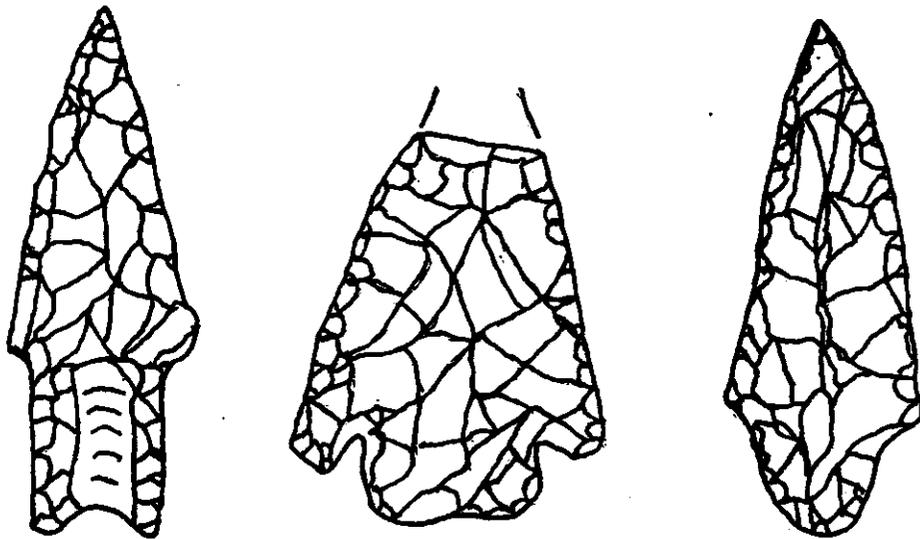


**EXCAVATIONS AT THE BOWSER SITE,
41FB3, FORT BEND COUNTY, TEXAS**

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INTRODUCTION

This report describes the results of excavations at the Bowser site, 41FB3, in Fort Bend County, Texas, conducted by the Houston Archeological Society in the fall of 1990 and the spring of 1991. This site functioned as a campsite, with fairly small or short-term occupations, and as a cemetery site in the Late Archaic mortuary tradition found in the western part of Southeast Texas.

Field work for this project was under the direction of Sheldon Kindall. Final site mapping was done by Marshall Black. Individuals who participated in the excavations included: Karen Acker, Christine Armentar, Julie Aguilar, Dave Atherton, Patti Beddingfield, Marshall Black, Fr. Ed Bader, Matt Bels, Phyllis Bradley, Robert Bidwell, Emily Croom, Jason Cook, Rhea Clemens, Linda Daugherty, Marc DeChellis, Michael DeChellis, Richey Ebersole, Dick Gregg, Shane Goodman, Joe Hudgins, Alexandra Hamaker, Dana Harper, Mike Johnston, Sheldon Kindall, Joyce Kelly, Chris Kainer, Alan Livingston, Don McReynolds, Ray McCausland, Linda Moorrees, Mike Marshall, Paula McGilvray, Bernard Naman, Edith Payne, Lee Patterson, Stan Perkins, Suzanne Patrick, Andrea Reynolds, Howard Rosenblatt, Gary Ryman, Terry Real, Janet Rathten, Carolyn Riley, Richard Ryan, Abigail Ryder, Jared Ryan, Graham Ryder, Jerry Sadler, Bob Shelby, Howard Scott, LaVon Scott, Gina Short, Bill Schurmann, Randy Spalinger, Marshall Thomas, Melanie Thomas, Jennifer Tribble, Bill Tribble, Busch Urmann, Susan Vychper, Muriel Walker, and Dudgeon Walker. Rebecca Storey and Suzanne Patrick conducted skeletal analyses, and Bill McClure did the faunal analysis.

The results of these excavations contribute data on settlement and subsistence patterns in the lower Brazos River valley, and give additional data on Late Archaic mortuary practices. The significant amount of faunal remains reflects the broad-based hunting and gathering lifeway of the nomadic Indians of this region. Skeletal analyses show a fairly good level of health, indicating adaptive success.

In respect to the cemetery component of site 41FB3, the excavation strategy was to determine the extent of the site, burial details, and mostly in-situ skeletal analysis. Most burials were left in place and reburied after analysis. Only two skeletons were removed for detailed analysis by Suzanne Patrick.

This work was made possible through the courtesy of the land estate executor, Dave Galloway, and with the assistance of the principal tenant, Martin Keoning. A preliminary report on this investigation was made to the estate executor in the fall of 1991 (Patterson 1991a).

Site 41FB3 is one of several sites in the western part of Southeast Texas that are part of a Late Archaic mortuary tradition. The organized nature of the burials and the use of exotic grave goods

characterize a higher level of cultural complexity than is generally found for hunter-gatherer groups of Southeast Texas. Exotic grave goods used in the Late Archaic mortuary tradition were obtained by widespread inter-regional trade, with details of the trade patterns not yet fully defined.

HISTORY OF RESEARCH

Site 41FB3 was discovered by Marshall Black in the early 1940's, and later recorded for state site records in 1949 by Wayne Neyland. In 1941, the landowners, Mr. and Mrs. Harvey Bowser, gave permission for Black to test this site. A one-meter test square was made, with a crushed skull and a marine shell pendant found at a depth of 62 cm. Results of this test were reported to Dr. Matthew Sterling of the Smithsonian Institution and Dr. Alex Krieger of the University of Texas at Austin. Many years passed before further archeological investigation of this site.

After Hall's (1981) publication of the Allens Creek sites in this general area of the Brazos River valley, Black realized that there were similarities between the Allens Creek Late Archaic burial sites and site 41FB3. In 1987, Mrs. Bowser (now Mrs. Esterok) gave permission for Black to conduct further site testing. A second test pit was then placed about 16 meters from the original 1941 test pit. Two burials were partially exposed at 53 cm. A marine shell pendant and a bead made from a whelk shell columella were recovered. Skulls from the burials were removed, reassembled, and given to Dr. Rebecca Storey of the University of Houston for curation.

Mrs. Esterok died in June 1990, and Dave Galloway became the estate executor. He inquired regarding what should be done, if anything, with the prehistoric burial site. After discussions with Sheldon Kindall, Mr. Galloway requested the HAS to make a further evaluation of site 41FB3, particularly to determine site area. The HAS conducted excavations in 1990 and 1991 to determine the extent and nature of the site, and to investigate the similarity of site 41FB3 with other sites found in Wharton, Fort Bend and Austin Counties of the Late Archaic mortuary tradition. During excavation work, it was determined that site 41FB3 had been used as a campsite as well as a burial site.

ENVIRONMENTAL SETTING

Site 41FB3 is located in the western part of Southeast Texas. The general area is a mixture of woodlands and coastal prairie. The specific location is at the eastern edge of the broad Brazos River flood plain. A wide variety of faunal and floral food resources would have been available for prehistoric hunter-gatherers. This area is especially known for native nut trees. There are pecan groves both east and west of site 41FB3, that would have been a prime food resource. A wide variety of animals lived in this area. Larger animals included deer and occasionally bison. Smaller animals

included rabbit, squirrel, raccoon, opossum and rat. Waterfowl were present on a seasonal basis. The variety of faunal resources utilized by Indians in the immediate area of site 41FB3 is shown in this report, and by the faunal remains from nearby site 41FB95 (McClure 1987).

The ecological variety, including woodlands, coastal prairie and the presence of a major river flood plain, contributed to an abundant food supply for Indians of this area. A plentiful food supply may have allowed a somewhat more sedentary lifestyle, which in turn favored development of greater social complexity, with organized burial and trade practices during the Late Archaic time period. The Late Archaic may have been a period of high rainfall (Story 1990:244), which enhanced faunal and floral resources. There are not many data on prehistoric climates in Southeast Texas, however.

GENERAL SITE LOCATION

Site 41FB3 is located on the south end of Pool Hill, near the edge of the Brazos River flood plain. Pool Hill is the now detached southern extremity of a somewhat anomolous north-south peninsula of the main eastern Brazos River terrace. It is cut off from the main terrace on the north by Bessies Creek, a near dormant and rectified stream with many oxbows and meanders between and south of Pool Hill and Fulshear. Bessies Creek was an ancient channel of the Brazos River northwest of Pool Hill.

Pool Hill is about 2 km (1.25 miles) long in a north-south direction, and is about 1 km (0.6 miles) wide. This hill truncates abruptly to the south into the Brazos River bottom lands. Site 41FB3 is located on the southern end of Pool Hill, near sites 41FB95 (Patterson and Hudgins 1987) and 41FB90 (Patterson and Black 1991). Site 41FB198 (Patterson and Hudgins 1991) is located farther to the north on Pool Hill. Pool Hill has been known historically as a refuge from Brazos River floods. Interviews with local residents by Marshall Black indicate that 50 years ago Indian artifacts could be found almost anywhere on Pool Hill when land was tilled for gardens.

The present channel of the Brazos River is about 4.3 km (2.7 miles) west of Pool Hill, but the channel then takes an east-west meander and passes downstream about 2.4 km (1.5 miles) south of Pool Hill. In the absence of authoritative work, it is difficult to surmise where the Brazos River channel was located 3000 to 2000 years ago, when site 41FB3 was occupied. It seems likely that at the time of site occupation, the Brazos River channel location was not much different than at the present time. West of Pool Hill, the eastern and western terraces of the Brazos River are about 7 miles apart. A few miles to the north, the western escarpment is more distant, and the flood plain becomes 10 miles wide.

LOCAL SITE TOPOGRAPHY

Pool Hill is indented with an opening to the southwest onto the Brazos River flood plain, situated in this indentation is a low hill or ridge which contains site 41FB3. The ridge is on a 40 acre tract that has been used for stock pasture for the past 50 years. Abandoned channels of Bessies Creek to the east and south of Pool Hill would have been nearby water sources. There is also a natural water catchment area 0.3 km northwest of the low ridge that contains site 41FB3, with water sometimes available.

