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Evelyn Lewis
Editor

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About the Cover: We are all familiar with the emblem of the Boy Scouts of America. Richard McReynolds has created a scene depicting Scouts of Bear Creek Boy Scout Reservation actively pursuing their interest in Archaeology. See Janet Steele's paper starting on page 10 of this issue.

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E D I T O R I A L

WHITHER ARCHAEOLOGY?

It used to be easy to be an archaeologist. You just went looking for treasure in ancient temples or sought lost cities or tribes to loot. An anachonism left over from these early days is that the Department of Archaeology at Oxford University is still a part of the Department of History of Art. Some people still think that archaeology is a treasure hunt. When the Houston Archeological Society sought permission to excavate 41 LB 2, the Jamison Site, they had to agree to give the property owner half of all the gold they found!

Things have changed. The current ideas have archaeology as the examination and interpretation of physical evidence for understanding the living conditions of earlier people in the broadest sense. This physical evidence can range from beautiful rock art to lithic debitage, from phytoliths to musket barrels. The examination becomes ever more specialized using highly sophisticated and complex techniques. **Archaeology** magazine recently published a special issue "A.D. 2050" to anticipate the future of archaeological methods. They foresee less disturbance of the record by excavation and more emphasis on micro artifacts for study.

Where does all this leave the amateur, the "avocational" archaeologist? Do you have to be a brain surgeon to excavate a human skull? As Dr. Dee Ann Story recently pointed out, the preservation of the record of the past is largely the responsibility of the knowledgeable non-professionals. Discovering sites, describing them and recording their location can only be done on a broad scale by eager, energetic amateurs. They appreciate the fragility of the record, the enormous range of evidence from postholes to potsherds and projectile points to painted pebbles. It takes the enthusiasm of dedicated stewards of the records of past peoples to spread the appreciation of the need for preservation. Not only is this a great challenge, it is a satisfying and fulfilling activity. It is also enjoyable and just plain fun.

The role of the amateur is greater than ever. The question is "Whither archaeology? not "wither archaeology."

Don Lewis
Associate Editor

NOTES ON SOUTH TEXAS ARCHAEOLOGY: 1989-2

A Late Archaic Burial from the Lower Nueces River Drainage, Live Oak County, Texas

Thomas R. Hester

In the late 1960s, I became friends with the late Lotta and J. L. (Jack) Tunnell of Kingsville, Texas. In addition to helping me with various facets of the archaeological survey of Grullo and Baffin Bays, they also shared information on their extensive artifact collection. The collection was from a number of sites across south Texas, and the Tunnells had been careful to plot the locations of most of the sites and to keep the artifacts separate by site. They subsequently donated the collection to the Texas Archeological Research Laboratory (TARL), The University of Texas at Austin, where it is housed today.

In 1961, Mr. Tunnell had contacted the Department of Anthropology in Austin and reported the discovery of a disturbed prehistoric burial. In the chest area of the burial, Mr. Tunnell found three small stemmed dart points. E. Mott Davis, then the editor of **Texas Archeology**, the newsletter of the Texas Archeological Society, published much of Mr. Tunnell's letter in Vol. 5, No. 4 (page 5) of that newsletter and added some brief comments of his own.

The site at which the burial was discovered was given the number 41 LK 21. It was situated on the west bluff of the Nueces River (now flooded by Lake Corpus Christi), east of the hamlet of Lagarto. Detailed provenience data is on file at TARL. The burial reported by Mr. Tunnell in July 1961 rested in sandy soil, apparently in flexed position, with the arms oriented toward the east. However, assessment of burial position was clearly made difficult, as the burial had been largely scraped away by a grading machine. The rib cage area was still partly intact, and Mr. Tunnell was emphatic as to the recovery of three small darts "still in the rib cage" (**Texas Archeology** 1961:5).

The specimens from the burial are shown in Figure 1. Typologically, two can be placed in the Ensor category, and the third is likely of the same type, although the lower part of the stem is broken away. Descriptions and measurements follow in Table 1.

Specimen	Length	Width	Thickness	Weight	Material
1	48	19.5	8	6.5	brown chert
2	42.5	18	6	4.5	brown chert
3	(53)	24	7.5	9.0	tan chert

TABLE 1. Dart Points from Burial at 41 LK 21. All measurements are in millimeters and weights are in grams.

Some further technological notes perhaps shed some light on their presence in the rib cage area. Two specimens (Figure 1 b,c) have impact flakes on their tips, and on both, the lower part of the stem have largely (Figure 1 b) or entirely (Figure 1 c) been snapped off. Indeed from my perspective, the breakage patterns on these two points are consonant with what we might expect if the specimens, mounted on shafts, had penetrated the individual, likely causing his/her death. In addition, Specimens 1 and 2 appear to be made of the identical brown chert, suggesting that they were made (and hurled) by the same person. As Mr. Tunnell noted in 1961 "...if the points had been buried with the victim to be used in the hereafter, wouldn't they have been perfect rather than broken points?" (ibid.). Although this logic is not

always seen in grave goods placed with the dead, it can be observed that finished or completed points and preforms were the norm in the burial caches at Loma Sandia, a late Middle Archaic cemetery also in Live Oak County (Taylor and Highley, n.d.).

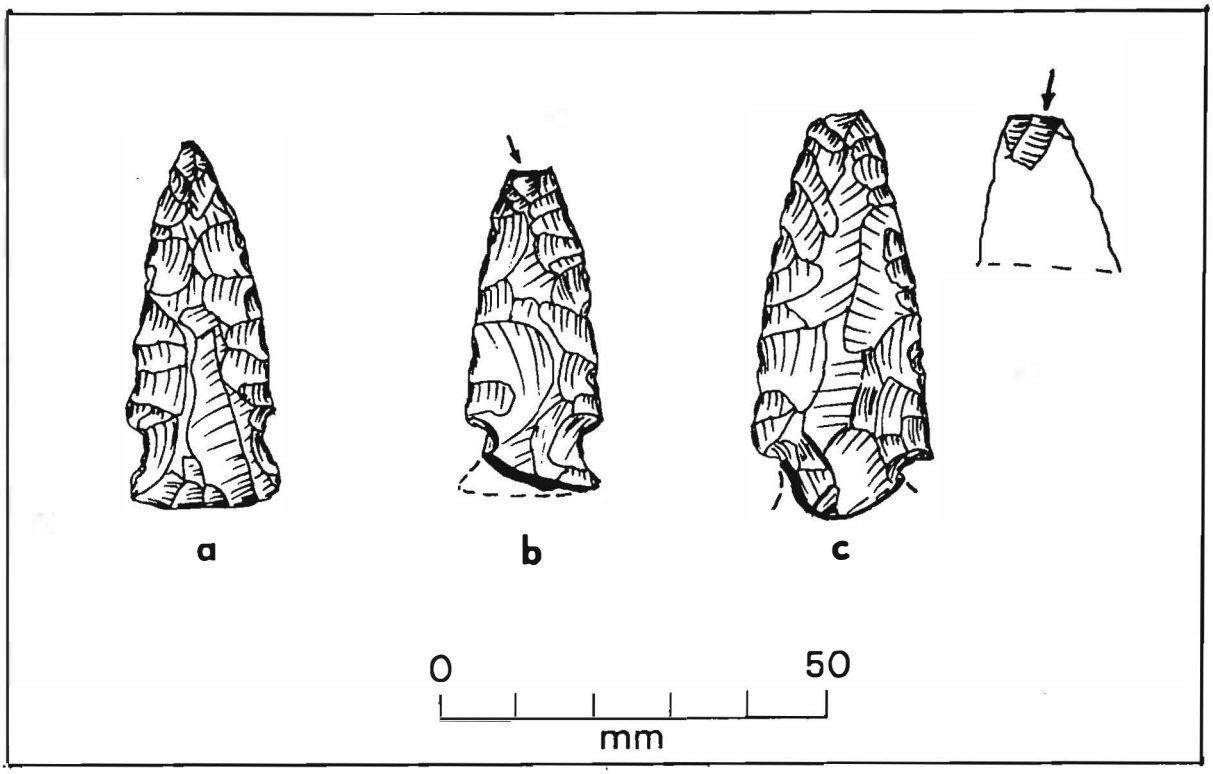

Figure 1. Dart Points from Burial at 41 LK 21. a, Specimen 1; b, Specimen 2 (arrow indicates impact flake); c, Specimen 3 (reverse side of tip illustrated and impact flakes shown).

In closing, I would like to note that the investigations at Choke Canyon Reservoir, 45 miles upstream from 41 LK 21, led to the recording of 44 Late Archaic sites. The common diagnostics at these sites included Ensor, Frio, Ellis, Marcos and Fairland points. The Late Archaic period is dated for this region at 400 B.C. to A.D. 900 (Hall, Hester and Black 1986:400-401).

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INCIDENT ON SALT CREEK

Curtis Dusek

On a cool November day in 1869 six men rode into what is now McMullen County. Coming from the east they skirted along the south bank of the Frio River, staying far enough away from the river to avoid the dense tangle of undergrowth that grew along the river bottoms. Eventually the riders came upon the spot where the red waters of San Miguel Creek emptied into the Frio River from the northwest. Here they found a shallow spot in the Frio River just below its junction with San Miguel Creek, and crossed over onto the north side. The riders then proceeded cautiously up San Miguel Creek, not wanting to reveal their presence to anyone in the area. After riding about four miles they came upon a small clearing in which a lone ranch house stood. Dismounting in a secluded spot away from the ranch, they quietly awaited the approach of darkness.

With the coming of nightfall the six men readied their firearms and stealthily surrounded the ranch house. One of the men removed the bell from one of the gentle ranch oxen and crept toward a nearby garden plot. Here he tinkled the bell once, waited a few seconds, and then tinkled it again.

"That old ox is in the garden again," a voice was heard to say from inside the ranch house.

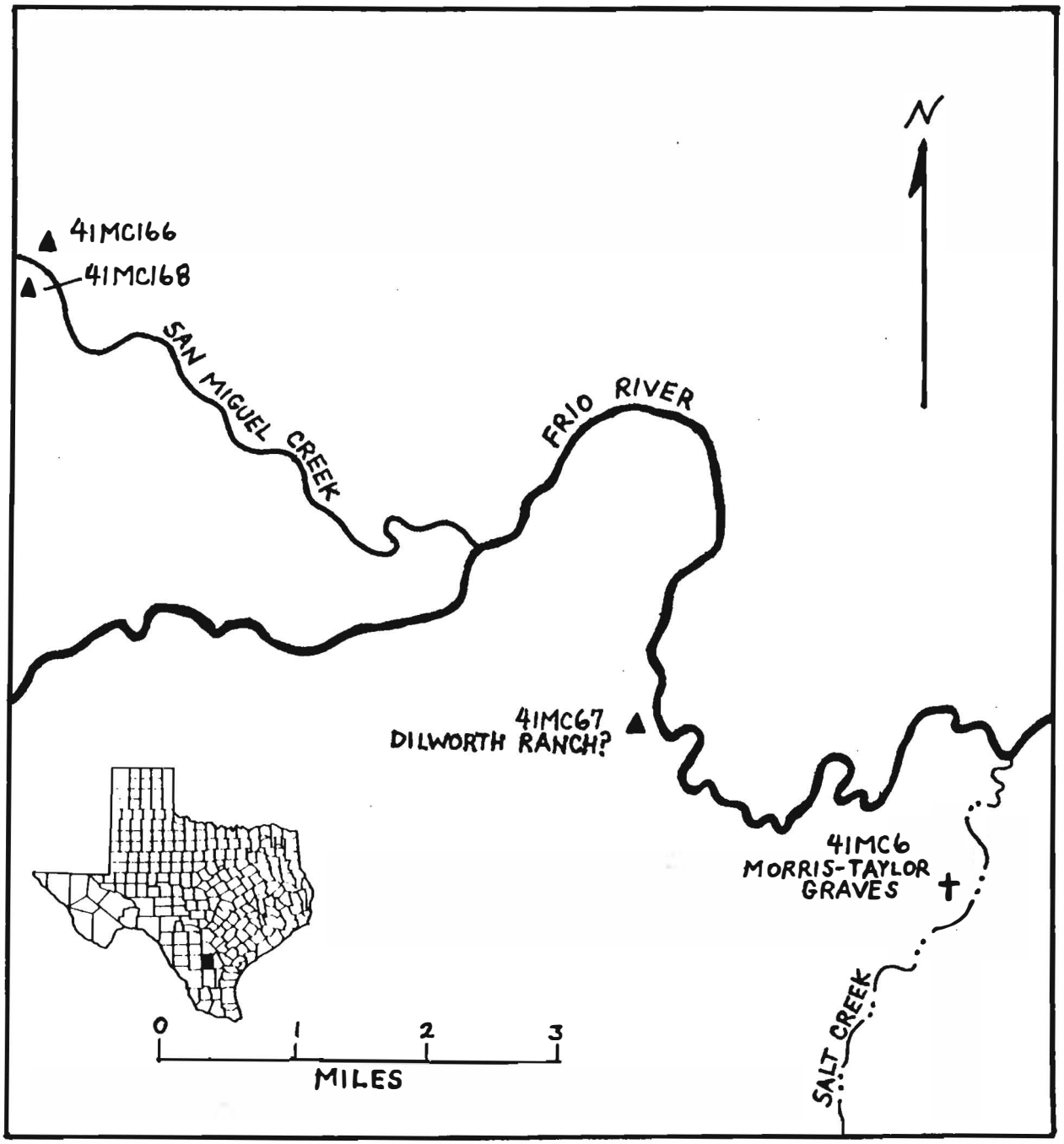
The door of the ranch house opened and the figures of two men emerged. As they began walking toward the garden, half a dozen men emerged from the shadows and rushed forward. With guns drawn and ready they seized their two unsuspecting victims. Unarmed, and with six guns pointed straight at them, the two men, Martin Luther Taylor and his father-in-law, William B. Morris, realized they could not escape. The men told Taylor that he was to be taken to the small town of Oakville in nearby Live Oak County. There he would be placed in jail to await a trial on charges pending against him. Morris asked if he could accompany his son-in-law and act as bondsman. Somewhat reluctantly the men agreed.

