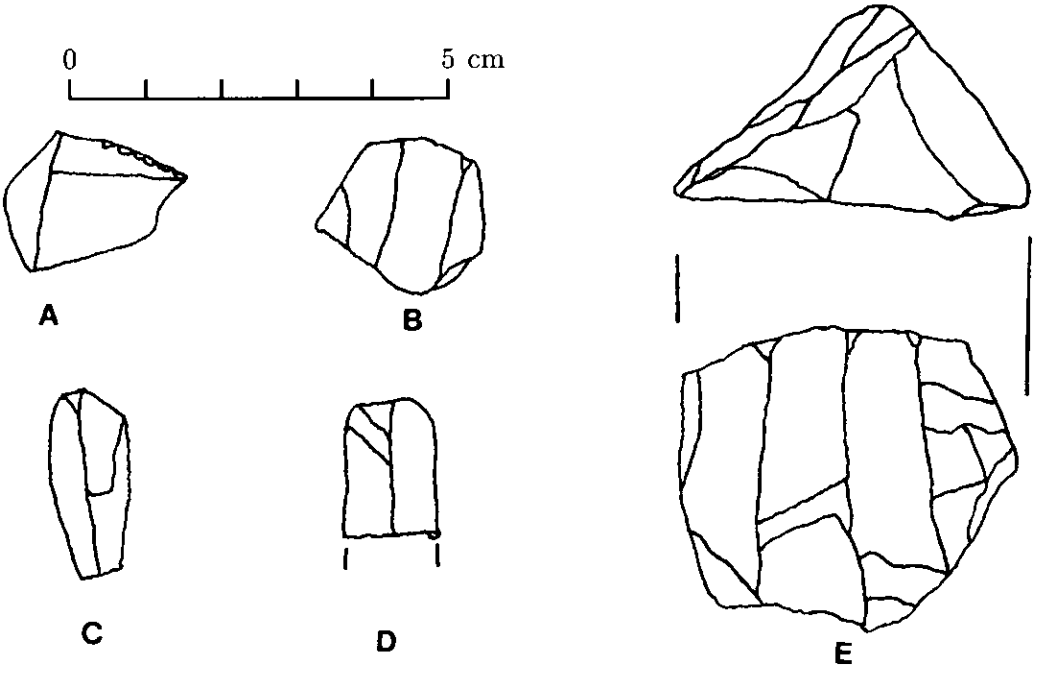
1995 Prehistoric Earth Ovens in Southeast Texas. Houston Archeological Society Journal 111:17-20

Patterson, L. W., and W. M. Black
1991 Prehistoric Site 41FB90, Fort Bend Co., Texas. Houston Archeological Society Journal 99:22-24

Patterson, L. W., J. D. Hudgins, S. M. Kindall, W. L. McClure, M. Marek, T. Nuckols, and R. L. Gregg
1998 Additional Excavations at the Bowser Site, 41FB3, Fort Bend County, Texas, Part 1: Archeology. Houston Archeological Society Report No. 14, Fort Bend Archeological Society Report No. 7

Table 1. Chert Flake Size Distribution

flake size, mm sq.	no. of flakes			%
	old	new	total	
under 15	45	63	108	51.2
15–20	41	32	73	34.6
20–25	13	7	20	9.5
25–30	6	2	8	3.8
30–35	1	1	2	0.9
	106	105	211	100.0