As part of the HAS field work, a contour survey was made of the low ridge that contains site 41FB3, as shown in Figure 1. The ridge has a fat elliptical shape, measuring 186 m (600 feet) by 87 m (280 Feet). The long axis is NW-SE along a bearing of 300 degrees magnetic or N60W. A datum point and a base line were set on the long axis of the ridge for control of excavation layout.

This ridge is visually most imposing on the western end. This may account for that end being densely used as a cemetery area. Burials seem to cluster around the centerline of the long axis of the ridge.

SITE GEOLOGY

The low ridge that contains site 41FB3 is of sandy composition. As a general site profile, there is brown sandy loam from 0 to 60 cm, red sandy loam from 60 to 95 cm, and light loose sand below 95 cm. Bone preservation at this site is good because of the high alkaline content of the soil. There are hard caliche (carbonate) pieces, and many chunks of a semi-hard mixture of carbonate and sand. Caliche found at site 41FB3 is summarized in Table 1. Caliche is common in this area of Pool Hill, according to Martin Keoning, who has extensively farmed this area. The soil of site 41FB3 is easily dug when moist, but becomes very hard when dry. There is extensive gopher activity which has created soil disturbance. There is not much evidence of disturbance of the articulated burials, but some of the non-articulated burials may have had bio-disturbance.

EXCAVATION LAYOUT AND METHODS

A map of the site excavation layout is given in Figure 2, and excavation pit coordinates are tabulated in Table 12. Burials were found in pits that clustered around the survey base line, which is the center line of the long axis of the site. No intact burials, and few human bones, were found in the excavation pits farthest from the survey base line. The location of 1941 and 1987 test pits by Black are also shown in Figure 2.

All excavation pits were the usual one-meter square. Excavations were done in arbitrary 5 cm levels in the absence of natural stratigraphy.

All soil was put through 1/4" (6 mm) mesh screens. In addition, McClure did fine screening of some soil to recover small animal bones.

1941 TEST PIT

A one-meter square pit was made by Black in 1941 as an initial test of this site. A crushed skull was found at a depth of 63 cm with upward position of the face. Exact burial orientation was not determined, because the full skeleton was not exposed. The right arm was drawn to the chin. A shell (Busycon) pendant (Figure 4A) was found under the chin. The burial seems to have been in a supine (face up) position.

1987 TEST PIT

A second test of site 41FB3 was done by Black in 1987, as a test pit about 16 m from the 1941 test pit. A confused mixture of skeletal material was found at 60 cm. The pit was enlarged to the north where two crushed skulls were found in close proximity. It was not possible to determine burial orientations. There was an impression that one burial was flexed and intrusive to the other which was extended. This second test confirmed that the burial area was extensive. Two marine shell ornaments, Figure 4B,C, were found above the skeletons. It was noted that marine shell ornaments from the 1941 and 1987 tests at site 41FB3 were similar to Allens Creek (Hall 1981) specimens related to a Late Archaic (Group 2) mortuary tradition.

PROJECTILE POINTS

A summary of dart points found at site 41FB3 is given in Table 1. There were 5 identifiable dart points, 4 dart point fragments, and 2 dart point preforms. None of these specimens were associated with a burial, which indicates that the site was used as a campsite as well as a cemetery. Point types include Pedernales, Marshall, Gary and Kent-like. These point types are consistent with the Late Archaic nature of this site.

Most specimens are made of local chert types. Judged by the large sizes of the points, the source of local chert was the Colorado River basin, where large size chert cobbles can be obtained. The nearby Brazos River has small size chert cobbles. One preform is made of petrified wood. The Marshall point may be made of Central Texas flint.

As is common at sites in the western part of Southeast Texas, site 41FB3 has a mixture of dart point types from traditions of the Southern Plains and Southeast Woodlands. Southeast Texas is an interface between these two regions. Pedernales and Marshall points are Central Texas types. Gary and Kent points represent Southeast

Woodlands lithic traditions. There is a long thinning flake scar on one face of the Pedernales specimen stem, as is common for this point type (Suhm and Jelks 1962:235, Turner and Hester 1993:171,172).

SITE CHRONOLOGY

As noted above, the dart point types found are consistent with the Late Archaic (1500 B.C.- A.D. 100) nature of site 41FB3. These point types were also made during the Middle Archaic (3000-1500 B.C.) period, however, so that some occupation of this site in the Middle Archaic is not precluded (Patterson 1991b). No pottery was found at site 41FB3 to indicate any occupation after the Late Archaic period.

A radiocarbon date of 2580 +/-130 B.P., 630 B.C. (I-16513), was obtained from long bones of a bundle burial at 25-30 cm in Pit E. The bundle burial was in a cluster of extended supine (face up) burials with head directions to north, in the western part of the site. Another radiocarbon date of 3230 +/-170 B.P., 1280 B.C. (I-17333), was obtained on long bones of an extended prone (face down) burial in Pits G,AA,BB,CC in the eastern part of the site. These dates are both within the Late Archaic (1500 B.C.-A.D. 100) period. Dates from 41FB3 can be related to the Late Archaic Group 2 burials at site 41AU36 (Hall 1981) in the same general area of the lower Brazos River valley.

It is concluded that site 41FB3 was used as a campsite and as a cemetery during the Late Archaic period. There is some possibility of light occupation of this site also in the Middle Archaic period, before 1500 B.C., where cultural deposits are deeper in Pits G,AA,BB,CC, and DD for this limited area of the site. However, deeper cultural deposits in this limited area could be from backfill for burials that were deeper but not earlier than the other burials of the Late Archaic period. As may be seen in Table 12, the limited area of Pits G,AA,BB,CC,DD had cultural deposits to depths of 100 to 125 cm. The majority of pits had cultural deposits only to depths of 20 to 55 cm, with Pit E having a few artifacts as deep as 80 cm.

GENERAL LITHIC TECHNOLOGY

A summary of lithic flakes found in excavations is shown in Table 3. A total of 1111 flakes, mainly chert were recovered. This is not a large amount of flakes for an excavation project of 28 pits with many excavation levels. Not all pits had flakes at every 5 cm level. It is concluded that only a moderate amount of lithic manufacturing to produce dart points was done at this site. There is evidence on chert flakes that heat treating was done, as indicated by waxy luster, reddish coloration, and potlid surface fracture scars.

No formal types of unifacial stone tools were found. This is not unusual for an Archaic period site, since unretouched utilized flakes were the predominant tool type during this time period. Miscellaneous

lithic materials recovered by excavations are shown in Table 4. There were 4 chert cobble fragments, 1 whole chert cobble, 1 bifacial chert core, 2 miscellaneous chert cores, 1 quartzite hammerstone, and 1 quartzite hammerstone fragment. Judged by the small number of chert cores and cobbles, not much primary lithic reduction was done at this site. The manufacture of dart points was mainly done using imported large flake blanks. For flakes over 15 mm square, there were 7.4% primary flakes (completely covered with cortex), 35.6% secondary flakes (partially covered with cortex), and 57.0% interior flakes (no remaining cortex). This distribution of remaining cortex on flakes is close to that obtained by experimental flaking of chert cobbles, for the second stage to simulate dart point manufacture at a campsite, using imported flake blanks. All lithic materials at site 41FB3 appear to relate to campsite activities, and not to mortuary activities.

MODERN MATERIALS

Modern materials found during excavations are shown in Table 5. These materials are the result of dumping of trash from modern farm activities. Modern materials found below the surface indicate some soil disturbance from farm activities. However, most of the specimens of modern materials are of small sizes, and could easily have been dispersed to subsurface levels by gopher activities. It was not apparent that any of the burials had been disturbed by modern farming.

SANDSTONE ARTIFACTS

A summary of sandstone pieces recovered in the excavations is shown in Table 6. Sandstone pieces were used as abrading and grinding tools. Forms of sandstone pieces include: (1) small spent pieces, (2) rounded pieces possibly used as manos, and (3) slabs used as abraders and metates, some with concave surfaces. There is direct indication that sandstone tools were used to grind red ochre used for burials. As shown in Table 7, several sandstone pieces were found with red ochre on the surfaces. In addition to use for grinding red ochre, sandstone tools may have been used to manufacture long-bone implements found at this site as grave goods.

MARINE SHELL ARTIFACTS

Four marine shell artifacts were found as grave goods, as shown in Figure 4. Three of these specimens are pendants, which are common in the Late Archaic mortuary tradition of this area (Hall 1981). The other specimen (Figure 4C) is made from a whelk shell columella and may be a bead, such as the Form 5 beads found at 41AU36 (Hall 1981:210).

One pendant (Figure 4A) was found in the 1941 test. A pendant (figure 4B) and a columella bead (Figure 4C) were found in the 1987 test. Another pendant (Figure 4D) was found in excavation Pit E at about 20 cm depth, not far from a bundle burial.

Marine shell artifacts are exotic objects that were imported and then used as grave goods in the Late Archaic mortuary tradition of this inland area in western Southeast Texas. The source of marine shell artifacts has not been determined. Hall (1981:295) has considered the Texas coast and Florida as alternate possible sources of this artifact type.

BURNT CLAY

A summary of burnt clay found in the excavations is shown in Table 8. Burnt clay specimens at site 41FB3 are not purposefully formed, and are not in the form of fired clayballs found at many sites in Southeast Texas (Patterson 1989a). Burnt clay at site 41FB3 may be an indication of fire hearths used for cooking during campsite use of this site.

BONE ARTIFACTS

Four bone artifacts found at site 41FB3 are of the type that Hall (1981) refers to as long-bone implements. This artifact type resembles a long bone awl with a pointed distal end. The proximal end sometimes has a drilled hole. Some specimens have incised patterns. Three specimens were found with the burial in Pit B as grave goods. These specimens are shown in Figure 5. Figure 5A is a nearly complete specimen. Figure 5B is the distal pointed end of a second specimen. The incised fragments shown as Figure 5C and 5D are probably from a single third specimen, since the incised patterns are similar on both fragments.

A small piece of incised bone found in Pit N at the 10-15 cm level may also be from a long-bone implement. Both faces of this specimen are shown in Figure 5E. Pit N is not associated with a burial. This may have been a location where long-bone implements were manufactured, as sharp chert flakes and sandstone abraders were present in this pit.