Waiting until daybreak the party mounted up. Taylor and Morris bid their wives goodbye, telling them that they would soon return. Proceeding down San Miguel Creek the party once again crossed over onto the south side of the Frio River and turned eastward.

After several miles of hard riding the horsemen came upon the ranch of Dr. George Dilworth. Here they decided to pause for a few minutes. Morris asked Dilworth's young son, Andrew, to fetch him a drink of water. Little did Morris realize, as the cool water trickled down his throat, that this was to be the last drink of water that he would ever have.

Following along the same route that they had come in on, the small group of horsemen continued eastward. After riding about three miles they came to a small rise overlooking Salt Creek. The leader of the group raised his hand, signaling for everyone to stop. Taylor and Morris looked at each other, confused as to why they were stopping. Realizing too late what was about to happen, Morris went for his gun. Before the gun cleared its holster half a dozen shells ripped into his body, knocking him from his horse. Unarmed, Taylor spurred his mount forward, hoping to escape in the dense tangle of brush along Salt Creek. Before he had gone a dozen paces a second volley of pistol fire cut him down. Falling from his horse, Taylor was dead before his body hit the ground. Leaving the bullet riddled corpses of Morris and Taylor where they lay, the horsemen rode eastward as quickly as possible, trying to put as much distance between themselves and McMullen County as they could, before their heinous deed was discovered.

At the time that Morris and Taylor were killed the bloody Sutton-Taylor Feud was raging in Texas, and their deaths have often been attributed to members of the "Sutton Gang." A closer examination of the historical evidence, however, seems to indicate this was not exactly the case. In fact, the name applied to the feud itself is misleading. Of the many people involved in the feud only one person by the name of Sutton played a major part, that person being Billy Sutton.



Site of possible Dilworth Ranch (see text), and original location of the Morris-Taylor graves, relocated in 1982 by UTSA archaeologists and the Bureau of Reclamation.

Many accounts have the Sutton-Taylor Feud first erupting when Billy Sutton and some associates shot down Buck Taylor and Richard Chisholm at a social gathering in the small town of Clinton in DeWitt County on December 24, 1868 (Day 1937:10-11). The reason for the killing is somewhat vague. Day states that Buck Taylor and Billy Sutton had earlier joined together and driven their two herds of horses east to market. Buck Taylor is later told that Sutton's horses were stolen, and calls Sutton a horse thief, giving Sutton a motive for hatred against Taylor (Day 1937:10). Robert Sutton, however, believes the killing may have been the result of a fair fight (Sutton 1974:34).

This killing appears to have been the fuse that ignited the powder keg as the Taylors and their friends joined forces against Sutton and his friends. The end result was that DeWitt County and the surrounding area became a battleground as members of the two factions fought and killed each other whenever the opportunity presented itself.

The Taylor faction was also out of favor with the Federal military government that occupied Texas following the Civil War. One of the main offenses was the killing of a Major Thompson, the post commander of Fort Mason, in November of 1867, by Hays Taylor and his brother Phillip, better known as "Doboy." It appears that Major Thompson was killed while attempting to arrest the Taylor brothers following an altercation between the brothers and Federal soldiers in Mason. Hays and Doboy managed to escape but were constantly on the move thereafter, in an attempt to stay ahead of the military authorities and bounty hunters (Sutton 1974:16-18).

In 1869 J. J. Reynolds, the military governor of Texas, sanctioned the formation of a body of men known as the Regulators. Their mission was to bring an end to the lawlessness that existed in South Texas at the time. Although their formation seems to be largely a response to rampant cattle theft, the elimination of the Taylor faction seems to have been given a high priority. Two of the men delegated to lead the Regulators were Jack Helm, a onetime foreman for A. H. "Shanghai" Pierce, and Captain C. S. Bell, a former Union spy and scout. Also enlisted as a leader of the Regulators was Joe Tumlinson, a famed Indian fighter, from the days of the Republic of Texas (Sutton 1974:8-9).

Tumlinson's reason for joining up with the Regulators is somewhat mysterious, especially knowing that one of the primary aims of the Regulators was the apprehension of members of the Taylor family. Tumlinson's first wife, Johanna, was a Taylor. She was the sister of Creed Taylor, father of Hays and Doboy. At one time Tumlinson and Creed even took Doboy to Monterrey, Mexico in an attempt to put him out of reach of the military law governing Texas at the time. What caused the rift between Tumlinson and the Taylors remains unknown (Sutton 1974:15-16).

It is with this setting that the Regulators swung into action in June of 1869, and Martin Taylor was but one of the many Taylors on their list.

The identity of the leader of the group of Regulators that came after Martin Taylor in November, 1869, is open to speculation. Day states that Joe Tumlinson was the leader, and that the group consisted of six men. He also has the foray occurring in April, 1870 (Day 1937:12), although the tombstones over the graves of Morris and Taylor give November 23, 1869 as the date of their deaths.

Fortunately, however, the recollections of Day are not the sole source of information on this incident. In a feature printed in the August 27, 1933 edition of the San Antonio Express, Henry Yelvington had the opportunity to interview Judge Andrew Dilworth of McMullen County, concerning the graves of Morris and Taylor. Dilworth was a young boy at the time of the incident, and was present when the Regulators, with Morris and Taylor in their custody, stopped at his father's ranch on their way to Oakville. Although the Regulators were not masked, Dilworth does not know if they were led by Bell or Helm. He also mentions giving Morris a drink of water at this time. Yelvington puts the number of Regulators in the group at seven, although he does not mention how he arrived at this figure. Cowhands from the Dilworth Ranch, who were searching for cattle the following day, reportedly came upon the bullet riddled bodies of Morris and Taylor (Yelvington 1933). If Dilworth did not actually know either Bell or Helm, then it is quite possible that Tumlinson was in charge of this group of Regulators.

Different versions of the actual capture of Morris and Taylor also exist. According to Day, the Regulators first went to the home of Morris and captured him. Tying him on his horse they then proceeded to Taylor's home. Here two men were left to guard Morris while the rest slipped up and captured Taylor (Day 1937:12). In Yelvington's version the Regulators simply rode up to Taylor's ranch and forced him, at gunpoint, to go along with them. Taylor's wife then asked her father, Morris, to accompany her husband (Yelvington 1933).

Another interesting account, which may have some bearing on the capture of Morris and Taylor, occurred three years later, in 1872. During the night Billy Sutton and four associates crept up to the house of a man named Pitkin Taylor. They removed a bell from one of Pitkin's oxen, went into the corn patch, and tinkled the bell. Believing his oxen to have gotten into the corn patch, Taylor came out of his house and was shot down. Some of the Taylor descendants are said to have related the use of the ox bell in the capture of Morris and Taylor (Sutton 1974:36-37). If this was the method used to capture Morris and Taylor, it seems unlikely that the bell was tinkled in a corn patch. A field of corn, growing in late November, is highly improbable.

The events that unfolded after the Regulators left the Dilworth Ranch are anyone's guess. Day simply says that Morris and Taylor were "carried into the woods and shot down like dogs" (Day 1937:13). The graves of Morris and Taylor lie close to the route of the old Oakville-Tilden Road (Everett 1981:48), and it was probably along this road that the group was traveling when the killings occurred. According to Yelvington it was said that Taylor started to run and had to be killed. Why Morris was also killed, and the bodies left unburied, is unknown (Yelvington 1933). "Attempted escapes" seem to have been a common occurrence among prisoners held by the Regulators (Sutton 1974:20).

Due to the archaeological work done during the construction of Choke Canyon Reservoir on the Frio River, it is possible to attempt to correlate the historical evidence with the archaeological evidence in the case of the Morris and Taylor incident. The census of 1870 lists the wives of Morris and Taylor as living together on San Miguel Creek, about five miles upstream from its confluence with the Frio River (Everett 1981:48). Two historical archaeological sites, 41 MC 166 and 41 MC 168, have been recorded in this area. 41 MC 168 is that of a farm/ranch residence, while 41 MC 166 is a refuse accumulation. Archival information (Everett 1981:45) and analysis of historic debris from the sites (Bandy 1981:167-168) would seem to indicate that both sites post-date the 1870s and are, therefore, not likely candidates for the ranch of Morris and Taylor. No other historic sites of consideration have been recorded in this area.

Evidence for the site of the Dilworth Ranch is more positive. Oral legend has it that the dugout site of 41 MC 67 was, at one time, inhabited by a doctor. One of the original settlers in the area was Dr. George Anson Dilworth, and it seems quite conceivable that he is the doctor of reference. The graves of Dilworth, his wife, and a daughter, were also located about one-half mile to the west of the site.

Since Dilworth, and most of the other early settlers in this area, were squatters, it is virtually useless to attempt to locate their residences based on early land titles. They may have believed that they were living on land that belonged to the state, and they would eventually be able to acquire titles to their small farms (Everett 1981:12).

Archaeological investigations were carried out at 41 MC 67 by the Texas Archaeological Society field school in June of 1981, and later in July of the same year, by archaeologists from the Center for Archaeological Research at UTSA. Analysis of artifacts recovered from the site appear to indicate an occupation period from about 1858 to 1880 (Fox 1986:36-45). This time period coincides with that of the Morris and Taylor killings.

Another strong point in favor of assuming that 41 MC 67 was the Dilworth Ranch is the location of the site itself. The site is located along the most expedient route one would take if he were to travel from the mouth of San Miguel Creek to the spot where Morris and Taylor are buried. Presumably this would have been the route traveled by the Regulators.

With the eventual inundation of the gravesites by the rising waters of Choke Canyon Reservoir, it became necessary to relocate them. On February 13, 1982 archaeologists from UTSA along with representatives from the United States Bureau of Reclamation, and morticians from the Hurley Funeral Home in Pleasanton, met at the site to accomplish this task. The burial, designated 41 MC 6, consisted of a low rubble cairn roughly two meters square with two gravestones leaning against the west edge of the cairn, their inscriptions facing west. Morris' gravestone was to the north while that of Taylor was to the south. William B. Morris was born in 1802 and died in 1869. Martin Luther Taylor was born in 1842 and, of course, also met his untimely death in 1869 (Fox 1984:9-10). After having been buried for over 110 years Morris and Taylor now had a chance to reveal some of their secrets.

Although the archaeologists were severely limited by the amount of time they were allowed to study the contents of the graves, several bits of interesting information were noted. Four coat buttons and one cuff-sized button from a U. S. Army General Service coat were found in the upper body portion of the southern grave. Some of the artifacts noted from the northern grave were a pocket knife, a dime dating from the 1860s but corroded too badly to note the exact year, a silver concha, and a brass buckle from some type of webbed belt. The artifacts along with the bone and some of the soil from the graves were placed in concrete grave liners and taken to the Tilden Cemetery for reburial (Fox 1984:12-14).

Fox noted that the U. S. Army General Service buttons found associated with the southern grave were interesting in view of the fact that the Taylors were well known for their Confederate sympathies (Fox 1984:12). If the placement of the gravestones was correct, this would have been the grave of Martin Taylor. Taylor, however, could have acquired the coat, or just the buttons, by means other than having once served in the U. S. Army.