A – graver; B – blade core trim flake; C,D - prismatic blades;
E – blade core

Figure 1. Lithic Artifacts

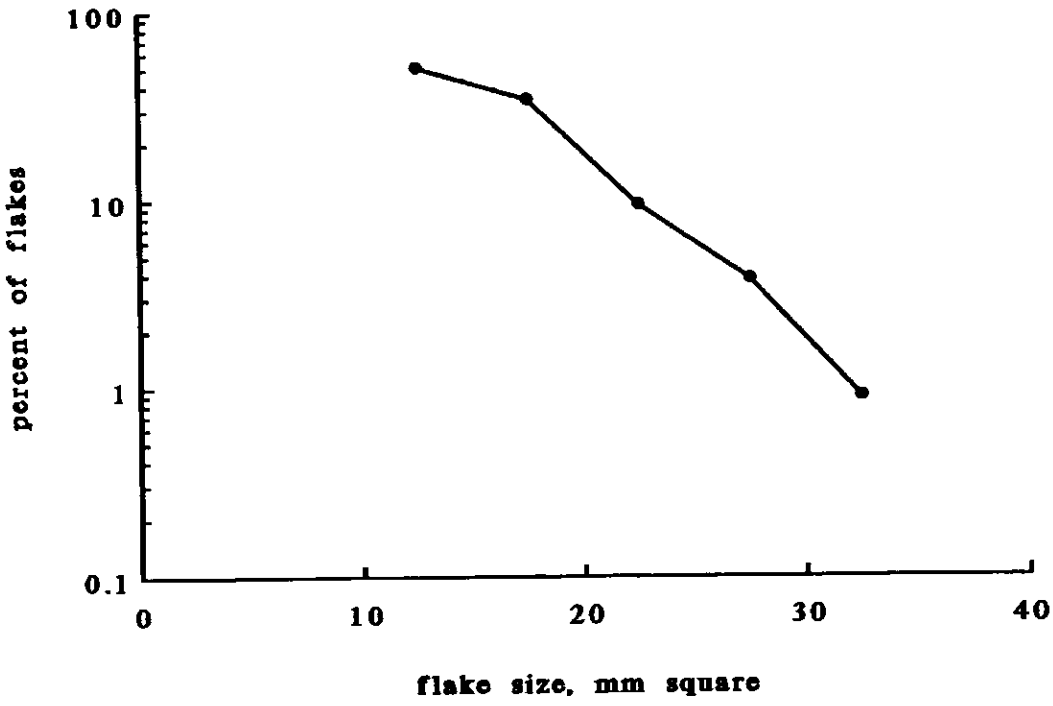


Figure 2. Flake Size Distribution

An Introduction to Pottery Analysis in Southeast Texas

Leland W. Patterson

Introduction

Pottery is an important artifact type in Southeast Texas, where data on ceramics can be used to address subjects such as subsistence patterns, site chronology, and technology. Pottery is especially important because it is well preserved at archeological sites, unlike organic materials such as wood and animal hides. At archeological sites in Southeast Texas, the main types of artifacts preserved are pottery, fired clayballs, lithics, and, sometimes, bone.

Pottery started in the Southeast in Georgia about 2500 BC and then slowly diffused to the west (Sassaman 1993), arriving in the Galveston Bay area of Texas at least two millennia later (Aten 1983:297). Mobile hunter-gatherers were not quick to adopt the use of pottery, especially because pottery is a bulky, heavy item that is difficult to transport.

The uses of pottery by hunter-gatherers in Southeast Texas are not well understood. Possible uses are for cooking, water storage, and food storage (Patterson 1995a:258, 1999a).

This paper discusses attributes of pottery, types of pottery, chronology of pottery, and geographic distributions of pottery types in Southeast Texas. Anyone interested in the archeology of Southeast Texas should acquire at least a basic knowledge of pottery of this region. Some members of the HAS may have the opportunity to analyze pottery from archeological sites.

Attributes of Pottery

Texture of Paste

Pottery is made by firing shaped forms made of clay. The internal characteristics of the clay paste in fired pottery depend on the degree of mixing of the clay before firing. Most pottery in Southeast Texas will have uniform paste due to thorough mixing. However, some pottery types, such as Tchefuncte, will consistently have contorted paste due to nonuniform mixing of the clay before firing. The characteristics of paste in a sherd should be examined on a fresh break, using a 10-power magnifier.

Temper

Temper is a material that has been added to the clay paste to improve strength and firing characteristics. Temper materials found in pottery in Southeast Texas are grog, bone, coarse sand, and, rarely, shell. Grog is crushed pieces of fired pottery. Bone temper consists of crushed pieces of burned bone. After firing of pottery, bone temper pieces are generally white on the surface and darker colors inside the paste. Pieces of shell temper in pottery will be white on both the surface and inside the paste. Coarse sand temper is usually visible on both the surface of a sherd and internally.

Bone temper can be distinguished from shell temper by use of an acid, such as hydrochloric acid. Shell temper will foam on contact with acid, due to carbonate composition. Bone temper will not foam on contact with acid, because bone is not a carbonate compound.

Aten (1983:239) has noted that caution must be used in the identification of grog tempered pottery when grog temper is not abundant. Dark smudges can be mistaken for grog temper. Another caution to be made is that dark pieces of bone temper can sometimes be mistaken for

grog. The analysis of temper in a sherd should be done by examination of both the surfaces and a fresh break, using a 10-power magnifier.