Hall (1988:72) has concluded from ethnographic data that pointed long-bone implements served as awls. Blunt or flat-ended specimens may have had other functions, such as hairpins, head scratchers or sweat scrapers. Data suggests that ownership was restricted to adults. Incised patterns might have some ownership or group affiliation significance.

Incised long-bone implements were found at nearby site 41FB95 (Patterson and Hudgins 1987). Hall (1988:Fig.1) shows a wide distribution of this artifact type in East and South Texas. In the

western part of Southeast Texas, long-bone implements have been found as grave goods at a number of sites associated with the Late Archaic mortuary tradition. Examples are site 41AU36 (Hall 1981), the Crestmont site (Vernon 1989), and the Albert George site (Walley 1955).

McClure recovered 2 additional bone artifacts during fine screening of soil, as shown in Figure 6. Figure 6A shows an artifact made from the midsection of a leg bone of a deer-sized animal. All edges have been smoothed. This specimen was found in Pit AA at the 80-85 cm level, above the level of a burial in this pit. The shape of this object suggests use as a pressure flaker tool for flintknapping. Figure 6B shows a tubular bone object resembling a modern napkin ring. Perhaps this object functioned to hold hair. This specimen is from Pit EE at the 10-15 cm level, which seems to be too high to be associated with the burial at 40 cm. This specimen is similar to a tubular slotted bone item that Hall (1981:Fig. 51) has illustrated for grave goods at site 41AU36.

RED OCHRE

In addition to traces of red ochre on surfaces of some sandstone grinding tools, powdered red ochre and small pieces of red ochre were found in some excavation pits. Powdered red ochre was associated with burial areas in Pits B and F. Small pieces of red ochre and traces of powdered ochre were found in the burial area of Pit L. Small pieces of red ochre were found below the burial in Pit E, at 60-65 cm and 65-70 cm. Some powdered red ochre was found at 30-35 cm in Pit N, not associated with a burial. It would appear that red ochre was being processed at Pit N for use at nearby burial locations.

MORTUARY DATA

BURIALS 1,2

Two burials were identified in Pits B,BX. One burial was not articulated. The other burial was complete and articulated. This burial was in supine position, extended, with head orientation to magnetic north. Powdered red ochre was present. Grave goods consisted of pieces of 3 long-bone implements (figures 5a,b,c,d), found near the head of the individual. An articulated skeleton was of a robust male. An isolated mandible is of a second individual, possibly also male. Burial depth was 40-50 cm.

BURIALS 3 to 7

Based on field observations by Storey, Pit E contained as many as five individuals as unarticulated remains. Two were probable bundle burials, with groups of parallel long bones. A marine shell pendant was present as grave goods for one individual, near a bundle burial. It was not possible to determine burial positions or orientations. Storey judged that one individual may be female. Burial depths were 20 to 40 cm.

BURIAL 8

A complete articulated skeleton was observed in Pits F,FX. This burial was in supine position, extended, with head direction to magnetic north. No grave goods were found, but powdered red ochre was present. This burial was covered again with soil without further skeletal analysis, because no analyst was available at that time. Burial depth was 50-60 cm.

BURIAL 9

Burial 9 is the 1941 test by Black, where one individual was partially uncovered by a single test pit. Grave goods consisted of a marine shell pendant (Figure 4A) near the head. Burial depth was about 60-70 cm.

BURIALS 10,11

Two burials were partially exposed by a single test pit in 1987 by Black. Two crushed skulls were found. Grave goods consisted of a marine shell pendant and a whelk shell columella bead. Details of burial positions and orientations were not determined.

BURIAL 12

A nearly complete articulated burial was found in Pits EE,FF. This burial was in prone position, extended, with head direction to magnetic N80E. No grave goods were observed. Burial depth was 40-50

cm. At some time after burial, the skeleton was bisected by a trench, with a domestic dog burial found at 65 cm. It was not determined if the dog burial was modern or prehistoric. It can be noted, however, that a prehistoric dog burial was found in this general area at site 41AU36 (Hall 1981:82) in Zone 4, which probably represents the Early Ceramic period.

BURIAL 13

A complete articulated skeleton was found in Pits G,AA,BB,CC. This burial was in prone position, extended, with head orientation to magnetic N80E. No grave goods were associated with this burial. Burial depth was 95 cm. A marine shell (coffee bean trivia) was found at 60-65 cm, above the burial and probably not related to this burial. A human tooth was found at about the same level as the marine shell, but this is not enough evidence to be counted as another burial.

BURIAL 14

Two human teeth and a premaxillary bone were found in a gopher mound at N105E70, northeast of Pit C. No excavation test was made here, but this probably represents another individual burial.

BURIAL 15

A partially articulated skeleton was found in Pit L at a depth of 25-30 cm. The lower part of the skeleton was exposed by the test pit, including pelvis, proximal ends of 2 femora, rib fragments, and phalanx near pelvis. Red ochre was found around the bones, and an ochre stain was observed in the pelvis area. This appears to be a supine, extended burial, with head direction estimated to be magnetic N10E.

BURIAL 16

Several scattered human bones were found in Pit M, at depths between 21 and 29 cm, including a scapula, a vertebra, and other possible human bone. These remains may represent another individual burial.

MORTUARY DATA SUMMARY

Approximately 16 individual burials were identified during the excavation project. Only 5 articulated burials yielded enough data to determine burial positions and orientations. Two bundle burials were also observed. Three extended supine burials had a north head direction. Two extended prone burials had an east head direction.

Based on location, there seems to be two burial groups. A group to the western end of the site contains most of the burials (14), including all of the supine burials. Two other burials are clustered farther to the east, and both are in prone position. All of the burials with a north head direction are in the western cluster and

all of the burials with east head direction are in the eastern cluster. All of the use of grave goods and red ochre is confined to the western burial cluster.

One of the two burials in the eastern cluster has a radiocarbon date of 1280 B.C. (Burial 13, Pits G,AA,BB,CC). Burial 12 has the same treatment as Burial 13, and therefore these two burials have been grouped together for interpretation. Burial 13 in Pits G,AA,BB,CC is at a deeper level than Burial 12 in Pits EE,FF. Burial 12 might be younger than deeper Burial 13, or of the same age, with Burial 13 simply being a deeper burial of about the same time.

Grave goods included marine shell pendants with 4 burials, and long-bone implements with 1 burial. Selective use of grave goods implies a higher social status for some individuals, but this does not represent a high degree of social organization in an egalitarian hunter-gatherer society.

There is no evidence of violent death for the burials at site 41FB3, as has been found at some other sites in the Late Archaic mortuary tradition, such as 41AU36 (Hall 1981), Peikert (Kindall 1980), and Crestmont (Vernon 1989). The significance of supine versus prone burials at site 41FB3 is not apparent. Perhaps this difference in burial treatment is related to social status, such as a person buried in a prone position not being well-liked. Only 8 of 141 burials in the Late Archaic Group 2 at site 41AU36 (Hall:Table III-13B) were in the prone position.

SKELETAL ANALYSES

Data on skeletal analysis are given here by Rebecca Storey and Suzanne Patrick. Storey observed several skeletons in-situ at site 41FB3. Patrick has given preliminary data on two skeletons from Burials 12 and 13, which were removed for more detailed analysis. Patrick will give a separate report on the detailed analysis of the two skeletons that were removed, and on some scattered specimens of human bone.

ANALYSIS BY STOREY

The intact burial in Pit B was observed to be male, in early 40's, robust and in good condition. An isolated mandible of a second individual was probably male, robust with strong ridge. There were some signs of arthritis.

The Burial 13 skeleton in Pits G,AA,BB,CC was observed to be male, in early 20's, with well-developed muscle markings. There was little tooth wear. The Burial 12 skeleton in Pits EE,FF was male, possibly older than 40.

Storey's impression was that skeletal remains observed in Pits B, E, AA, and EE showed a good general level of health. This is probably an indication of local adaptive success, with adequate food resources.

The two bundle burials in Pit E had well-developed muscle markings. There was evidence that one body was not completely decomposed when "bundled" for burial. One bundle burial may be female.

ANALYSIS BY PATRICK

Burial 13 in Pits G,AA,BB,CC and Burial 12 in Pits EE,FF were removed for detailed analysis. It would be wise for the reader to keep several cautions in mind. First, when using the skeleton itself to determine a person's age at death, it is best if the researcher has a large sample to work with or has access to a comparative collection of the same population. In that way, the range of variation is more visible. Many of the standards commonly applied by researchers were developed from groups whose physiques may have been different from those under study. However, these studies do have their value for initial comparative purposes. Second, the more characteristics that can be observed, the more accurate the assessments. And third, just as some people "show their age" more than others, osseous materials may appear younger or older than the actual chronological age, depending on conditions in that individual's life, such as hard labor, illness or genetic predisposition.

SEX

Burials 12 and 13 both appear to be male as noted in field observations by Rebecca Storey. Dr. Storey of the University of Houston graciously agreed to visit the site to observe burials and to instruct on traits used by physical anthropologists to make assessments. The general robustness of both skeletons indicated maleness. Observation of morphological characteristics of the bones and metric measurements have been used in the lab to substantiate field designations.

For Burial 13, the right sciatic notch and left symphysis were well-preserved. The shape of the sciatic notch was a J or fishhook shape common to males. The left symphysis displayed an absence of the feminine subpubic concavity. The subpubic angle was small and also the general shape of the os pubis was narrow. Females tend to have a wide subpubic angle and a broad os pubis which lends breadth to female hips.

Another useful morphological characteristic is the shape of the chin. Burial 13 has the square front common to males. Although the right eye orbit does not appear to be very robust, edges of the upper orbit are somewhat rounded. A pronounced supraorbital brow ridge is not evident. One's impression of the mastoid process is that it is large, but without a comparative collection, one has to wonder "large in relation to what?". It is unfortunate that the skull is fragmented, which prevents overall assessment of the characteristics mentioned

above. Some Texas coastal populations such as the historic Karankawa included very robust females who could be misclassified as males in less robust populations, especially if only the skulls were available for study.