A long-time resident of a ranch located near the gravesite told the author that, years ago, oilfield workers, who were drilling a nearby oil well, had dug into the cairn and removed a handgun. Yelvington observed that the cairn was in a bad condition when he saw it in 1933, although he mentions having seen it many years prior when it was still in good condition (Yelvington 1933). Fox also notes the disturbed condition of the remains (Fox 1984:14). If the Regulators had allowed one of the two men to carry a gun it most likely was Morris. There were no charges against him, and he was accompanying the group merely to act as Taylor's bondsman.

Martin Taylor may not have been the only member of the Taylor faction to have met his end in McMullen County. According to Andrew Dilworth a man by the name of Henry Westfall was killed in the area by some of C. S. Bell's men in 1870 or 1871 (Yelvington 1933). A man by the same name is also reported to have ridden with Hays and Doboy Taylor when Hays was killed by a group of men under Bell in June of 1869 (Sutton 1974:22). These two accounts are possibly referring to the same person.

The questionable Texas election of 1869 ushered into office the carpetbaggers, under the rule of newly elected governor, Edmund J. Davis. One radical bill, passed early in his term, was the establishment of the State Police. The State Police were to consist of 200 men who would have the authority to operate anywhere in Texas, unhindered by county lines, as sheriffs and local constables were. They could take prisoners from one county to another for trial, and could also operate undercover as secret agents (Fehrenbach 1968:414-417). One of the first captains appointed to lead them was Jack Helm (Sutton 1974:27).

With the establishment of the State Police the Regulators ceased to function. The State Police, however, were just as fervent as the Regulators, in their desire to put an end to the Taylor faction. The Taylors were not about to submit easily, and one of their victims was to be Jack Helm.

Helm was killed in July of 1873 in the small town of Albuquerque in Wilson County by Jim Taylor, son of Pitkin Taylor, and John Wesley Hardin, who had thrown his support behind the Taylors. Hardin states that Jack Helm attacked Jim Taylor with a large knife. Hardin shot Helm, then held his gun on a group of Helm's supporters while Taylor finished Helm off by repeatedly shooting him in the head (Sutton 1974:43-44).

As for Billy Sutton, he was also to meet his death facing the shooting end of Taylor guns. Sutton had decided to get out of DeWitt County for good, or at least until more peaceful times prevailed. He had put together a herd of cattle to be driven to Kansas. Sutton and his wife had planned to take a steamer to New Orleans, and from there they would go by rail to Kansas to await the herd's arrival. The Taylors, however, learned of Sutton's intentions and were not about to let him get away. Sutton, along with his wife and a friend named Gabriel Slaughter, boarded the steamer "Clinton" at Indianola on March 11, 1874. Jim Taylor and his cousin Bill Taylor boarded the "Clinton," shot both Sutton and Slaughter, then made good their escape (Sutton 1974:51-53).

Events finally came to a head in September, 1876, with the killing of Dr. Philip Brassell of DeWitt County and his son George, by masked members of the Sutton faction. Concerned citizens of DeWitt County wrote the Governor asking for a detachment of rangers to help clean things up. On November 23 the rangers arrived, commanded by Lieutenant Lee Hall. A grand jury was assembled and returned true bills for the arrest of seven men believed to be responsible for the Brassell killings. All seven men were captured by the rangers on the evening of December 22, 1876, while attending the wedding of one of the accused. Although the gun battles ceased, many legal battles followed, with the last member of the accused party being pardoned by the Governor in 1896 (Sutton 1974:70-79). As for Morris and Taylor, they never did get their day in court.

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ARCHAEOLOGY AT BEAR CREEK SCOUT RESERVATION

Janet Fitzsimmons Steele

ABSTRACT

During the summers of 1983 and 1984, archaeological excavations were conducted at the Bear Creek Site (41 KR 172) in Kerr County, Texas. The site of this investigation was a burned rock midden first reported by the Southern Texas Archaeological Association's survey of the Boy Scout Reservation. These excavations were conducted as part of an educational program. The methods used to accomplish these excavations are unique to this project and will be reported. One possible localized function of the burned rock midden is considered in this environment.

INTRODUCTION

In 1982, my husband accepted the summer job assignment of Program Director for the Boy Scouts of America at the Alamo Area Council's Bear Creek Scout Reservation located in Kerr County, Central Texas (see Figure 1). During the summer camp season, I was shown "The Digs" and invited to get my own "arrowheads." As I stared into the ragged potholes that pitted the 20- by 40-meter burned rock midden, I was proudly told of the fine adornments for neckerchief slides that had come from the depressions. I was a assured that there were also artifact boards and, yes, cigar boxes brimming with artifacts that had been dug up by a clique of camp collectors (Figure 2). I said that I did not really want to dig up "my points," but I would be interested in seeing their collections. I spent that summer politely discussing their ill-gotten goods, and watching in amazement and dismay as carloads of people drove to the midden with their shovels.

I realized that these collectors were displaying a negative archaeological lesson to the thousand or more Boy Scouts who spend a week of their summer vacation at this camp every year. The site, 41 KR 172, is a burned rock midden located on the northern side of a plowed field at the camp. It is the largest, most prominent remaining midden on the Reservation. This midden is highly accessible and visible from the main camp road. I was at a loss as to how this looting could be stopped. Some of the Bear Creek pothunters were very active and dedicated adult Scouters. I did not want to jeopardize my husband's new job; and I did not want to make the situation worse by creating a backlash, which might result from telling the collectors that their activity was an unethical destruction of a finite cultural resource and must be stopped immediately.

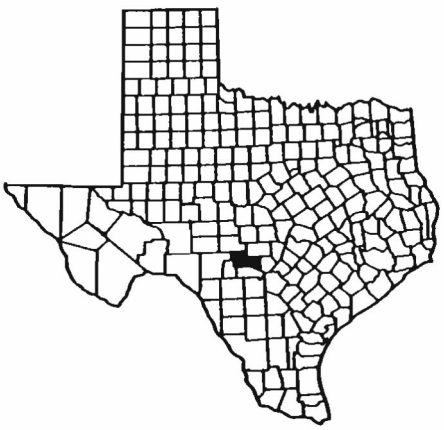


Figure 1. Texas map showing Kerr County (darkened area).

Soon after our shock at the Scout reservation we happened across a book entitled **Digging Into South Texas Prehistory: A Guide for Amateur Archaeologists** by Thomas R. Hester (1980). We realized that valuable archaeological work can be conducted by volunteers with some guidance from professionals and avocational members of archaeological societies. We thought that in our vicinity such help might be available, as the book mentioned the Southern Texas Archaeological Association (STAA) and the Center for Archaeological Research at the University of Texas at San Antonio (CAR-UTSA). We felt that we might be able to turn the situation around by establishing archaeology as a camp program. There was a precedent for offering archaeology as a BSA program as we were aware that this program has been in effect from time to time at the Philmont Scout Ranch in New Mexico. My husband and I had previously worked together on professional archaeological excavations. It was decided that I would direct an excavation designed to teach Scouts and adult leaders the importance of preserving undisturbed archaeological sites.

I contacted the STAA and was given an appointment to submit my request to their Board for approval and possible aid during the Spring 1983 meeting. The Bear Creek request was accepted and the Board members further advised me to speak with Dr. Hester, then the director of CAR-UTSA. He agreed to lend his guidance. I became aware that the Bear Creek archaeological situation was not news to the STAA or the CAR-UTSA. There had been past involvement which had included an STAA site survey conducted in 1976 (Table 1). Through Scouting circles, I retrieved the survey map and the original site survey forms and was given a copy of Griffin's (1976) summary of the STAA survey.

Site 41 KR 172 is located on the north side of a plowed field across from the Bear Creek. In the course of two seasons nine test units and five backhoe trenches were examined. Unit and backhoe trench profiles and descriptions will be reported. Selected illustrated artifacts will be described. Flake analysis will be reported at a later date. An analysis of the assemblage proposes that the site was occupied during the Early through the Late Archaic periods. A hypothesis will be offered regarding the accumulation and subsequent utilization of the midden materials.

ARCHAEOLOGICAL BACKGROUND

During the Early Archaic period people may have been making the transition between the hunter Paleo-Indian and the lifeways of the Middle and Late Archaic periods when there were specific technologies for hunting and the gathering of wild plant foods (Hester 1980). In Central Texas, burned rock midden accumulations are generally typified by assemblages of Middle Archaic stone artifacts (Turner and Hester 1985). Information concerning burned rock middens is summarized by Black and McGraw (1985) which the reader may consult for an overall perspective of this technology. Various authors have contributed hypotheses for the presence of burned rock middens which include: 1) their use by macrobands to harvest and stoneboil acorns in the fall, 2) the use of crescent middens as pit ovens for possibly baking agave, yucca or sotol, and 3) that middens may have been communal dumps for the fractured rocks used elsewhere. However, no one has effectively demonstrated the specific cultural activities that resulted in these accumulations (ibid.).

In addition to burned rock middens, quarry stations are found in Central Texas and are relevant to this study. Suhm (1960) describes quarries as areas where chipping materials were obtained from chert concentrations embedded in limestone; chipping waste and unfinished or broken chert artifacts are often recovered from these sites.

The reader should refer to Weir (1976) and Prewitt (1981, 1983) for a review of Central Texas archaeology. Hester's (1972) report from La Jita Girl Scout Camp provides a general background for a Scout archaeological project.

Table 1. S.T.A.A. Site Survey

Site Numbers TARL	Temp.	Descriptions
173	4A	Cortex and cores, fine chips
120	10A	Midden
121	10B	All types of debris and material
122	11A	Small chipping station
123	11B	Cave
124	11C	Quarry site
125	12A	Hilltop knapping site
126	16A & 16B	Knapping site
127	17A	Quarry site
128	19A & 25A	Many lithics; quarry site and knapping station
129	21A	Large Quarry; nodule reduction to cores
133	22A	Sinkhole; broken chert, Archaic point, possible burial
134	23A	Secondary flakes
135	23B	Chipping station, eastern side of major ravine
136	24A	Chipping station, small
137	26A	Disturbed by swimming pool construction; midden debris
138	26B	Fire-cracked limestone and chert; disturbed by road construction
139	26C	Probable midden, but destroyed by construction of rifle range
140	26D	Burned rock midden
141	26E	Possible chipping station with burned rock
142	26F	Chipping station and quarry site
143	26G	Possible burned rock midden, covered by soil
144	26H	Large field with flakes scattered across surface
145	27A	Dark, loose soil with fire-cracked chert and rock; end scraper
146	27B	Burned rock midden
147	27C	Burned rock midden
148	27D	Black soil with scattering of fire-cracked rock
none	27E	Black dirt from pool, biface
149	27F	Quarry
150	27G	Chert outcrop; possible quarry
151	29A	Quarry chipping station
152	29B	Quarry workshop
153	29C	Open area, workshop area; large biface, cores, flakes, chips
154	30A	Quarry site
155	30B	Quarry workshop
156	34A	Chipping station
none	34B	Large bifacial preform, broken cortex
none	34C	Sinkhole, no observable artifacts
157	34D	Worked cores and core fragments
158	34E	Worked nodules, cores, core fragments
159	36A	Burned rock midden under fish hut
160	36B	Quarry area, lithic utilization; ledge chert, highest utilization on west side
161	36C	(no description)
162	37A	(no description)
163	41A	Two cortex scrapers
164	43A	Lithic utilization station; hand chopper, 100% secondary flakes, biface
165	43B	Lithic concentration
166	45A	Quarry
167	45B	Ledge and cobble chert, bifaces
168	45C	(no description)
169	50A	Quarry area
170	51A	Very small knapping site
171	52A	Quarry
172	53A	Burned rock midden

THE SETTING

The location of the 1,030-acre Bear Creek Scout Reservation is six miles west of Hunt, Texas on Farm Road 1340 in Kerr County. The ranger's cabin at the entrance to the camp is located at 30°03'53"N and 99°25'06"W on a 7.5' USGS Bee Caves Creek Quadrangle map. The Reservation extends to the north and west of this point. Bear Creek, a permanent water source, flows southeasterly; it joins the North Fork of the Guadalupe River about 1,000 feet after leaving the Reservation and its entire course is heavily wooded (Griffin 1976). Bear Creek runs across the width of the camp, with a quarter of the Reservation to the south and three-fourths to the north. All of the apparent middens on the Reservation are located directly by Bear Creek or on the immediate drainage system. Griffin (ibid.) counted 14 middens.

According to Griffin (1976) there are five major chert beds located at the following elevations: brown chert from 1,888 to 1,895 feet, recrystallized chert from 1,959 to 1,960 feet, brownish-gray chert from 1,967 to 1,968 feet, grayish-brown chert at 2,000 feet, and another bed of abundant brown chert between 2,027 and 2,037 feet. Edwards limestone of Cretaceous age is the major geological formation on the Reservation (ibid.). The surface rock at Bear Creek camp is the Edwards limestone with recent to Pleistocene alluvium (Barnes 1981).