Surface Treatment

Surface treatment of a sherd can sometimes be noted. Most sherds simply have smooth surfaces, but some sherds may have rough surfaces, highly polished surfaces, a brushed appearance, or a film of clay of a different color than the main paste.

Amount of Firing

The degree of firing of a sherd can be noted as producing hard, soft, or friable sherds. Vessels intended for use in cooking would tend to be hard fired to improve durability.

Decoration

Pottery can be decorated by impressing designs on soft clay before firing, by engraving designs on fired pottery, and by painting. Most pottery in Southeast Texas was decorated by impressing designs on soft clay before firing. This was done by incising with a tool, by impressing a cord to create a line, or by making repetitive impressions with a tool. Repetitive impressions are called "stamped." Incised decorations are common in this region, cord marked pottery is not common, and stamped decorations are rare. Black (1989) has illustrated a large number of pottery decorations for Southeast Texas, and Aten (1983:Figure 12.2) has illustrated a number of pottery decorations from the Galveston Bay area.

Engraved pottery is common in the Caddo culture of Northeast Texas (Suhm and Jelks 1962), with only occasional sherds of Caddo engraved pottery found in Southeast Texas. The only painted pottery found in Southeast Texas is Rockport Asphalt Decorated pottery (Suhm and Jelks 1962:131).

Pottery decoration in Southeast Texas consists mainly of linear patterns, sometimes with punctations (Black 1989). Curved lines are rare.

Thickness

Thickness of pottery in Southeast Texas can range from 4 to 9 mm, but a large proportion of pottery in this region has a thickness of about 6 mm. Thickness of a sherd can be measured with calipers.

Vessel Size

The diameter of a vessel can be estimated by measuring the horizontal curvature of sherds. This can be done with a template with a series of partial circles of various sizes, or by measuring certain dimensions of a sherd and then calculating the vessel diameter (Patterson 1980). Curvature of rim sherds can be used to find the diameter of a vessel opening.

Vessel Shape

Most pottery vessels in Southeast Texas had conical bottoms. A conical bottom node of a vessel is occasionally found. Complete vessel shape can be determined only by reconstruction of the vessel.

Rim Shape

Vessel rim profiles are sometimes illustrated in archeological site reports. Vessel rims can curve inward or outward or have no vertical curvature. If no vertical curvature is present, the rim diameter is the maximum vessel diameter.

Types of Pottery

General Comments

The types of pottery described here represent a simpler scheme of nomenclature than that given by Aten (1983: Chapter 12). Aten's classification of pottery has some varieties of types that are either not well established or that are inconsistent in nomenclature. The simpler scheme of classification presented here does not represent any significant deviations from Aten's pottery classification scheme, but rather simplification in nomenclature.

Goose Creek

Goose Creek pottery has a fine sandy paste with uniform texture. Sand in this pottery type is considered to be natural, rather than added as temper (Aten 1983:231). Patterson (1996:12) has noted that most sand grains in Goose Creek pottery have a size range of 0.125-0.250 mm. There are two types of Goose Creek pottery, Plain and Incised. Minor variations of Goose Creek are Red Filmed, Cord Marked, and Stamped. Goose Creek is the most common pottery type throughout Southeast Texas.

O'Neal Plain

O'Neal Plain pottery has coarse sand added as temper (Aten 1983:239). Coarse sand grains in O'Neal Plain pottery generally have a size range of 0.5-1.0 mm (Patterson 1996:12). Care should be taken in classifying pottery with coarse sand as O'Neal Plain. There are locations in Southeast Texas, such as site 41WH72 (Patterson et al. 1995:4), where pottery was made from clay with a natural content of coarse sand, rather than coarse sand as added temper.

San Jacinto

San Jacinto pottery has a uniform paste with fine sand and small-to-moderate amounts of grog temper. The two types of San Jacinto pottery are Plain and Incised. Aten (1983:239) has classified San Jacinto Plain as a variety of Baytown Plain, but has classified San Jacinto Incised as a major type. As previously noted (Patterson 1995b), it is inconsistent to classify San Jacinto Plain as a variety of another type (Baytown Plain), while classifying San Jacinto Incised as a major type.

There are two types of grog tempered pottery in Southeast Texas, San Jacinto and Baytown. San Jacinto has low-to-moderate density of grog temper and Baytown has higher density of grog temper. There is a bimodal distribution of the density of grog pieces on the surfaces of San Jacinto and Baytown sherds in a sample of pottery from site 41CH290 (Patterson 1995b:Figure 1), with Baytown having a higher density of grog pieces than San Jacinto. In actual practice, it is generally easy to see the differences in grog density between San Jacinto and Baytown sherds.