Several metric measurements were taken for Burial 13, and compared to those of modern and prehistoric Indian groups. The Maximum diameter of the femur head, the length of the talus (as defined by Steele 1976), and the maximum length of the calcaneus were all above the means reported for various Indian, white, and black males (Bass 1971, Steele 1976). Steele found that measuring the length of the talus provided data that allowed sexing with 80% accuracy.

Burial 12, a probable male, was bisected by a trench that contained a domestic dog burial. Although some of the torso was missing, the general robustness of the bones was noted in field notes by Ebersole. Unfortunately, the best morphological and metric sites useful for determining sex were missing or damaged. The shape of the chin is strongly male. Although fragments of the orbit appear rounded, the expected supraorbital ridge is missing. The appearance of the orbit is much like that of Burial 13 as is the size of the mastoid process. Measurement of the right humerus of Burial 12 was inconclusive due to damage. However, the measurement was above the mean for males (Bass 1971). A similar measurement was not possible for Burial 13 due to the extensive damage to the proximal areas of both humeri.

AGE

Burial 13 was an adult, probably in his thirties, as evidenced by fusion of all visible epiphyses to long bones and pelvis. Fusion was complete in all cases with line of fusion well-obliterated. Two areas that were available for age determination were dentition and the pubic symphysis of the pelvis. While a large collection of Late Archaic burials was not available for comparison, charts have been devised for other populations which are useful for comparison (Brothwell 1972, Lovejoy 1985). The molars of Burial 13 were highly polished and in all sets of the first two molars, enamel was worn down to the dentine. Wear was less severe on the anterior teeth. Only three of eight incisors were present. Although there is damage to the area, loss appears to be postmortem. Even with the light wear of the anterior teeth, general appearance indicates an individual who was surely in the Late 20's at time of death and possibly in the early 30's.

The appearance of the os pubis of Burial 13 supports an age in the thirties at the time of death (McKern 1970, Meindl et al 1985). General degradation of the face of the pubic symphysis suggests an age range of 30 to 40 years. The skull was fragmentary, but one fragment showed a 2.5 mm area of fusion. Location of bone was not determined. Cranial suture fusion is generally less reliable than other methods, but can be used to support an age designation of 30+.

For Burial 12, an adult, comparison of the molars with Brothwell's British material suggests an age range of 25 to 35. Wear on the first and second molars is more severe than that of Burial 13. Comparison of all teeth with Lovejoy's charts suggests an age bracket of 30 to 40. One should remember that an extensive collection of material for this population would provide a more accurate estimate. But, since the tooth wear for Burial 12 is slightly more severe than that of Burial 13, and the degradation of the pubic symphysis of Burial 13 supports an age of 30+, the designation of 30+ for Burial 12 is acceptable.

FAUNAL REMAINS

FRESHWATER SHELLFISH

A summary of freshwater mussel shell found at site 41FB3 is given in Table 9. Freshwater shellfish appear to have been a minor food resource at this site, and are not present in large quantity. Shell remains may be at least a partial source of the carbonates in the soil at this location

ANIMAL BONES

A summary of quantities of animal bones found at site 41FB3 is given in Table 10. The analysis of these materials by McClure is given below.

ANALYSIS OF VERTEBRATES BY McClure

Introduction

During the laboratory processing of the excavated material from the site, the bones of vertebrates were separated and then identified to the level made possible by their condition. Identification was by direct comparison with bones of known animals in the comparative collections of the Houston Archeological Society and McClure. Tabulation and analysis was facilitated by use of "A Vertebrate Faunal Analysis Coding System" developed by Shaffer and Baker (1992).

Since only a small part of the site was excavated and the site had been disturbed by burials as well as by activities of fossorial animals, and only a relatively small number of bones were identifiable, it was decided that horizontal and vertical analyses would be unproductive. Thus, the vertebrate remains are herein considered on the basis of the site as a unit.

Nearly 3500 bones and bone fragments were recovered and 18% of them could be identified to some level. Condition of the bones is only fair with fragmentation being drastic. The complete elements were primarily teeth, bones from a dog burial, and rodent bones. At least 11% of the bones had been burned.

Of the 615 identified elements, 12% are fish bones and scales, 33% are reptile bones, 10% are bird bones, 45% are mammal bones, and less than 1% are bones of amphibians.

Species tabulation

Fishes that were identified are alligator gar (Atractosteus spatula), freshwater drum (Aplodinotus grunniens), and sunfish (Lepomis sp.) as well as three sizes of other unidentified fish varieties.

Amphibians are a toad (Bufo sp.) and a frog (Rana sp.).

Reptiles include mud turtle (Kinosternon sp.), slider (Chrysemys sp.), box turtle (Terrapene sp.), softshell (Trionyx sp.), a lizard, rat snake (Elaphe sp.), hognose snake (Heterodon platyrhinos), water snake (Nerodia sp.), probable bullsnake (cf. Pituophis sp.), cottonmouth (Agkistrodon piscivorus), and rattlesnake (Crotalus sp.).

Birds include red-tailed hawk (Buteo jamaicensis) and turkey (Meleagris gallopavo) as well as three other unidentified bird varieties.

The mammals are eastern mole (Scalopus aquaticus), cottontail (Sylvilagus floridanus), swamp rabbit (Sylvilagus aquaticus), uncertain rodent, thirteen-lined ground squirrel (Spermophilus tridecemlineatus), Louisiana pocket gopher (Geomys breviceps), deer mouse (Peromyscus sp.), hispid cotton rat (Sigmodon hispidus), probable weasel (cf. Mustela frenata), domestic dog (Canis familiaris), and white-tailed deer (Odocoileus virginianus).

Species Account

Three varieties of fishes were identified and there were remains of other fish that could not be identified by the material that was recovered. The identified fish were alligator gar, freshwater drum and sunfish. The gar remains consist of 21 scales, 11 vertebrae, and three sculptured head bones. A few of these items are definitely from the alligator gar and the others could be from that species or from other smaller gars. The freshwater drums were identified by seven otoliths and a scale. Sunfish are represented by an otolith and an operculum. The collection includes at least three sizes of unidentified fish. Their remains consist of a dentary, two otoliths, a parasphenoid, 20 vertebrae, one rib, two spines, and two other fragments.

Two genera of amphibians are among the recovered material. These are two vertebrae and a humerus of a toad and the pelvis of a frog. Reptile bones are the second most common items that were among the faunal remains. This includes at least four varieties of turtles, one lizard, and six kinds of snakes.

Mud turtle bones include a nuchal, a neural, seven pleurals, five peripherals, a hyoplastron, and a femur. Slider turtles are represented by a neural, three pleurals, a peripheral, and six other shell parts. Box turtles bones are 12 pleurals, seven peripherals, and one plastron. Softshell turtles are represented by two carapace bones. Turtle bones that were not identified to genus include a coracoid, eight pleurals, and 70 pieces of shell that are mostly of the carapace. These are probably from the above varieties of turtles.

Unidentified lizards are included on the basis of three vertebrae. Snakes are included on the basis of recovered vertebrae. These include seven of ratsnake, one of hognose snake, five of water snake, one of probable bullsnake, six cottonmouth and one of rattlesnake. In

addition there were eleven vertebrae of colubrids (non-poisonous), three of pit vipers (poisonous), and 32 of unidentified taxa.

Nearly 60 bird bones were recovered. These include a red-tailed hawk, a turkey and at least three other kinds of birds. The hawk bone is a carpometacarpus. Turkey bones include two vertebrae, a coracoid, two humeri, two radii, two ulnae, two scapholunari, two carpometacarpi, a femur, two tibiotarsi, and two phalanges. The bones of unidentified birds are two vertebrae, two coracoids, a scapula, three carpometacarpi, two scapholunari, four phalanges, and 26 fragments.

Mammal bones were the most plentiful of the recognizable bones that are in the assemblage. These include a mole, a swamp rabbit, an eastern cottontail, a ground squirrel, pocket gophers, deer mice, cotton rats, a probable weasel, a domestic dog, and white-tailed deer. In addition, there were bones of an unidentified rodent, unidentified canid, and three or four other sizes of unknown mammals.

The only bone of a mole that was recovered is an upper molar. Swamp rabbit bones are a cranium, six teeth, a humerus, a femur, a calcaneus, a metatarsal, and a phalanx. The cottontail bones are a scapula, an ulna, and a calcaneus. Rabbit bones that could be of either of the above are two mandibles, five teeth, and a phalanx.

Ground squirrel bones are a mandible and a tibia. Pocket gopher bones include ten crania, 11 mandibles, 44 teeth, two humeri, a radius, a pelvis, and a femur. Deer mouse bones are a mandible, two teeth, and a calcaneus. Hispid cotton rat bones include a mandible, 18 teeth, three scapulae, four humeri, six femora, three calcanei, and a baculum. Unidentified rodent bones are a mandible, three teeth, and a vertebra and are probably of one or more of the above species.

Two teeth that are of a weasel or a small mink are in the assemblage. Domestic dog bones are from an individual that had been buried. The entire skeleton was not recovered since it continued on into areas that were not excavated. The burial pit of the dog had been dug through the burial of a human. The bones were in the pit at N100; E107 below a human burial at a depth of 64 cm. It consisted of bones from the posterior part of an adult dog. The elements recovered include sacrum, pelvis, caudal vertebra, 2 femora, 2 tibiae, 2 fibulae and a metatarsal. They were compared with bones of an adult male coyote (Canis latrans) from Uvalde County, Texas. The recovered femur is 3% shorter, 5% broader at the distal end, and 16% wider at midshaft than the coyote. The recovered tibia is 5% shorter, 10% wider at the proximal end, and 3% wider at midshaft than the coyote. The recovered sacrum is 4% wider and 6% shorter than the coyote. The measurements of these bones are included in a table below. This dog was shorter and heavier than the coyote. In addition, a tibia and four phalanges that may be from the same individual or of another canid were recovered in other pits. Deer bones are three mandibles, 19 teeth, antler, two radii, an ulna, a femur, a patella, a tibia,

two calcanei, a naviculo-cuboid, a metapodial, two sesamoids, ten phalanges, and ten other fragments.