Griffin reports (1976) that the primary flora are juniper and oak trees. By order of frequency of occurrence, other trees include cypress, sycamore, black walnut, pecan, willow, ash, cedar elm, hackberry and wild black cherry (ibid.). Agarita, mustang and fox grapes, and dewberries may be found seasonally (Griffin 1976). Fauna includes whitetail deer, jackrabbit, cottontail rabbit, squirrel, armadillo, raccoon, opossum, fox, and wild turkey (ibid). For an updated list see Table 2.

THE SITE

Site 41 KR 172 is a 20- by 40-meter crescent-shaped burned rock midden. It is located at the base of a hill in a prevalent modern stand of oak, and is in close proximity to Bear Creek. Quarry areas are located all along the slopes above the creek. A ledge of chert is present on the hill (north 528.50, east 512.34, elevation 138) directly above the 41 KR 172 midden.

The midden was investigated by means of nine excavated units (A-I) and a backhoe trench (T1). Also investigated with site 41 KR 172 was the plowed field situated between the midden and Bear Creek. The field was barren in 1984 due to an extraordinarily dry climate. Four backhoe trenches (T2-T5) running north-south were also examined.

A total station contour map was made by theodolite and infrared electronic measurements. It included elevations up to the chert ledge above the midden and also across the floodplain to the creek (Figure 3).

OBJECTIVES

The educational program objectives were designed to instruct archaeological methods and ethics to older Scouts and Scoutmasters during their one-week stay at the camp. The objectives were further designed to create an exhibit of a proper archaeological excavation at site 41 KR 172. The site would serve as an educational tool for those participating in the program and for younger scouts who could tour the site by troop. Another objective was to create a museum to curate and display the excavated and surface-collected artifacts for the viewing of those Scouts working on Indian Lore merit badges and as a focus for sharing the camp's heritage with all the Scouts and visitors. For educational purposes, a pamphlet would be prepared to include a study of the human occupation of the Bear Creek Scout Reservation; the

Table 2. Bear Creek Boy Scout Reservation Nature Facts (page 1).

Trees	Edible Plants
Black Cherry	Agarita
Black Walnut	Black Walnut
Cedar Elm	Clover
Chittan Wood	Dew Berry
Cypress	Fox Grapes
Hackberry	Horse Mint
Jujube Plum (one - not native)	Johnson Grass
Lacey Oak (Mountain Oak)	Lemon Plant
Live Oak	Mesquite
Mexican Juniper (cedar)	Mexican Juniper
Mexican Persimmon	Mexican Persimmon
Mesquite	Muscadine
Osage Orange (bardok)	Pecan
Pecan	Prickley Pear
Redbud (one)	Pomegranate
Red Oak	Stinging Nettle
Shin Oak	Spearmint
Sumac	White Oak (chinkapin)
Sycamore	Yucca
Water Ash	
Western Soapberry (wild china)	
White Oak (chinkapin)	
Wild Plum	

Bushes	Snakes	Fish
Prickly Ash	Western Diamondback Rattlesnake	Carp
Cat's Claw	Copperhead	Catfish
	Common Water Snake	Minngus
	Green Snake	Perch (several kinds)
	Bull Snake	Trout
		Black Bass
		Guadalupe Bass

Mammals	Insects	Reptiles
Whitetail deer	House fly	Collared Lizard
Axis Deer (not native)	Wood Roach	Texas Alligator Lizard
Sika Deer (not native)	Stink Bug	Anole (Amer. Chameleon)
Armadillo	Soldier beetle	Texas Swift
Raccoon	Leaf-footed bug	Slider Turtle
Ringtail Cat	Monarch butterfly	Soft-shelled Turtle
Brown Bat	Grasshopper	
Field Mouse	Honey bee	
Skunk	Bumble bee	
Fox	Lygers bug	
	Ladybird beetle	

Table 2. Bear Creek Boy Scout Reservation Nature Facts (page 2).

Common Birds

Turkey Vulture	Black-crested Titmouse
Black Vulture	Bewick's Wren
Red-tailed Hawk	Carolina Wren
Bobwhite	Canyon Wren
Turkey	Mockingbird
Killdeer	Eastern Bluebird
Rock Dove	Blue Gray Gnatcatcher
Mourning Dove	White-eyed Vireo
Inca Dove	Yellow-throated Vireo
Yellow-billed Cuckoo	Red-eyed Vireo
Screech Owl	House Sparrow
Common Nighthawk	Orchard Oriole
Chimney Swift	Brown-headed Cowbird
Black-chinned Hummingbird	Bronzed Cowbird
Golden-fronted Woodpecker	Summer Tanager
Ladder-backed Woodpecker	Cardinal
Scissor-tailed Flycatcher	Blue Grosbeak
Ash-throated Flycatcher	Painted Bunting
Eastern Phoebe	House Finch
Vermillion Flycatcher	Lesser Goldfinch
Barn Swallow	Lark Sparrow
Scrub Jay	Rufous-crowned Sparrow
Carolina Chicadee	Field Sparrow

Fossils

Name	Common Name
Turritella	Snail
Ostrea	Oyster
Gryphaca texana	Oyster
Tucasia	Oyster
Exogyra	Clam
Milliolid	Micro fossil
Protocardia	Clam
Worm burrows	Worms

pamphlet would be made available to all Boy Scout campers. The final educational objective was to initiate interest in the program that would lead to the establishment of an archaeological committee that would pass rules forbidding further unscientific digging on the Reservation.

The scientific objectives were to answer certain questions through the excavation of site 41 KR 172. Initial questions concerned the burned rock midden. What is its size in diameter and thickness? What is its shape in outline and in profile? Which time periods and cultures are represented in the midden deposits? Is the character of the deposit just rocks, or are rocks and other debris present? What is its density? Was the site occupied before or after the midden accumulation? Why was the site occupied and what activities took place? At the perimeter of the midden, we questioned the extent and purpose of occupation surrounding that midden; also, what is the depth of such deposits and the character of these deposits when compared with the midden?

The 1983 excavation objectives were to first lay out a site grid installing three datum stakes. We would then choose test pit locations and lay out units. In excavating the test pits we would dig carefully, keep records, screen soil, bag the artifacts, and draw profiles of the completed units. Another 1983 objective was to clean the potholes to expose profiles and then sketch and photograph them. All recovered materials would be processed in our laboratory by washing, identifying, labeling, and inventorying.

In 1984 our objectives were to continue excavation of the 1983 test units. We would also choose locations and lay out new units to complete a north-south and east-west midden profile and to excavate these units to sterile levels. Another objective was to backhoe-trench the floodplain to correlate the occupation on the floodplain with the use of the midden and to determine what the past nature of the creek had been in its meandering within the Bear Creek canyon. We would draw these backhoe trench profiles, and all material recovered would be processed in the laboratory.

THE EXCAVATIONS

The archaeological method at Bear Creek was designed for Scouts, 14 years old or older, who were interested in something beyond working on merit badges. The program was also open for Scoutmasters wishing to take the course. There was a limit of 10 participants for each of the six-week sessions. We met three hours each day for five days. The class was organized each week on Monday in the laboratory. The lab was a garage-sized building with running water nearby. It was walled with printed archaeological material, including a prehistoric time line, leaving only some wall space to show slides. We arranged tables and chairs for working. There was a display case and also several chests of drawers for our artifacts. All of our equipment was stored in the lab. The survey equipment, screens, and record forms were provided by UTSA-CAR and STAA. The methods which were applied for this project were adapted from Hemion's **Field and Laboratory Handbook** (1983).

After studying the time line and examining the donated artifacts from various Bear Creek collectors and from the STAA site survey, the Scouts were given an instructional lesson in excavation technique. They were familiarized with the equipment and record-keeping sheets. We would walk to the site where the grid was explained. The Scouts would then walk to the nearby chert quarry. Viewing the quarry gave the Scouts a broader picture of the existence of the Indians in the area surrounding our midden site. Also, the Scouts gained confidence as they recognized chert in their excavation and screening through studying the original ledge outcrop source.

The Scouts excavated Tuesday through Thursday. They were told that there was no reason to rush, since it was unimportant as to the number of levels dug by camp's end. Any pit could be reopened as one of the next year's goals. Scouts were encouraged to enjoy their digging with freedom to take breaks and to drink water.

They were encouraged to pause and to think about what they were doing. They worked at their own pace, but they were persistent because they wanted to uncover artifacts. Most of the Scout archaeologists were able to handle freshly excavated stone tools and cores from at least one pit during the week.

Usually the Scouts excavated and screened their pits in teams of two or three (Figure 4). Sometimes the same excavator screened his own dirt. They always stayed with the same unit during the week. Although every Scout did not excavate diagnostic artifacts or features, many were surprised and pleased to discover the accumulation resulting from their screening. Animal bones, snail shells, charcoal pieces, chert flakes, and chert chips were kept. The Scouts counted and recorded the buckets of burned rocks from each level. They realized how very much is lost when a pothunter pulls out a notable artifact, leaving behind the disturbed site without context noted. When first looking into their pits the Scouts felt that the accuracy of the digging would be difficult to accomplish. An in-pit demonstration with a line level and trowel gave the Scouts the fortitude to take that initial stab into the well-swept floor. The Scouts were asked to leave their units at a completed level on Thursday. This allowed the next week's Scouts a view of a properly completed level.

On Friday the Scout archaeologists went to the lab where they washed, catalogued, and stored their finds. They then glanced through publications which described similar completed archaeological investigations. The importance of the Bear Creek Reservation's project write-up was considered.

One educational objective for the program was to turn the vandalized midden into an exhibit of what an archaeological project should look like. The archaeological program area did truly come to "look proper." Eventually the potholes were filled in with the screened dirt. The straight-walled and flat-floored units were shaded by canvas sunshades. Therefore, during the 1984 summer season, tours for entire troops of non-participating Scouts and leaders were conducted through the excavation and lab. Approximately 400 junior high school boys participated in the one-hour tour in 1984. They were told why the previously looted midden was being excavated and why they should not disturb archaeological sites.

During the closing days of camp staff members, along with Order of the Arrow ordeal candidates, helped to seal the excavated units for the winter. This was done by cutting 48-inch squares of one-half inch plywood and drilling holes in the corners. These lids were then set down by slipping them over the four corner stakes of the pits. Plastic sheets were placed over the plywood and the squares were then covered with dirt. When the sunshades were removed the site looked untouched. Before camp opened for the 1984 season these lids were removed and the units were in excellent shape. The units were again covered after the 1984 season.

The Units

Comparable soil horizons could be distinguished through investigating the units. These were designated as Horizons O, A with a subhorizon A1, and B. The brownish-black silt topsoil was labeled Horizon O. Pressure flakes (<.4 cm) were noted in this horizon. Horizon A was discerned to be the cultural midden which was mostly ash (<3% soil). Predominant in the ash were angular limestone fragments. Inclusive in the upper sections of this horizon, however, was a moderate brown silt mixed with the ash. In other regards, this upper section, A1, was similar to A with angular limestone fragments and cultural material. Horizon B was the soil below the midden; it consisted of moderate yellowish-brown silty sand. Although this horizon became sterile, cultural material was sporadic in the upper levels (Figures 5A and 5B).

During the 1983 summer season, Units A, B, C, D, and E were laid out and opened. Unit A is not included in the profile drawings because on July 20 when the profiles were drawn, A was excavated down to only 50 cm and no stratigraphic change from the brownish-black silt topsoil was indicated at that time. The depth of excavation for the other units at the end of the 1983 season is indicated on their

respective profiles (Figure 5B). These units were opened again for the 1984 season, and work in them continued during that summer. Newly opened in 1984 were Units F, G, H, and I (Figure 3). Due to lack of time, these units have not, as yet, been profiled.

Three permanent datum points were situated in cement on the top of the midden in a north-south alignment. A grid of one-meter squares associated with a horizontal main datum, noted as N50/E50, provided horizontal control. Grid squares were selected for excavation, which would result in north-south and east-west profiles. A survey error occurred in Units F and G due to having been laid out and measured from Unit A, which was not square. Units H and I were incorrectly located due to survey error. These errors were discovered near the end of the 1984 season by Ray Smith using his transit. Their correct locations were noted on the site map (Figure 3). Previous to the project, Unit B had been the largest pothole which we subsequently prepared for excavation and, for this reason, it was located as such.

All vertical measurements, using the metric system, were read in relation to the permanent N50 datum with an assumed elevation of 100 feet. The corner elevations were checked toward the end of the 1984 season and both the 1983 elevations and 1984 elevations will be given for the units. In addition, the floor of the pits were shot to check for the Scouts' digging accuracy toward the end of the 1984 season; no pit was found to be off by more than one centimeter from their recorded line level readings.