Baytown

Baytown pottery has a uniform paste with little sand content and abundant grog temper (Aten 1983:241; Patterson 1995b). The two types of Baytown pottery are Plain and Incised. As with San Jacinto pottery, Aten (1983) is inconsistent with his nomenclature of Baytown pottery. He classifies Baytown Plain as Baytown Plain, variety Phoenix Lake, but Baytown Incised as San Jacinto Incised, variety Spindletop.

As noted above for San Jacinto pottery, there is a bimodal distribution in the density of grog pieces on the surfaces of San Jacinto and Baytown sherds, with Baytown having a higher density of grog pieces. It is important to differentiate between San Jacinto and Baytown pottery because of differences in geographic distributions.

Tchefuncte and Mandeville

Tchefuncte Plain pottery has a fine contorted paste with little sand content (Aten 1983:238). There are also rare examples of Tchefuncte Stamped. Mandeville Plain pottery is like Tchefuncte with contorted paste, but with some fine sand and irregular surfaces. A question can be asked as to whether Mandeville pottery is simply a variant of Tchefuncte pottery. These two pottery types are not common in Southeast Texas (Aten:1983:Figure 14.1).

Rockport

There are three types of Rockport pottery: Asphalt Decorated (Black-on-Gray), Incised, and Plain (Suhm and Jelks 1962). None of the Rockport types are common in Southeast Texas. Rockport pottery has a fine sandy paste. Rockport Plain occasionally has some bone temper (Suhm and Jelks 1962:135). In Southeast Texas, only Rockport Asphalt Decorated can be easily identified. Rockport Plain and Rockport Incised are very similar to Goose Creek pottery. When Rockport Plain has bone temper it is easily confused with pottery of Southeast Texas that is simply classified as Bone Tempered, without any obvious affiliation with Rockport Plain.

Caddo

Caddo pottery has many varieties (Suhm and Jelks 1962), but is rare in most of Southeast Texas. Many varieties of Caddo pottery are hard fired and engraved with complex design patterns. Most analysts in Southeast Texas will never encounter Caddo pottery.

Bone Tempered

Bone Tempered pottery is a minor type in Southeast Texas, most important because of limited temporal placement in most parts of this region.

Shell Tempered

Shell Tempered pottery is very rare in Southeast Texas (Aten 1983:244). This is somewhat surprising because of the large amounts of shell available at shell middens on the coastal margin. Shell may not be a suitable type of temper material for use with local clay types.

Chronologies and Geographic Distributions

Goose Creek pottery is the most common pottery type in Southeast Texas, found throughout the inland and coastal margin parts of the region. Goose Creek pottery starts at the time of introduction of pottery into Southeast Texas from the east and continues in all subsequent time periods.

Aten (1983:297) has placed the start of pottery in the Galveston Bay area at AD 100, with the start of pottery at the Louisiana border at least 200 years earlier. The introduction of pottery to Southeast Texas seems to have occurred on the eastern coastal margin, then spreading inland and to the west. Aten (1983:297) places the start of pottery at AD 300 for the Brazos River delta and AD 500 for the Conroe-Livingston area. Aten's (1983) radiocarbon dates do not have a C13 age adjustment, which would generally add 300 years to radiocarbon dates (Ricklis 1998:440). A date of AD 100 is still a good minimal date for the start of the Early Ceramic period in Southeast Texas.

San Jacinto and Baytown grog tempered pottery types start in the Late Prehistoric period (AD 600-1500). Grog tempered pottery occurs mainly on the coastal margin of Southeast Texas.

Baytown pottery, with abundant grog temper, has been found only on the coastal margin, but small amounts of San Jacinto pottery are occasionally found at inland sites (Patterson 1990).

Tchefuncte and Mandeville pottery types are minor types found only on the coastal margin of Southeast Texas and limited to the Early Ceramic period (Aten 1983:Figure 14.1) of AD 100-600.

Rockport pottery is associated with the Karankawa Indians of the central Texas coast, with little of this pottery type found east of the San Bernard River. This pottery type occurs in the Late Prehistoric and Historic Indian time periods. The small amount of Rockport pottery found at the Mitchell Ridge site (41GV66) on Galveston Island (Ricklis 1994) may be from a composite group of the Historic Indian period after decimation of Indian population after European contact. There are only a few inland sites with Rockport pottery, in the Historic Indian period, in the western part of Southeast Texas (Patterson 1990).