In addition to the above, bones of at least four different sizes of mammals could not be identified. These are four teeth, two ribs, one humerus, one radius, one ulna, one pelvis, one femur, one patella, eleven phalanges, four vertebrae, and numerous other fragments.

Discussion and Conclusions:

The soils included enough bones to demonstrate that consumption of animals had occurred at the site. Enough of the bones had been burned to indicate that the animals were cooked and bones discarded in fires or in locations such that subsequent fires impacted the discarded material.

At some time after the burial of an aboriginal in Pits EE,FF, a dog was interred. It was not determined whether this was a dog of the prehistoric inhabitants or of an early Caucasian settler.

It is apparent from the recovered faunal materials that the site served as a living site as well as a burial ground. There is no indication that these uses were concurrent, except that the burials are less disturbed than the indicated distribution of the midden material.

This site was used as a dwelling place for an unknown time period during which a variety of available vertebrate animals were included in the diet. The relative sequence of use of this location as a campsite and as a cemetery has not been determined.

Measurements of the dog bones are in mm and conform to the system set out by von Den Dreisch (1976).

PELVIS	FEMUR	TIBIA	FIBULA	SACRUM
GL= 139	GL= 171	GL= 170	GL= 159	GL= 36
LA= 21.3	GLC= 172	Bp= 34.2		GB= 44
LS= 44	Bp= 38.4	SD= 13.3		PL= 35
SH= 19.7	DC= 17.8	Bd= 22		BFcr= 23
LF= 28	SD= 12.7			HFcr= 11.8
GBTc= 80	Bd= 30.5			
GBA= 71				
GTTi= 91				
SBI= 59				

LATE ARCHAIC MORTUARY TRADITION

The cemetery at site 41FB3 is part of the Late Archaic mortuary tradition in the western part of Southeast Texas, with sites along and between the lower valleys of the Brazos and Colorado Rivers. A list of sites in this tradition are shown in Table 11. In addition, site 41FB95 may have a component in this tradition. Incised long-bone implements have been found at site 41FB95 (Patterson and Hudgins 1987), and some human bones have also been found at this site (McClure 1987).

The Late Archaic mortuary tradition is characterized by organized burial practices and extensive use of grave goods, including exotic stone and marine shell items. Hall's (1981) Allens Creek report is the standard reference on this subject. It appears that there was participation in a widespread inter-regional trade network to obtain exotic grave goods. A higher degree of cultural complexity is implied by these mortuary practices than is usually found for hunter-gatherer groups in Southeast Texas. This higher degree of cultural complexity may have been promoted by a more sedentary lifestyle due to abundant food resources in this immediate area during this time period. A higher degree of social complexity for hunter-gatherers seems to be connected with a more sedentary lifestyle (Price and Brown 1985:437). The Late Archaic mortuary tradition ended sometime after the start of the Early Ceramic period (A.D. 100-600). Hall (1981) attributes this change to external conflict and the interruption of trade routes. It may be, however, that rapidly increasing population (Patterson 1991c) and climatic change (Story 1990:244) were important factors in the demise of the Late Archaic mortuary tradition, by resulting in a more mobile lifestyle.

The long-bone implements used as grave goods in this mortuary tradition were probably manufactured locally, and sometimes used together with or in place of exotic grave goods. Details of the inter-regional trade patterns of this tradition have not yet been fully defined. The source of marine shell ornaments has not yet been determined, for example. Trade implies mutual exchange, but items for export from Southeast Texas have not been determined. At least some of the inter-regional trade network connected with the Late Archaic mortuary tradition in Southeast Texas may have included involvement in the Poverty Point exchange system of Louisiana (Patterson 1989b).

Change over time in burial direction at site 41FB3 is consistent with change over time in burial direction at site 41AU36 (Hall 1981:Figure 53), with head direction shifting to a more northerly direction in later time. At 41AU36, Middle Archaic burials had a head direction to the southeast. These were Group 1 burials with radiocarbon dates of 2610 and 1530 B.C. Then at site 41FB3, there is a burial cluster with head direct to the east, with a radiocarbon date of 1280 B.C. Later, Group 2 Late Archaic burials at 41AU36 had head directions from northeast to north. Hall (1981:284) states that "It appears that the preferred orientation was shifting toward a more northerly direction

during the latter stages of burial activity in Group 2". Group 2 burials have radiocarbon dates of 520 B.C. and A.D. 360. The western burial cluster at site 41FB3 with a radiocarbon date of 630 B.C. fits well with the northerly head direction of the Group 2 burials at 41AU36.

When data from sites 41AU36 and 41FB3 are considered together, it appears that organized burial practices started in the Middle Archaic in this geographic area, and continued into the Late Archaic period with increasingly elaborate practices, such as use of exotic grave goods and red ochre, in the latter part of the Late Archaic. This indicates an increase in cultural complexity, concurrent with increasing population level, and possibly a shift to a more sedentary lifestyle

POOL HILL SETTLEMENT SEQUENCE

The end of the Late Archaic mortuary tradition may be related to a change in settlement pattern as shown at Pool Hill in the lower Brazos River valley. As noted above, changes in lifeway at the end of the Late Archaic may have been caused by high population density and perhaps climatic change at the same time. After thousands of years of occupation, from the Paleo-Indian to the Late Archaic time periods, Pool Hill had little occupation after the start of the Early Ceramic period. Sites 41FB95 (Patterson and Hudgins 1987) and 41FB198 (Patterson and Hudgins 1991) on Pool Hill have occupation sequences from the Late Paleo-Indian period (8000-5000 B.C.) through the Late Archaic period until about A.D. 100. No pottery and only a few arrow points have been found at these two sites to indicate occupations after the Late Archaic period. Site 41FB3 and 41FB90 (Patterson and Black 1991) on Pool Hill are mainly Late Archaic occupations, and have no evidence of occupation after the Late Archaic.

The change in settlement pattern on Pool Hill at the start of the Early Ceramic period at about A.D. 100 does not mean that occupation of the lower Brazos River Valley was lower, but that preferred occupation locations changed. There may have been a general tendency to locate more campsites on the flood plain of the Brazos River, rather on high terraces such as Pool Hill. Sites on the flood plain would be difficult to find because of deep alluvial deposits. All of the Allens Creek sites (41AU36,37,38) on the western terrace of the Brazos River have occupations after the start of the Early Ceramic period (Hall 1981). Therefore, the low occupation of Pool Hill after the Late Archaic period is only suggestive of a more general settlement pattern change for the entire lower Brazos River valley. Site 41FB223 gives another indication of a settlement pattern change in this area at the end of the Late Archaic period. This site is several miles southeast of site 41FB3 on a large sand hill at the edge of the Brazos River flood plain. Excavations by the HAS have so far found an occupation sequence for 41FB223 from the Late Paleo-Indian through the Late Archaic periods, with no indication of later occupation in the Early Ceramic period. In contrast to the low

occupation of Pool Hill and site 41FB223 after the Late Archaic period, there are many sites in other areas of Southeast Texas that have continuous occupation sequences from the Paleo-Indian through the Late Prehistoric periods. It is suggested that a more mobile lifestyle was practiced in the lower Brazos River valley after the start of the Early Ceramic period, which did not necessarily cause abandonment of all traditional campsite locations. Instead, some of the traditional campsite locations were used for shorter time periods, and some did not have much further use. A less sedentary lifestyle would have contributed to the demise of the Late Archaic mortuary tradition by disrupting some of the cultural complexity associated with a more sedentary lifestyle. There is evidence of a more mobile lifestyle in all of Southeast Texas during the Late Prehistoric period (Patterson 1991c). This trend toward a more mobile lifestyle may have started a few hundred years earlier in the Early Ceramic period.

41FB3 CAMPSITE ACTIVITIES

The use of site 41FB3 as a campsite is shown by lithic artifacts, burnt clay, freshwater mussel shell, and faunal remains. Although mortuary activities at this site are from the Late Archaic time period, campsite use could have started in the Middle Archaic period, since cultural materials were found to a depth of 125 cm, which is of greater depth than the Late Archaic mortuary remains. Also, dart point types found here were used in both the Middle and Late Archaic periods. In any event, intense use of this location as a campsite is not indicated. Occupations were probably by small groups for short time periods, mainly in the Late Archaic period.

SUMMARY

Limited occupation at site 41FB3 may have started as early as the Middle Archaic period, but use of this location appears to have been mainly in the Late Archaic period. This site was used as a campsite and as a cemetery. Data obtained from excavations here contribute to details of prehistoric hunter-gatherer subsistence and settlement patterns of this area of the lower Brazos River valley.

Data on burial practices at site 41FB3 fit well with burial practices of the Late Archaic mortuary tradition of the western part of Southeast Texas. Organized burial practices in this geographic area started in the Middle Archaic period (Hall 1981), but did not reach the fully developed elaborate form, using exotic grave goods, until some time after about 1000 B.C. The Late Archaic mortuary tradition seems to have ended about A.D. 300. Rapidly increasing population and climatic change are possible factors that contributed to the demise of this mortuary tradition.