Standard STAA forms were used in the field and the lab. All dirt from each level was screened through a $\frac{1}{4}$-inch mesh; bone, shell, and lithics were saved and have been curated at the Reservation for future research. The buckets used to determine burned rock density were standard two-gallon size. The following is a general overview of the units. For detailed descriptions of each unit refer to Steele (1984):

Unit A: N36 E50
1983 elevation: 97.77
1984 elevation: 97.72
Maximum depth: one meter

This unit seems to be located at the very edge of the midden, as burned rock was found on the north side of the unit but not the south side. A lithic scatter was recorded and drawn for Level 4 (30-40 cm) which included a Pedernales base (Specimen A4; Figure 6, D) at 33 cm depth/S40 W40. Level 7 (60-70 cm) had no indication of midden accumulation. In Level 8 (70-80 cm), the chert debris decreased by 50%. Several flakes were found that had patination. Levels 9 and 10 (80-100 cm) were culturally sterile.

Unit B: N45 E45
1983 elevation: 97.98
1984 elevation: 97.98
Maximum depth of excavation of unit: 118 cm (50 cm below vertical datum, 68 cm below surface)
Figure 5A

Unit B was placed in a large pothole on the west slope of the midden. A narrow bench of undisturbed deposits was discovered beginning just below the midden (i.e., pothunters tore out the midden deposit but stopped at the soil color and texture change). At this depth (68 cm), a 2-meter by 1/2-meter unit was laid out oriented northwest-southeast by straightening up the midden/pothole profile.

A rodent burrow was exposed in the profile protruding through Level 1. A thinned-base Early Triangular biface (Specimen B2; Figure 6, A) was excavated from Level 2 (78-88 cm) at a depth of 82 cm, and was located north-central in the unit. Level 3 (88-98 cm) provided good chert recovery, notably large flakes, chunks, and

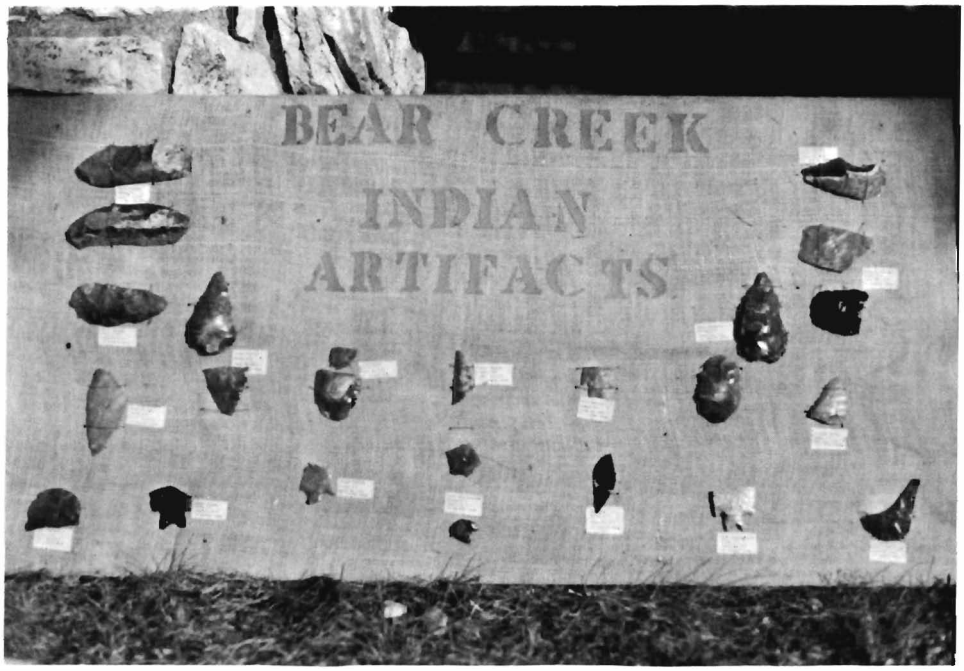
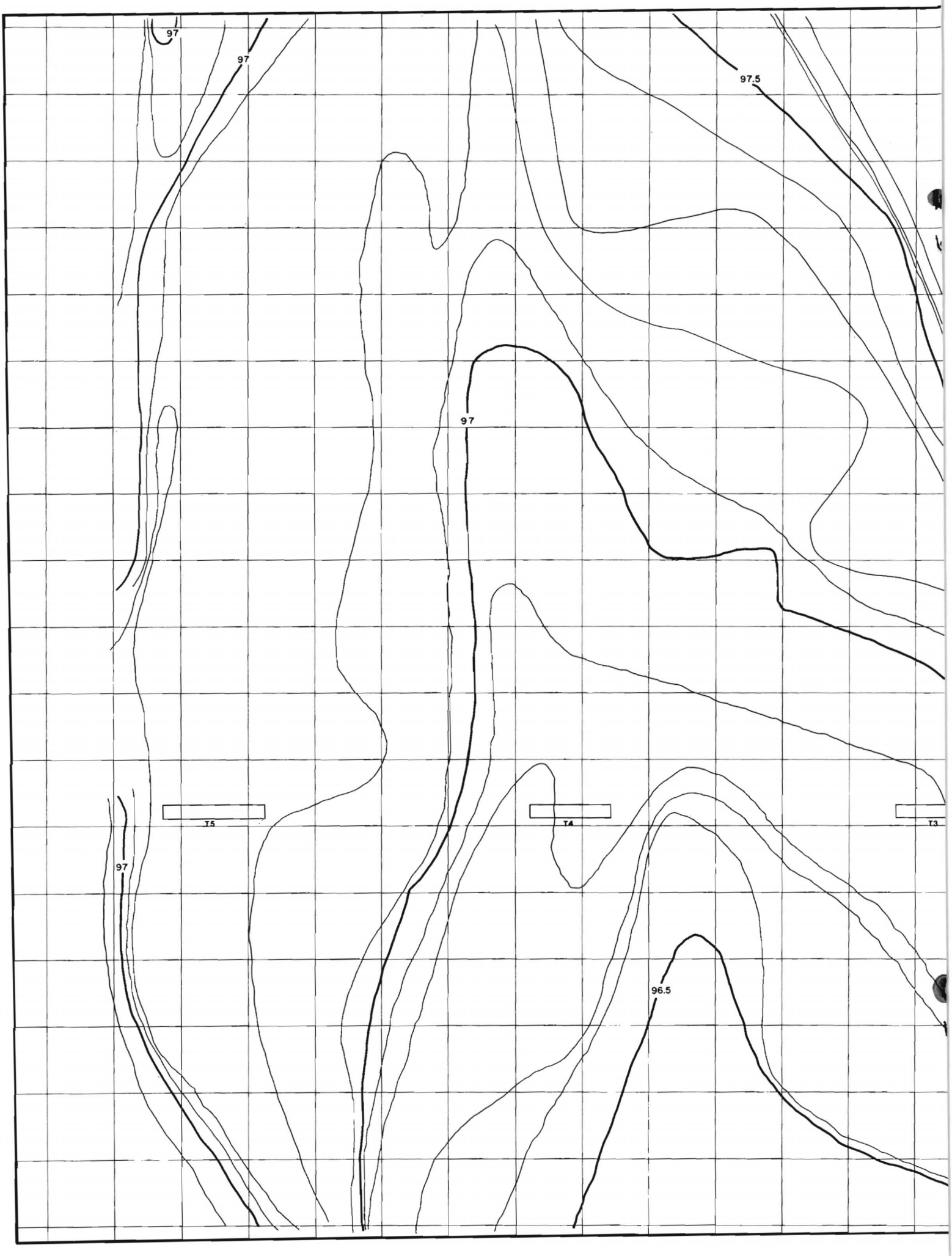


Figure 2. Bear Creek Scout Reservation collections on display.