Caddo pottery is rare in Southeast Texas, except for the northern tier of counties, such as Polk and San Jacinto, nearest the Caddo heartland of Northeast Texas. Caddo pottery is from the Late Prehistoric and Historic Indian periods.

Bone Tempered pottery is a minor pottery type in Southeast Texas that has an uneven geographic distribution in inland and coastal margin areas (Patterson 1993). Bone Tempered pottery has been found only in the Late Prehistoric period (AD 600-1500) at inland sites of western Southeast Texas, such as sites 41WH12 (Patterson and Hudgins 1989) and 41FB224 (Patterson et al. 1996). Bone Tempered pottery in the western part of Southeast Texas may be related to Leon Plain pottery found in the Colorado River basin (Suhm and Jelks 1962:95). This pottery type occurs in the Late Prehistoric and Historic Indian periods on the coastal margin of this region (Aten 1983:Figure 14.1). There is only one example in this region of occurrence of Bone Tempered pottery in the Early Ceramic period, at site 41HR315 in Harris County (Patterson 1980b).

In general, decorative patterns on pottery in Southeast Texas have not been shown to have much value for chronological or geographic placement, especially because there are so many design patterns. Aten (1983:Figure 12.2) has shown that decorative patterns on pottery in this region tend to become more complex after the Early Ceramic period. Perhaps future research will shed more light on this subject.

Summary

This paper has given a basic introduction to the analysis of pottery in Southeast Texas. Hopefully, this paper will serve as a useful guide for individuals who desire to learn more about pottery in this region. There are now reports for hundreds of archeological sites in Southeast Texas that contain analyses of pottery (Patterson 1999b). Not all analyses are consistent, however, for pottery typologies. A pottery analysis should explicitly state details of attributes used, so that there is a clear picture of the analysis.

References Cited

Aten, L. E.

1983 Indians of the Upper Texas Coast. Academic Press

Black, W. M.

1989 A Study of Decorative Designs on Goose Creek and San Jacinto Pottery of Southeast Texas. Houston Archeological Society, Report No. 8

Patterson, L. W.

1980a Measurement of Curvature of Potsherds. Houston Archeological Society Newsletter 67:8

1980b The Owen Site, 41HR315: A Long Occupation Sequence in Harris County, Texas. Houston Archeological Society, Report No. 3

1990 The Distribution of Coastal Margin Pottery Types in Southeast Texas. Houston Archeological Society Journal 97:14-19

1993 Bone-Tempered Pottery in Southeast Texas. Houston Archeological Society Journal 105:2-5

1995a The Archeology of Southeast Texas. Bulletin of the Texas Archeological Society 66:239-264

1995b Classification of Grog-Tempered Pottery in Southeast Texas. Houston Archeological Society Journal 112:11-15

1996 Classification of Goose Creek and O'Neal Plain Pottery in Southeast Texas. Houston Archeological Society Journal 114:12-14

1999a Uses of Prehistoric Pottery in Southeast Texas. La Tierra 26(2):37-40

1999b Bibliography of the Prehistory of the Upper Texas Coast, No. 11. Houston Archeological Society, Special Publication

Patterson, L. W., and J. D. Hudgins

1989 Excavations at Site 41WH12, Wharton Co., Texas. Houston Archeological Society Journal 95:1-11

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

1995 Excavations at Site 41WH72, Wharton Co., Texas. Houston Archeological Society Journal 111:1-13

Patterson, L. W., W. L. McClure, E. Palmer, and T. Palmer

1996 Excavations at 41FB224 and 41FB225, Fort Bend County, Texas. Fort Bend Archeological Society, Report No. 3

Ricklis, R. A.

1994 Aboriginal Life and Culture on the Upper Texas Coast: Archaeology at the Mitchell Ridge Site, 41GV66, Galveston Island. Coastal Archaeological Research, Inc.

1998 Exploring Long-Term Environmental and Human-Ecological Change at the Eagle's Ridge Site. In: Eagle's Ridge: A Stratified Archaic and Clear Lake Period Shell Midden, Wallisville Lake Project Area, Chambers County, Texas, by H. B. Ensor. Reports of Investigations No. 4, Geo-Marine, Inc.

Sassaman, K. E.

1993 Early Pottery in the Southeast. University of Alabama Press

Suhm, D. A., and E. B. Jelks

1962 Handbook of Texas Archeology: Type Descriptions. Texas Archeological Society, Special Publication No. 1