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Table 1

CALICHE FROM EXCAVATIONS

<u>level, cm</u>	<u>wt., gr.</u>	<u>level, cm</u>	<u>wt., gr.</u>
0-5	16	90-95	985
5-10	2	95-100	829
10-15	68	100-105	451
15-20	69	105-110	500
20-25	34	110-115	49
25-30	131	115-120	74
30-35	116	120-125	132
35-40	137		
40-45	86		
45-50	109		
50-55	98		
55-60	158		
60-65	101		
65-70	124		
70-75	223		
75-80	554		
80-85	180		
85-90	461		

Table 2
DART POINTS

<u>type</u>	<u>dimen., mm</u>			<u>illust.</u>	<u>pit</u>	<u>level, cm</u>
	<u>L</u>	<u>W</u>	<u>T</u>			
Pedernales	67.2	23.1	7.8	Fig. 3A	G	0-10
Marshall	-	40.0	6.4	Fig. 3B	G	20-25
Gary	53.9	24.6	11.1	Fig. 3C	E	20-25
Gary	64.5	24.6	10.7	Fig. 3D	BB	65-70
Kent-like	69.2	22.9	12.4	Fig. 3E	AA	65-70
preform	-	23.5	13.0	Fig. 3F	BB	30-35
preform	-	26.0	8.7	Fig. 3G	AA	80-85
point tip	-	-	8.1	-	CC	95-100
point frag.	-	32.8	7.6	-	BB	85-90
point tip	-	-	-	-	BB	45-50
point frag.	-	-	8.4	-	C	0-30

Table 3

SUMMARY OF LITHIC FLAKES

<u>level, cm</u>	<u>no. of flakes</u>	<u>level, cm</u>	<u>no. of flakes</u>
0-5	9	80-85	34
5-10	30	85-90	27
10-15	104	90-95	26
15-20	102	95-100	8
20-25	91	100-105	8
25-30	122	105-110	9
30-35	70	110-115	12
35-40	88	115-120	6
40-45	43	120-125	5
45-50	56	total	1111
50-55	64		
55-60	48		
60-65	40		
65-70	43		
70-75	32		
75-80	34		

Table 4

MISCELLANEOUS LITHICS

<u>pit</u>	<u>level, cm</u>	<u>item</u>
AA	70-75	split chert cobble
BB	55-60	chert cobble fragment
C	50-55	chert core, 35 mm diam.
CC	95-100	bifacial core, 40 mm diam.
FF	20-25	whole chert cobble, 70 mm diam.
FF	40-45	chert cobble fragment
G	35-40	chert core, 35 mm diam.
G	40-45	quartzite hammerstone fragment
H	35-40	split chert cobble, 50 mm diam.
N	15-20	quartzite hammerstone, 30 mm diam. by 60 mm

Table 5

MODERN MATERIALS

<u>pit</u>	<u>level, cm</u>	<u>items</u>
A	20-30	1 glass piece
A	30-40	1 iron wire
A	40-50	1 iron strap, 6 modern sherds
AA	15-20	1 small metal
AA	20-25	1 glass piece
AA	40-45	1 iron wire
BB	15-20	metal flakes
BB	25-30	1 metal piece
BB	55-60	1 iron wire
BB	70-75	1 glass, 1 iron wire
BX	15-20	1 iron wire
BX	20-25	1 glass piece
C	0-30	1 glass piece
C	30-35	1 iron wire
CC	25-30	1 metal flake
CC	115-120	1 small metal piece
D	0-30	1 glass, 1 iron wire
E	0-15	1 bullet
E	15-25	1 rifle shell
E	25-30	1 iron wire
H	20-25	1 iron wire
J	15-20	1 glass piece
FF	35-40	1 iron wire
EE	10-15	1 iron wire

Table 6

EXCAVATED SANDSTONE

<u>level, cm</u>	<u>no.</u>	<u>wt., gr.</u>	<u>level, cm</u>	<u>no.</u>	<u>wt., gr.</u>
0-5	2	3	80-85	4	50
5-10	3	53	85-90	0	0
10-15	22	134	90-95	1	23
15-20	18	380	95-100	5	57
20-25	24	262	100-105	0	0
25-30	34	495	105-110	2	9
30-35	16	243	110-115	1	21
35-40	24	1108	115-120	4	33
40-45	11	1043			
45-50	16	428			
50-55	15	332			
55-60	19	1622			
60-65	12	329			
65-70	12	238			
70-75	7	105			
75-80	1	2			

Table 7

RED OCHRE ON SANDSTONE TOOLS

<u>pit</u>	<u>level, cm</u>
A	20-25
AA	55-60
CC	95-100
CC	110-115
DD	60-65
F	burial feature
F	35-40
F	40-45
G	50-55

Table 8

EXCAVATED BURNT CLAY

<u>pit</u>	<u>level, cm</u>	<u>wt., gr.</u>	<u>pit</u>	<u>level, cm</u>	<u>wt., gr.</u>
A	40-45	2	FF	25-30	1
AA	35-40	15	FF	30-35	12
AA	20-25	2	FF	65-70	7
BX	30-35	34	FF	35-40	5
BX	25-30	5	FX	25-30	6
BX	15-20	4	G	45-50	46
BB	60-65	34	G	50-55	19
BB	50-55	4	G	55-60	3
C	35-40	3	G	30-35	8
CC	95-100	2	H	15-20	50
CC	115-120	3	H	50-55	9
CC	75-80	3	M	25-30	3
CC	50-55	3			
DD	50-55	10			
DD	55-60	9			
E	15-20	5			
E	60-65	18			

Table 9

FRESHWATER MUSSEL SHELL

<u>level, cm</u>	<u>wt., gr.</u>	<u>level, cm</u>	<u>wt., gr.</u>
0-5	2	80-85	17
5-10	5	85-90	20
10-15	19	90-95	23
15-20	17	95-100	26
20-25	8	100-105	12
25-30	43	105-110	0
30-35	14	110-115	8
35-40	37	115-120	0
40-45	28	120-125	trace
45-50	97		
50-55	12		
55-60	19		
60-65	4		
65-70	72		
70-75	15		
75-80	16		

Table 10

BONE QUANTITIES

<u>level, cm</u>	<u>wt., gr.</u>	<u>level, cm</u>	<u>wt., gr.</u>
0-5	1	80-85	34
5-10	23	85-90	38
10-15	82	90-95	12
15-20	76	95-100	14
20-25	136	100-105	8
25-30	177	105-110	34
30-35	148	110-115	2
35-40	143	115-120	20
40-45	78	120-125	3
45-50	171		
50-55	143		
55-60	72		
60-65	29		
65-70	46		
70-75	33		
75-80	26		

Table 11

SITES IN LATE ARCHAIC MORTUARY TRADITION

<u>site</u>	<u>burials</u>	<u>references</u>
1. Goebel (41AU1)	42	Duke 1981
2. Brandes (41AU55)	3	Highley et al. 1988
3. Ernest Witte (41AU36)	141	Hall 1981
4. Leonard K (41AU37)	9	Hall 1981
5. Albert George (41FB13)	15+	Walley 1955
6. Big Creek (41FB2)	75+	TARL archives
7. Piekert (41WH14)	11	Kindall 1980, Copas 1984
8. Crestmont (41WH39)	39+	Vernon 1989
9. 41WH44	2	Black, Patterson, Storey 1992
10. Bowser (41FB3)	12+	this report
11. Ferguson (41FB42)	4+	HAS report in progress

Table 12

EXCAVATION PIT COORDINATES

<u>pit</u>	<u>N</u>	<u>E</u>	<u>remarks</u>
A	100	90	modern trash to 40 cm
B	100	78	burials, closed at 50 cm
BX	99	78	burials, closed at 50 cm
C	100	70	closed at 55 cm
D	100	80	closed at 45 cm
E	100	82	burials, closed at 80 cm
F	100	85	burial, expanded as Pit FX
G	100	97	burial, closed at 110 cm
H	100.5	96	closed at 55 cm
I	100.5	106	sterile pit
J	100.5	111	closed at 20 cm
K	111	80	closed at 25 cm
L	106	80	burial, closed at 35 cm
M	95	80	burial, closed at 35 cm
N	90	80	closed at 35 cm
O	111	85	closed at 20 cm
P	106	85	closed at 25 cm
Q	95	85	closed at 30 cm
R	90	85	closed at 40 cm
S	111	75	closed at 25 cm
T	106	75	closed at 35 cm
AA	100	98	burial, closed at 110 cm
BB	101	98	burial, closed at 110 cm
CC	101	99	burial, closed at 125 cm
DD	100	104	closed at 100 cm
EE	99.5	106.5	burial, closed at 50 cm
FF	100	107	burial, closed at 50 cm