97
97
97.5
97
T5
T4
T3
97
96.5

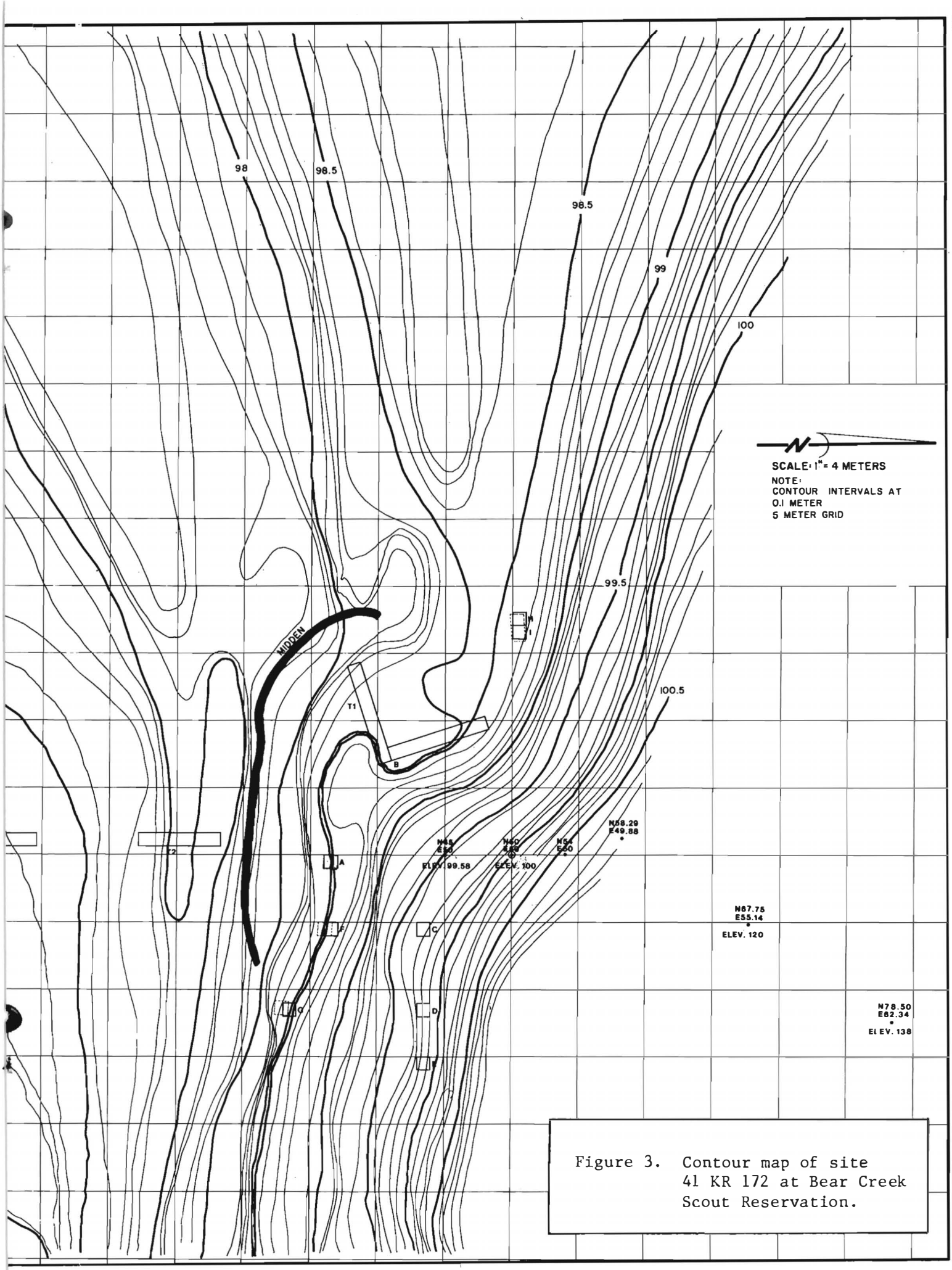
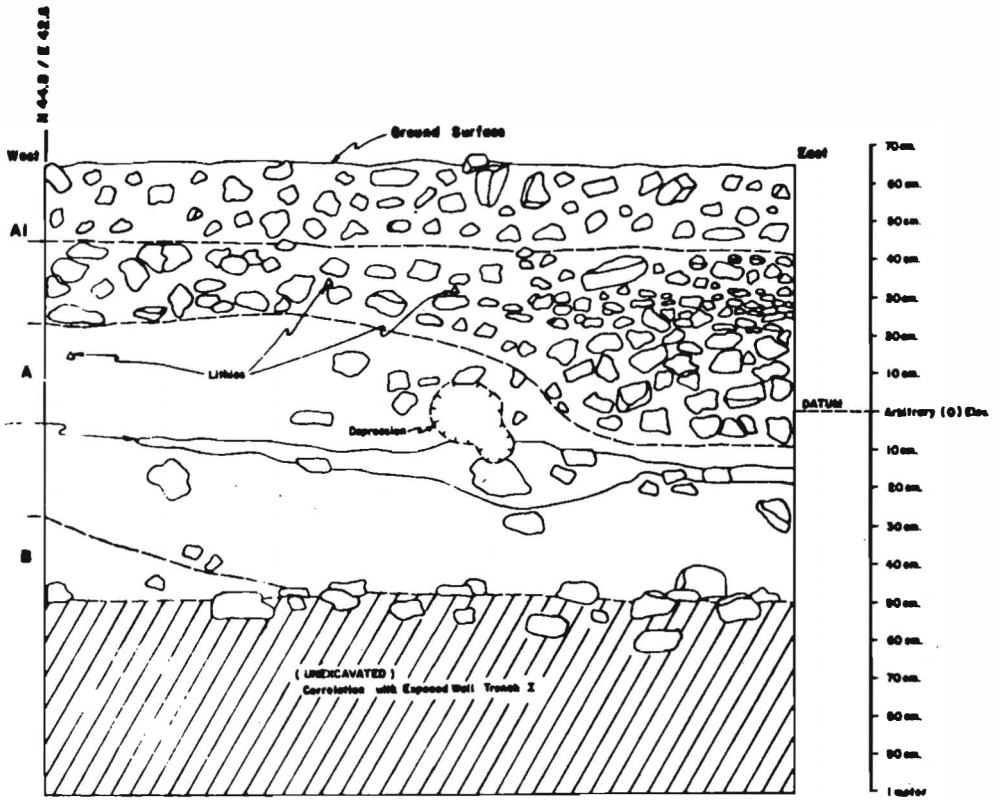
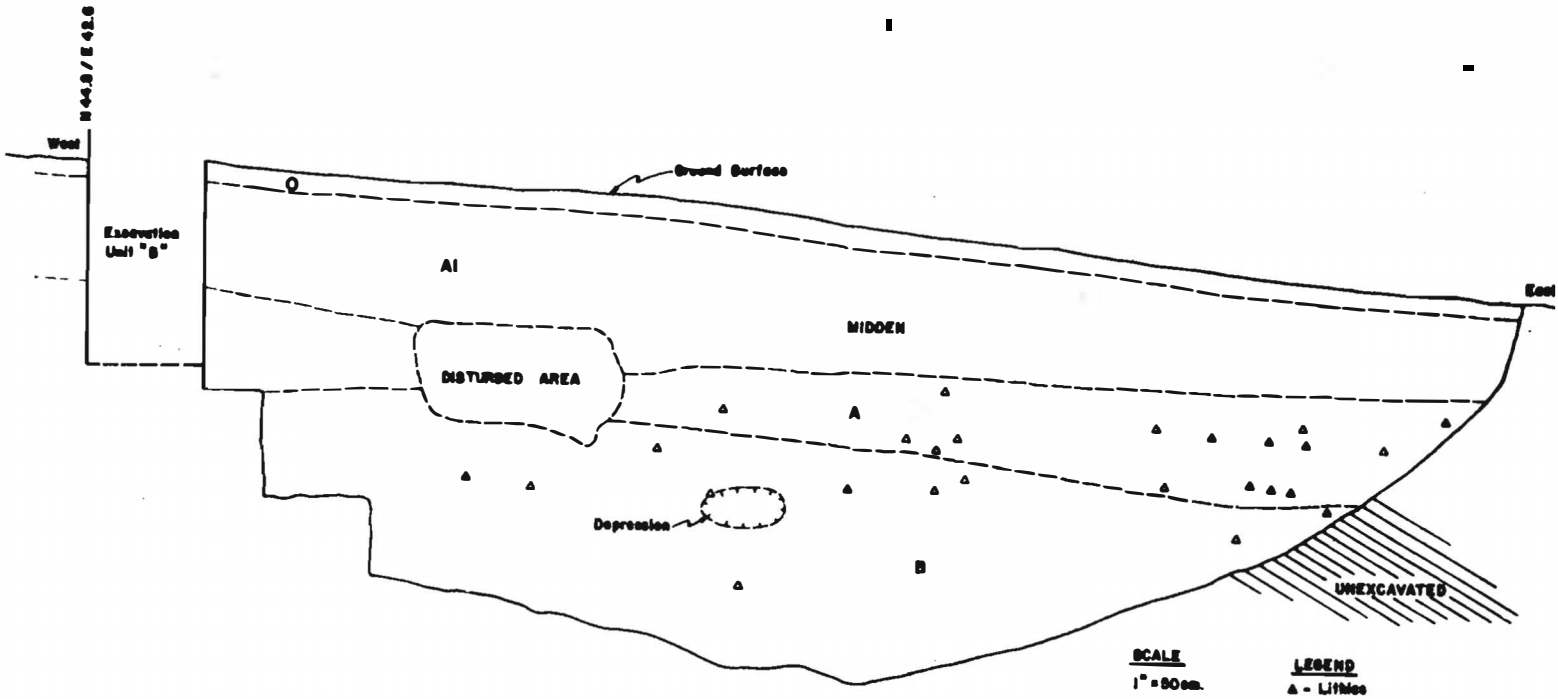


Figure 3. Contour map of site 41 KR 172 at Bear Creek Scout Reservation.

Figure 4. Bear Creek Scouts working at 41 KR 172.

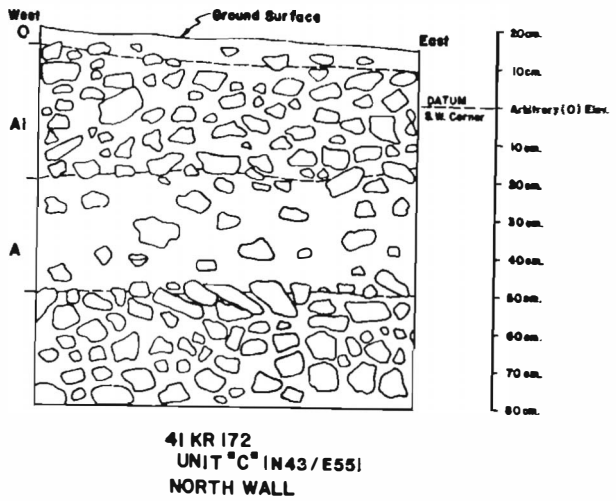


41 KR 172
UNIT "B"
NORTH WALL

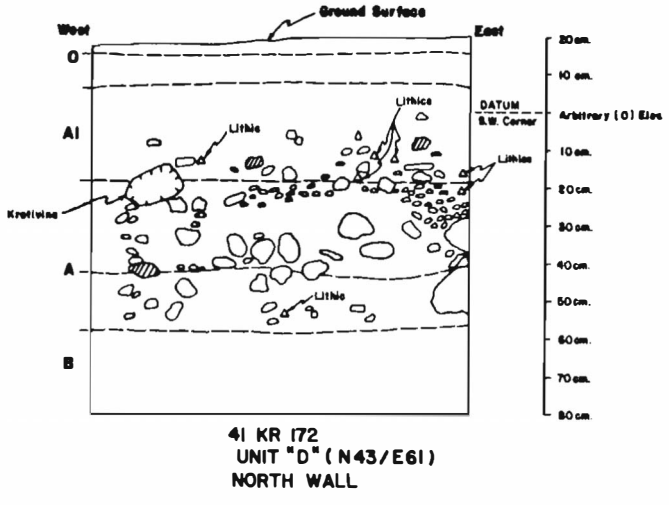


41 KR 172
TRENCH I PROFILE

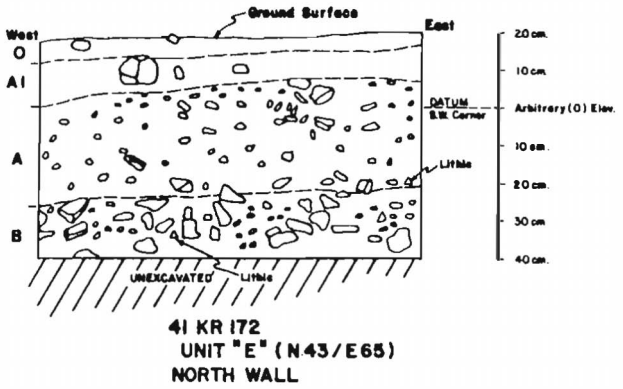
Figure 5A. Profiles of Unit B, and Trench 1, Site 41 KR 172, Bear Creek Boy Scout Reservation.



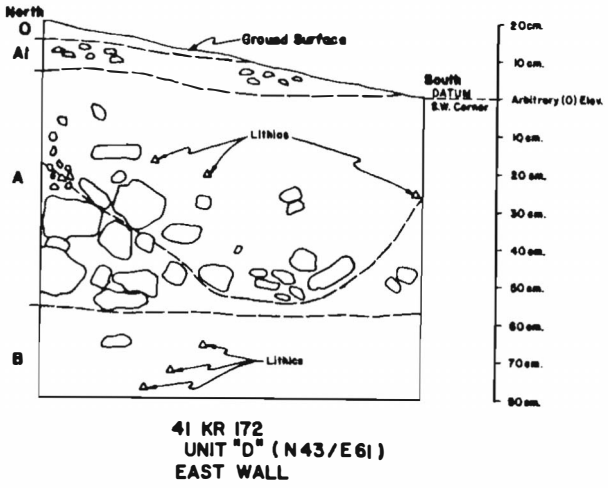
41 KR 172
UNIT "C" (N43/E55)
NORTH WALL



41 KR 172
UNIT "D" (N43/E61)
NORTH WALL



41 KR 172
UNIT "E" (N43/E65)
NORTH WALL



41 KR 172
UNIT "D" (N43/E61)
EAST WALL

LITHOLOGY DESCRIPTIONS

I. "O" Horizon - 5 Yr 2/1 brownish black silt topsoil; 0-20 cm thick (variable) organic (humus) with grasses; with angular "fragmented" (spalled) limestone fragments to 2 cm; lithics: pressure flakes <.4 cm); @ 5-8% ash content.

II. "A" Horizon - "Cultural Midden" predominantly angular limestone fragments; variable in size; $4N_4$ medium dark gray silty ash, <3% soils; mostly ash with organic fragments--poorly sorted (low silt content).

III. "A1" Horizon- 5 Yr 3/4 moderate brown silt; poorly sorted with angular limestone fragments (cultural material).

IV. "B" Horizon - "PaleoSol" 10 Yr 5/4 moderate yellowish brown silty sand 4.0 Ø (.06 m.m.); very well sorted with limestone fragments to 3.0 cm.

Figure 5B. Profiles of Units C, D. and E, Site 41 KR 172, Bear Creek Boy Scout Reservation.

exhausted cores. A large biface fragment was excavated in the northeast corner of Level 4 at 107 cm. The chert debris was considerably less in Level 5 (108-118 cm).

Unit C: N43 E55
1983 elevation: 99.26
1984 elevation: 99.20
Maximum depth of excavation of unit: 110 cm
Figure 5B

Unit C is the closest unit to the apex of the midden. The northwest corner between 40 to 80 cm appears to represent a baking pit. Within Levels 1-4 (0-40 cm) the burned rocks were quite heavily packed; however, Level 5 (40-50 cm) became lighter with ash, and the rocks were covered with a very white ash. Level 6 (50-60 cm) was so powdery that the level could be swept up with a whisk broom. Level 7 (60-70 cm) was likewise powdery. Levels 8 and 9 (70-90 cm) were equally composed of ashy rock and the base of the pit seemingly ended; however, the exact definition was not clear. A crude core scraper was excavated from Level 7 at 61 cm depth and a lithic core was excavated from Level 8 at 77 cm depth. Both cores were situated on the east side of the perceived baking pit.

Level 10 (90-100 cm) recorded a half-bucket of burned rocks. There were no buckets of burned rock recorded for Level 11 (100-110 cm). Considering the soil change to Horizon B, it appears the midden ends in the 10th level. An "Early Corner Notched" basal fragment (Specimen C10; Figure 6,B) was not found in situ but definitely was associated with the yellow-brownish soil below the midden deposit.

Unit D: N43 E61
1983 elevation: 99.08
1984 elevation: 99.03
Maximum depth excavation of unit: 130 cm
Figure 5B

A hearth was excavated between 20 and 55 cm and can be seen in the east profile (Figure 5B). One side scraper was excavated from Level 2 at a depth of 19 cm (N35 W30) and appeared to be associated with the hearth. A core was found within the hearth in the northwest quadrant at 22 cm depth. Another core was excavated from within the hearth feature. Its in situ position was not clearly noted, but it seemed to have been resting upon the rocks that lined the hearth. One core chopper was excavated from Level 5 at a depth of 45 cm in the southwest quadrant.