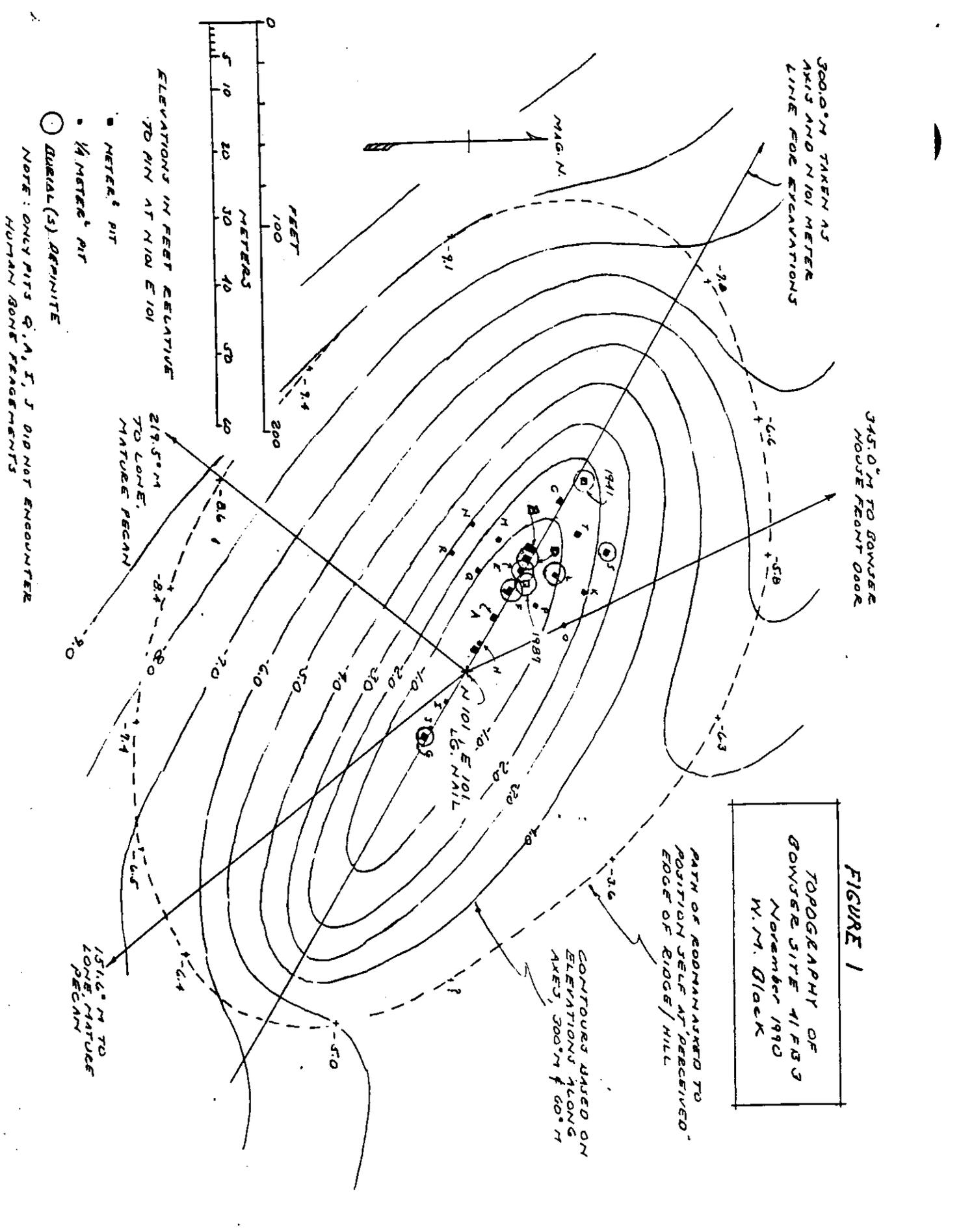


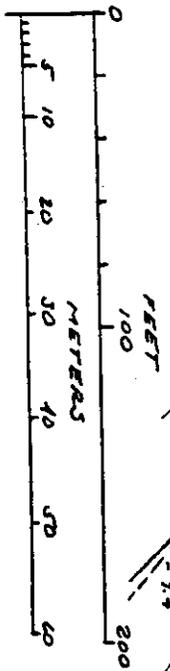
FIGURE 1
 TOPOGRAPHY OF
 GOWSER SITE 41B3
 November 1990
 W. M. Black

300.0m TAKEN AS
 AXIS AND N101 METER
 LINE FOR EXCAVATIONS

345.0m TO GOWSER
 HOUSE FRONT DOOR

PATH OF ROMAN ARMED TO
 POSITION SELF AT PERCEIVED
 EDGE OF RIDGE/HILL

CONTOURS BASED ON
 ELEVATIONS ALONG
 AXES, 300.0m & 60.0m



ELEVATIONS IN FEET RELATIVE
 TO MIN AT N101 E101

- METER'S PIT
- 1/4 METER'S PIT

○ DUBIAL (S) DEFINITE

NOTE: ONLY PITS Q, A, I, J DID NOT ENCOUNTER
 HUMAN BONE FRAGMENTS

219.5m
 TO LONE,
 MATURE PECAN

151.6m TO
 LONE, MATURE
 PECAN

N 101 E 101
 LG. MAIL

MAG. N.

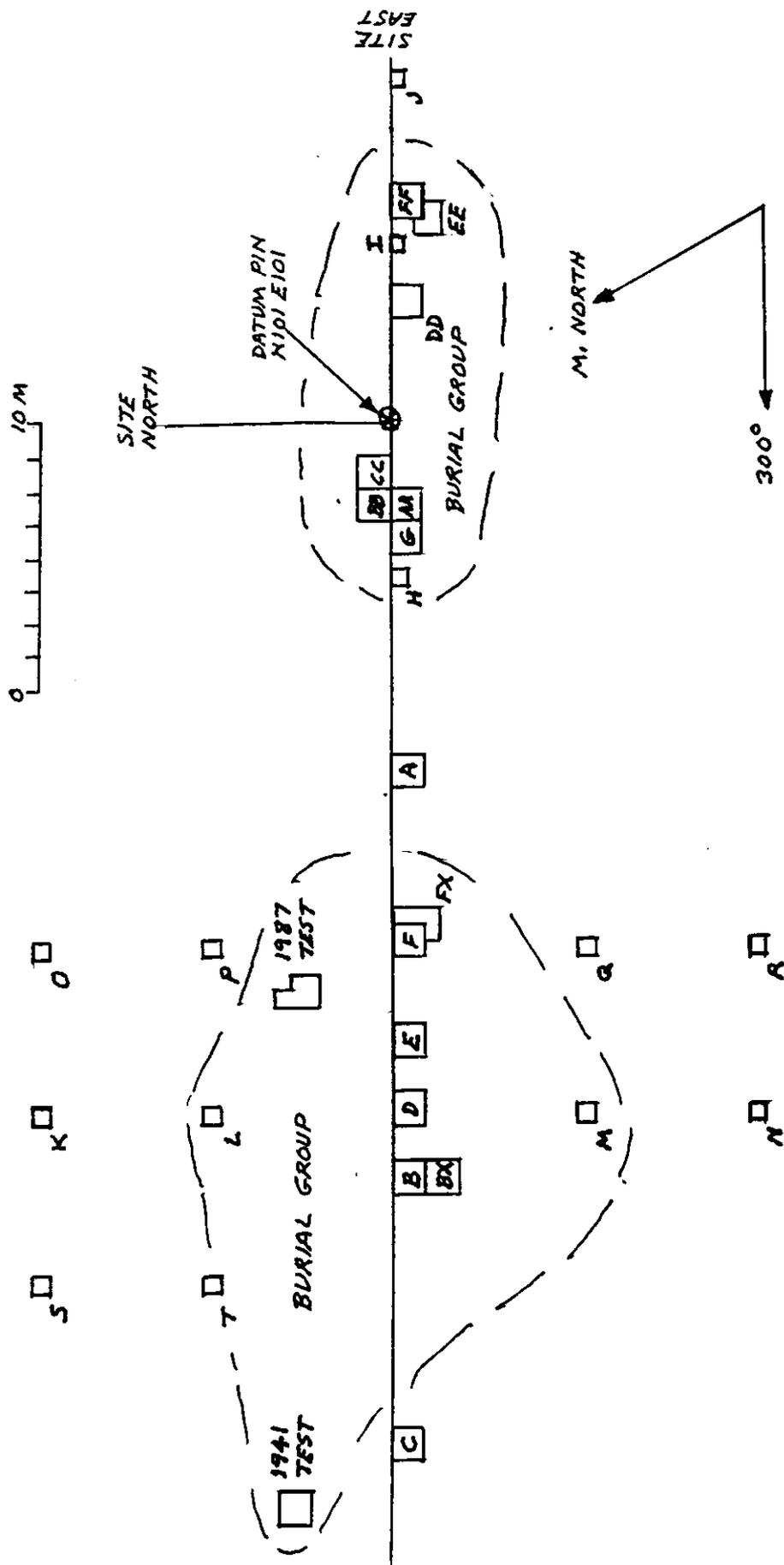
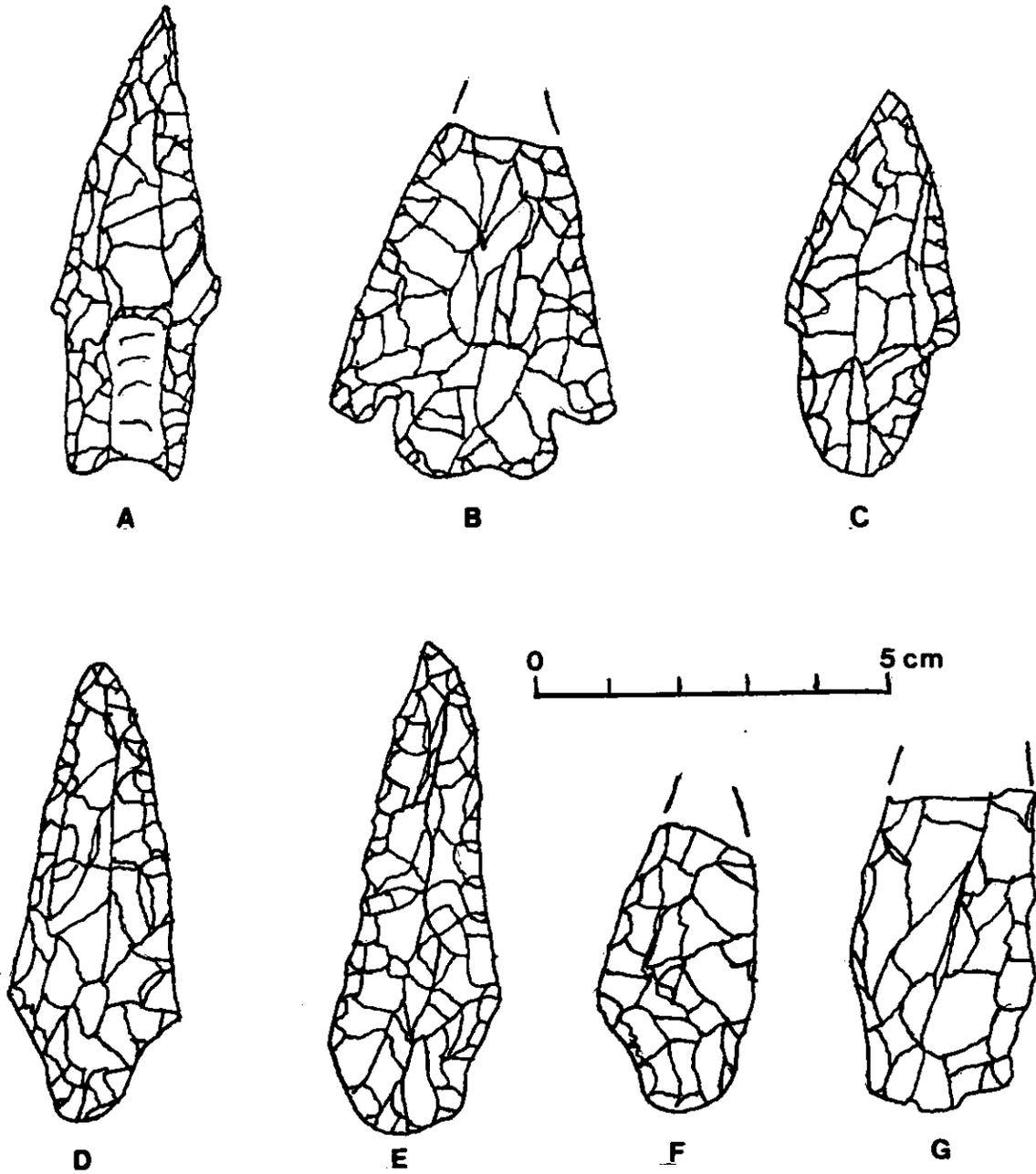


FIGURE 2
SITE EXCAVATION LAYOUT

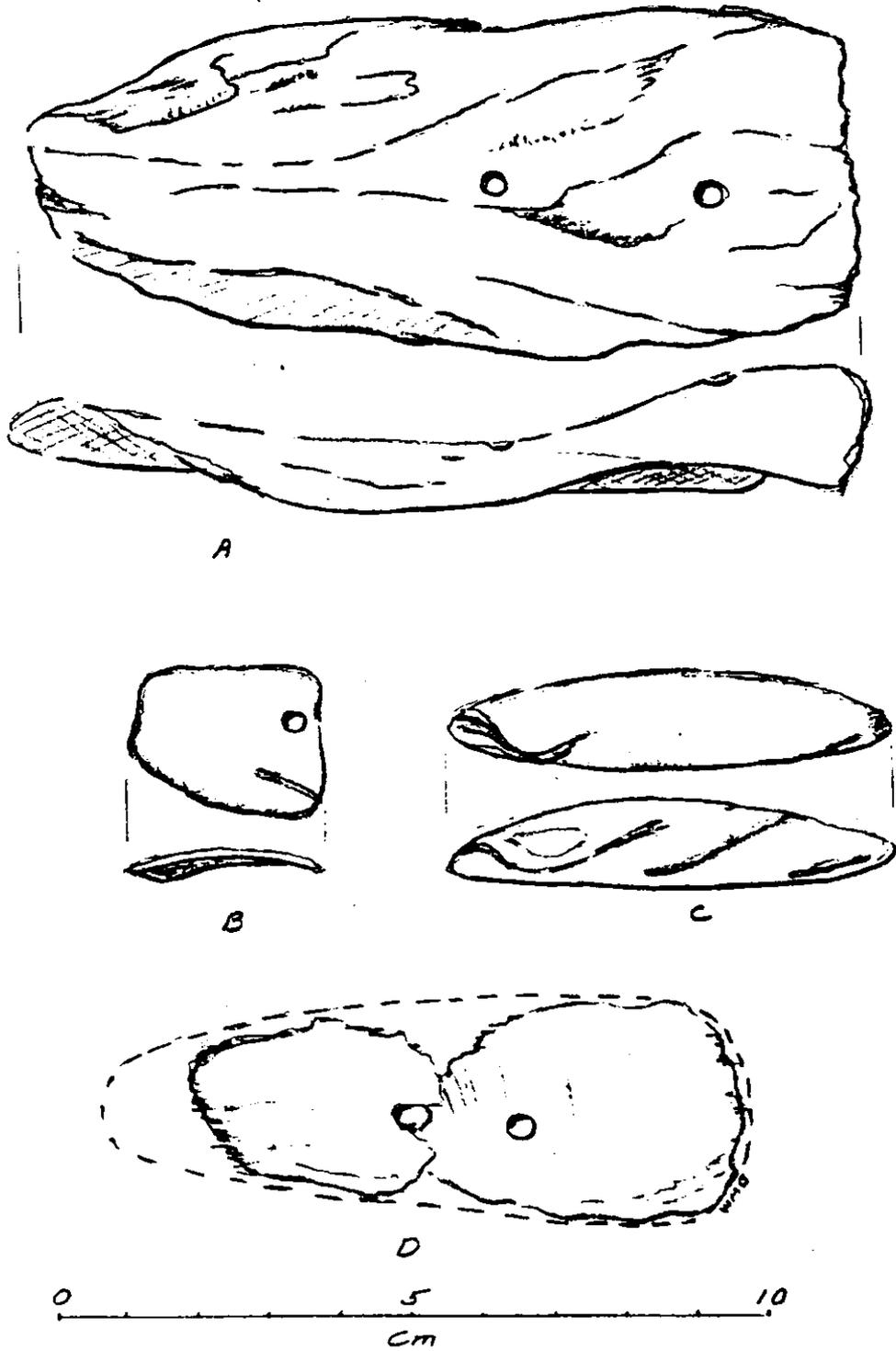
Figure 3
DART POINTS



A- Pedernales; B- Marshall; C,D- Gary; E- Kent-like;
F,G- preforms

Figure 4

MARINE SHELL ARTIFACTS



A,B,D- pendants; C- columella bead

Figure 5

LONG-BONE IMPLEMENTS

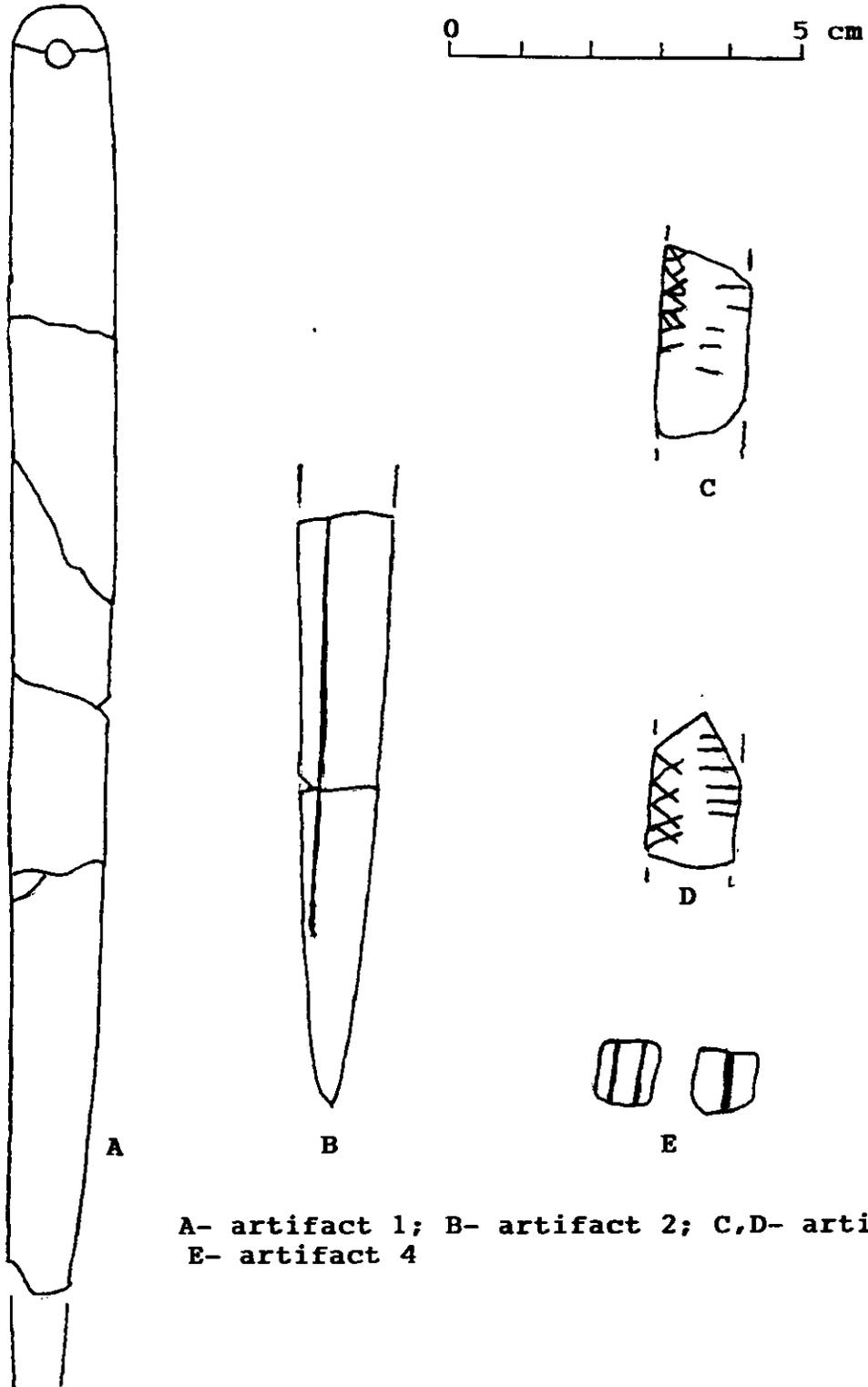
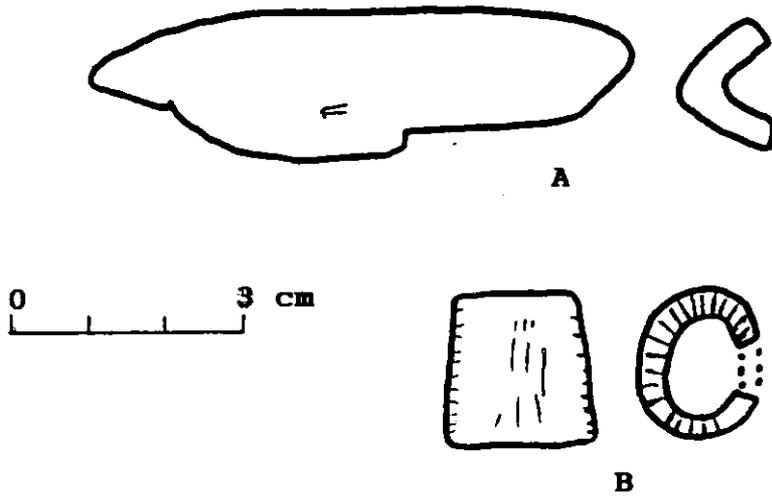


Figure 6

MISCELLANEOUS BONE ARTIFACTS



A- bone tool, B- slotted bone tube