Unit E: N43 E65
1983 elevation: 99.35
1984 elevation: 99.31
Maximum depth of excavation of unit: 60 cm
Figure 5B

This unit was located completely off the midden except at Level 4 (30-40 cm) where two buckets of burned rock were retrieved from the northwest and northeast quadrants. This might indicate the eastern extremity of the midden occurring at this depth.

Unit F: N36 E55
1984 elevation: 97.79
Maximum depth of excavation of unit: 50 cm

This unit was also located completely off the midden as no burned rock was reported. There is no change in the level's soil which is Horizon O topsoil. In Level 1 (0-10 cm), an unfinished Pedernales projectile point base with 30% cortex on one side was found on the screen. A barbed Pedernales base (Specimen F2; Figure

6,E) was excavated from Level 2 at a depth of 18 cm (N10 E20). A Marshall projectile point (Specimen F4, Figure 6,F) was excavated in association with a bifacial tool (Specimen F4; Figure 7,C), which is locally known as a "Hill Country Fist Axe," but is referred to by Turner and Hester (1985) as a butted knife. The Marshall projectile point was excavated at a depth of 36 cm (N25 E38) and the tool was uncovered at 37.5 cm (N30 E38).

Unit G: N33 E61
1984 elevation: 97.61
Maximum depth of excavation of unit: 70 cm

Levels 1-3 (0-30 cm) are composed of Horizon 0 brownish-black silt topsoil. A perforator base (Specimen G1; Figure 7,A) was excavated from Level 1 at a depth of 10 cm (N55 E18). Level 4 (30-40 cm) began to uncover the southeast extremity of the midden. The south two-thirds of the fifth level (40-50 cm) was heavily concentrated with thermally fractured limestone chunks and it seems likely that this represents the southern extremity of the midden. Numerous chert flakes, burned and unburned, were lodged among the rock fragments. A reworked Bulverde projectile point (Specimen G5, Figure 6,C) excavated from Level 5 was discovered at a depth of 50 cm (N03 E12). A burned rock scatter was present throughout Level 6 (50-60 cm), but it was more concentrated in the southeast quadrant. The larger flakes were recovered from the southern third of the unit at this level. A large bifacial piece was located in the southwest corner at 55 cm depth; it may represent either a tool or a lithic failure.

Unit H: N50 E27
1984 elevation: 97.98
Maximum depth of excavation of unit: 70 cm

The soil in this unit was continuously brownish-black Horizon 0 topsoil. Lighter and sandy in the upper three levels (0-30 cm), it became darker and hard packed with clay in the lower four levels (30-70 cm). One distal bifacial fragment was excavated from Level 1 (0-10 cm); one palm-size, flat, bifacially-chipped cobble was excavated from Level 2 at a depth of 13 cm (N40 E22). A large rock was uncovered that was not measured, but was large enough to sit upon. It was exposed in Level 6 (50-60 cm) and removed in Level 7 (60-70 cm). Also at Level 7 small pieces of burned limestone were scattered throughout the unit but seemed to be independent from the midden.

Unit I: N50 E27
1984 elevation: 97.98 (Unit I used the same corner designator as Unit H)
Maximum depth of excavation of unit: 70 cm

The soil is the same as Unit H. The distal tip of a projectile point was found at Level 4 (30-40 cm). At Level 7 (60-70 cm) the soil is brownish-black; however, ash was mixed within the soil. A few unidentified animal bones were found at this level. To the immediate west, the "sitting rock" was found in Level 7 of Unit H; it was considered to be associated with this possible cooking area.

The Artifacts

The artifacts represent an assemblage that suggests 41 KR 172 was occupied from the Early through the Late Archaic periods based on chronologies offered by Hester (1980), Prewitt (1981), and Turner and Hester (1985). Abbreviations are as follows: ML=Maximum Length; MW=Maximum Width; MT=Maximum Thickness; SW=Stem Width; ND=Notch Depth, and WT=Weight.

The Projectile Points

Early Triangular (Specimen B2, Figure 6,A)

Thin with parallel oblique flake scars along the edges, this Early Archaic point has a base thinned by long vertical flakes (Hester 1980).

ML:60.5 mm; MW:28.5 mm; MT:5.5 mm; WT:9.6 gm.

"Early Corner Notched" (Specimen C10, Figure 6,B)

This Early Archaic projectile point is described by Hester (1980) as a series which consists of points having corner-notched stems.

ML:30 mm; MW:36 mm; MT:6.5 mm; ND:6 mm; WT:8.1 gm.

Bulverde (Specimen G5, Figure 6,C)

Bulverde is characterized by strong shoulders with a thin, finely-chipped base (Turner and Hester 1985) and occurs in the Early Archaic and Middle Archaic periods (Prewitt 1981).

ML:84 mm; MW:39 mm; MT:8.5 mm; SW:16 mm; WT:19.3 gm.

Pedernales (Specimen A4, Figure 6,D)

Indicative of Pedernales projectile points are the bifurcated stem and deep concavity in the base; they are extremely common in the Middle Archaic (Turner and Hester 1985).

ML:47 mm; MW:49 mm; MT=8 mm; SW:20 mm; ND:6 mm; WT:15.3 gm.

Pedernales (Specimen F2, Figure 6,E)

See description above.

ML:60 mm; MW:43 mm; MT:8 mm; SW:21.5 mm; ND:7 mm; WT:17.3 gm.

Marshall (Specimen F4, Figure 6,F)

The broad triangular point has strong shoulders and a relatively short expanding stem with a concave base (Turner and Hester 1985). Prewitt (1981:76) extends the use of the Marshall projectile point into the earliest Late Archaic phase. Although Marshall points are considered a key index marker for the previous phase and Montell projectile points are an indicator for the Uvalde phase of the Late Archaic (ibid.), the author agrees in this case with Prewitt's extension of the Marshall's use also into the Uvalde phase. This seems likely as the Marshall point excavated from 41 KR 172 was in association with a "Butted Knife" biface considered by Turner and Hester (1985) to have been utilized in the Late Archaic period. Further, more Montell projectile points acquired from the midden by Bear Creek pothunters were shown to the author.

ML:48 mm; MW:42 mm; MT:7.5 mm; SW:18 mm; ND:2 mm; WT:10.3 gm.

The Tools

Perforator/Drill (Specimen G1, Figure 7,A)

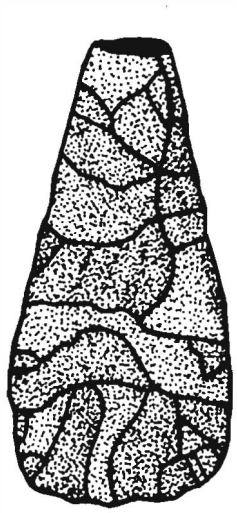
Characterized by a long, tapered bit that is diamond-shaped in cross-section, the specimen is bifacially flaked (Turner and Hester 1985). The bit is broken from the specimen.

ML:66 mm; MW:44 mm; MT:15 mm; WT:39.1 mm.

Perforator/Drill (Specimen I2, Figure 7,B)

Same as described above. This tool is quite thin and appears to have been reworked. The bit is broken from the specimen.

ML:60 mm; MW:54.5 mm; MT:8.5 mm; WT:24.4 gm.



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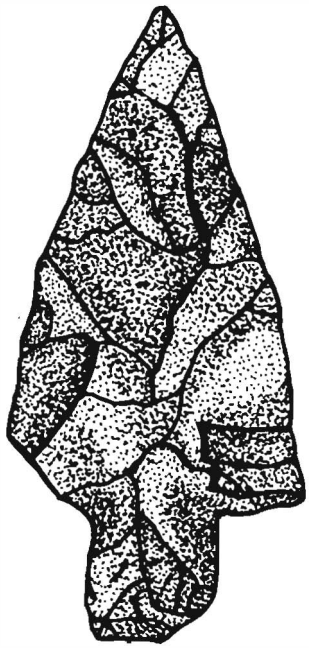
B



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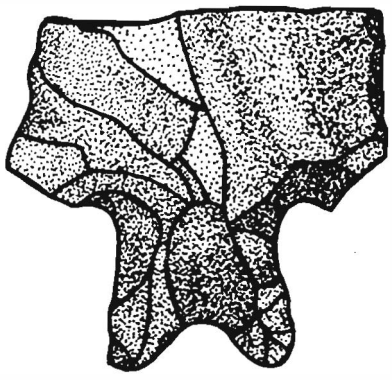

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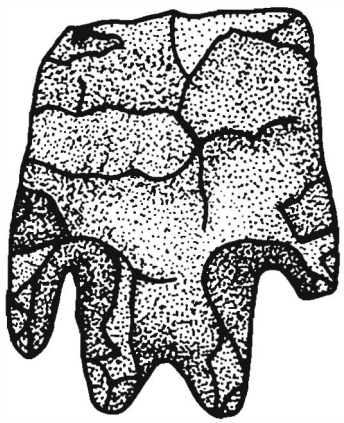

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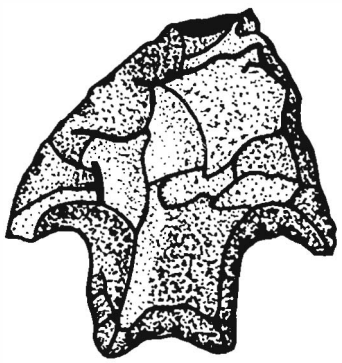

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Figure 6. Projectile Points from Site 41 KR 172 on Bear Creek Boy Scout Reservation. A, Specimen B2, Early Triangular; B, Specimen C10, "Early Corner Notched"; C, Specimen G5, Bulverde; D, Specimen A4, Pedernales; E, Specimen F2, Pedernales; F, Specimen F4, Marshall. Drawings by Rita Neureuther.

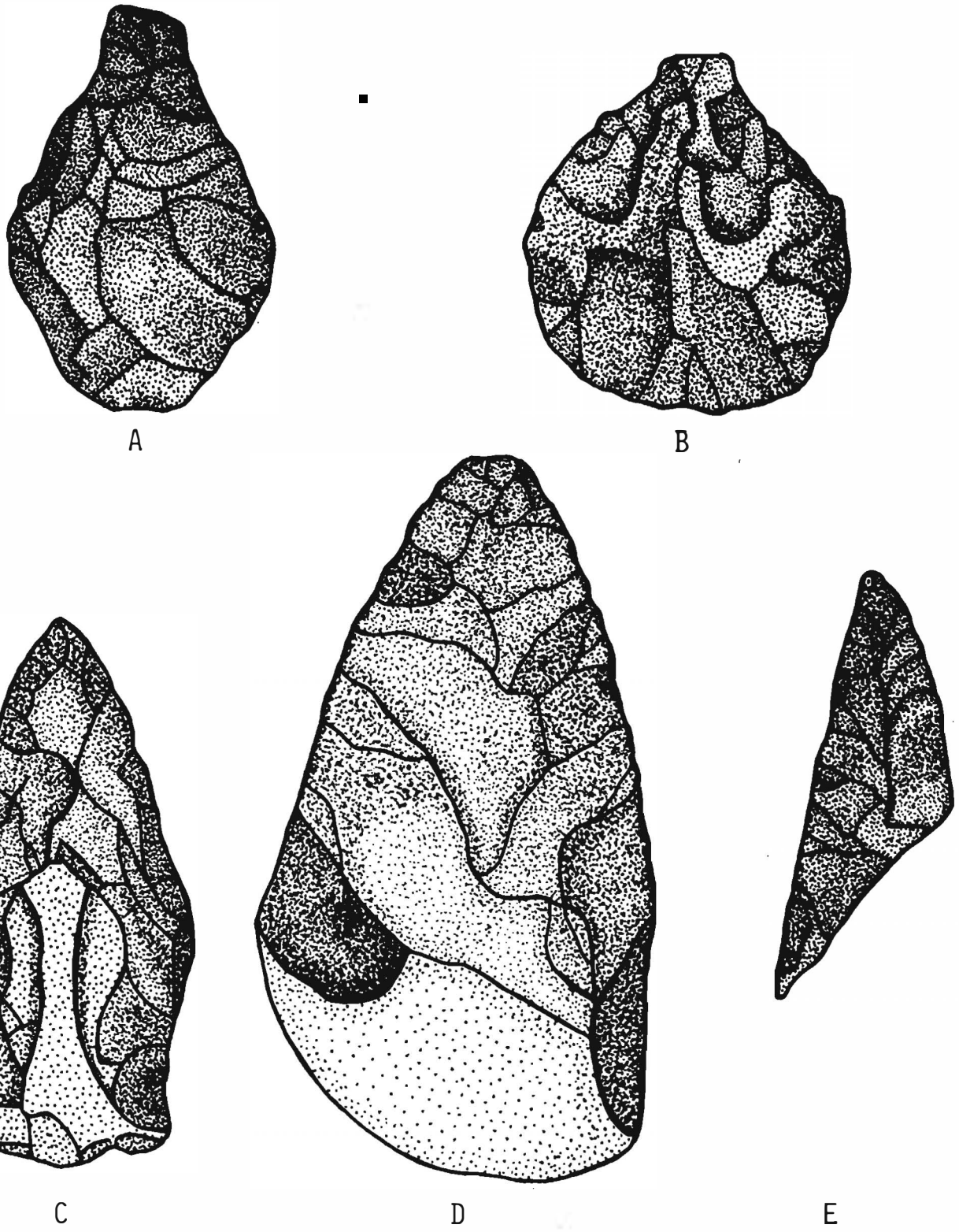


Figure 7. Tools from Site 41 KR 172 on Bear Creek Boy Scout Reservation. A, Specimen G1, drill/perforator; B, Specimen I2, drill/perforator; C, Specimen F4, "Butted Knife"; D, Specimen T1, "Butted Knife"; E, Specimen I6, biface fragment. Drawings by Rita Neureuther.

"Butted Knife" Biface (Specimen F4, Figure 7,C)

This biface is characterized by a rounded natural cobble handgrip and opposing worked edge. This tool form is attributed to the Late Archaic period (Turner and Hester 1985). This small biface was excavated in association with a Marshall (F4, Figure 6,F) projectile point.

ML:91 mm; MW:46 mm; MT:16 mm; WT:55.2 gm.

"Butted Knife" Biface (Specimen T1, Figure 7,D)

Same as Butted Knife Biface (Specimen F4, Figure 7,C), only this specimen is larger. Stone artifacts such as F4 and T1 are locally known as "Hill Country Fist Axes."

ML:125 mm; MW:68 mm; MT:42 mm; WT:259.8 gm.

Undetermined Biface (Specimen I6, Figure 7, E)

This specimen is possibly the distal tip of a bifacial knife. Its appearance suggests this function as its straightened edge has a thinned opposing convex edge.

ML:73.5 mm; MW:24 mm; MT:6.5 mm; WT:7.6 gm.

The Trenches

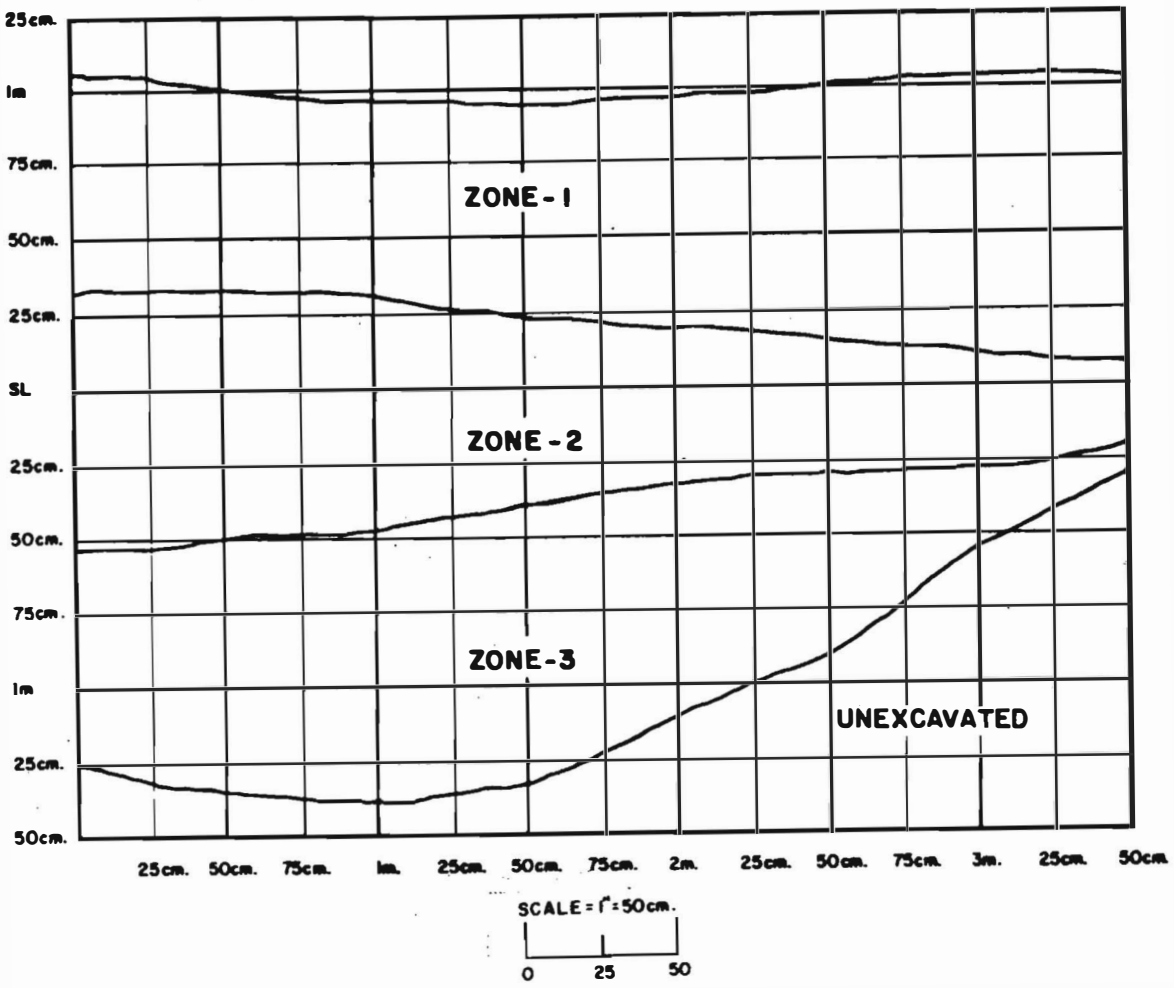
The first trench was dug by backhoe in the summer of 1983, and it profiled the western slope of the midden (Figure 5,A). A question had been formulated as to whether Level 5 (108-118 cm) of the Unit B yellowish-brown soil deposit might contain cultural remains. The trench answered the question negatively for this location. No cultural material was observed in the trench profile. One core chopper, one Pedernales point and a butted biface were found in the back dirt.

Four backhoe trenches were dug in 1984: Trench 2 (60.96S 50.88E), Trench 3 (88.39S 50.88E), Trench 4 (115.83S 50.88E), and Trench 5 (129.54S 50.88E). These trenches produced a cross-section profile across the floodplain to the Bear Creek. These north-south trenches were staggered across the plowed field south of the midden (Figure 3). As was stated in the 1984 objectives, these trenches were a means to correlate the occupation on the floodplain to the use of the midden and to determine what the past nature of the creek had been in its meandering within the Bear Creek canyon. The depositions in Trenches 2-5 represent alternating layers of fine and coarse sediments which is typical of a floodplain/abandoned stream sequence (Figures 8-11). The stream gravel was deepest in Trench 4 and may represent a main channel of the creek prior to the present course to the south of the floodplain.

In Trench 2, zone transition from 1 to 2, one burned rock and flakes were recorded at an approximate elevation of 96.75. In Trench 3 Zone 2, one chert chunk may represent a possible flood deposit from the river. In Trench 3 Zone 5b, a 10-cm lens of charcoal flecking and one burned rock were recorded at an elevation of 95.20. This may be representative of a natural fire. In Trench 5 Zone 2b, however, a definite cultural horizon is represented in the profile at an elevation of 95.50. This layer is below a massive stream bed load deposit of pebbles, cobbles, and boulders that were larger than basketball size. The cultural horizon is demonstrated by the presence of considerable quantities of chert, including a lithic core, flakes, and a trimmed chip.

DISCUSSION

The Bear Creek Boy Scout Reservation site 41 KR 172 was used by Early Archaic to Late Archaic people as indicated by "Early Corner Notched," Bulverde, Pedernales and Marshall projectile points. The Trench 5 Zone 2b cultural horizon may be contemporary with the midden or it may represent an earlier occupation. This horizon should be excavated as a future research objective.



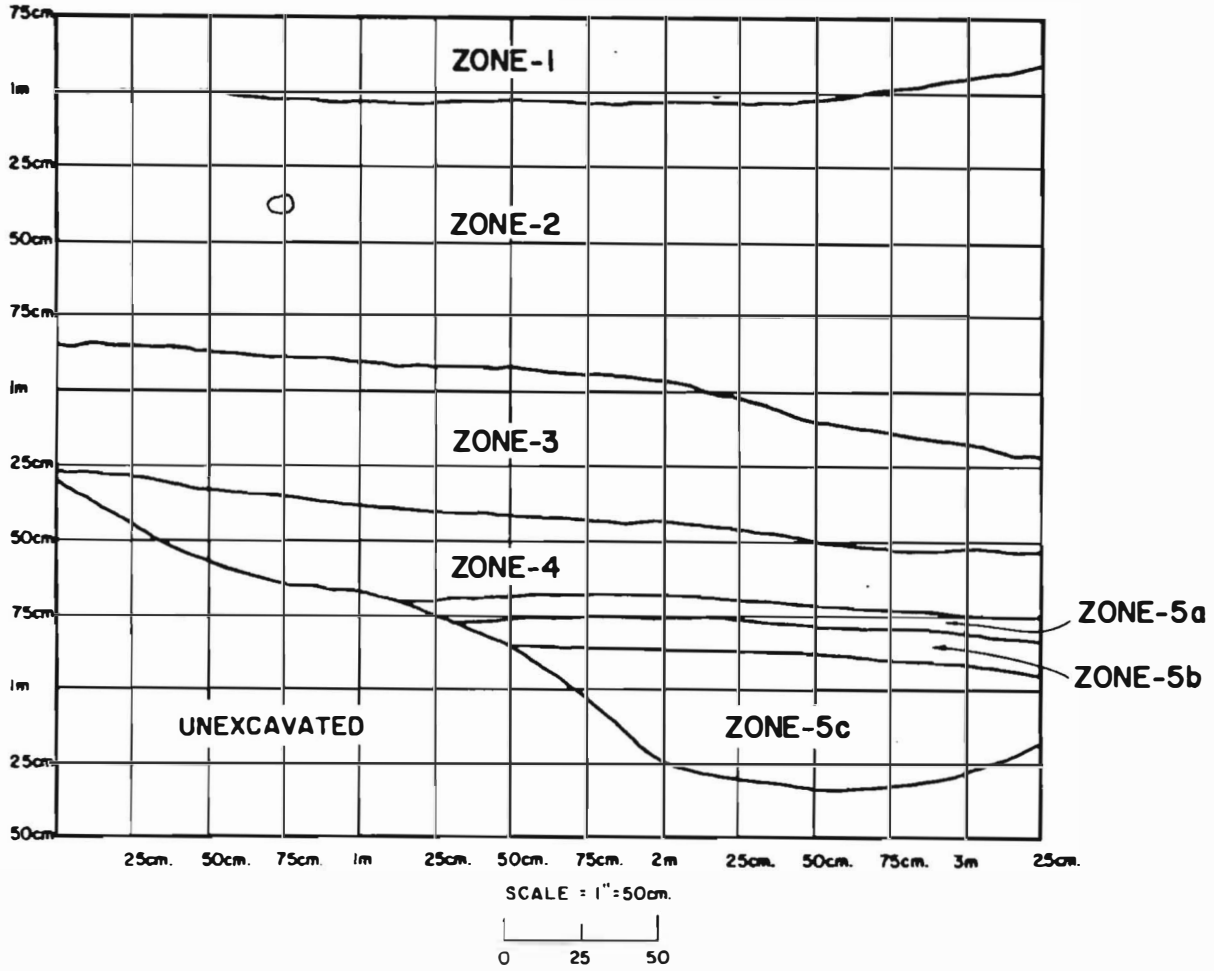
ZONE 1: Plow Zone: dark grey brown, silty clay loam with numerous cultural materials including burned rock, chert flakes; soil becomes gradually lighter in color. Interface between Zones 1 and 2 is not abrupt but distinctive; at interface between Zones 1 and 2 is a layer of cultural material including burned rock; flakes are present on top of gravel.

ZONE 2: Gravels: poorly sorted, smaller in size than gravels in Trench 3, mostly tennis ball size or smaller; most are not rounded gravels; within a light brown silty clay.

ZONE 3: Calcareous clay: light reddish brown at bottom of trench; an increase in calcium carbonate, mottled with calcium carbonate concentrates (almost like little pockets of caliche) with scatters of limestone fragments; finer in texture towards bottom of Zone 3.

No cultural material below top of Zone 2 (below Gravel).

Figure 8. Profile of Trench 2, 41 KR 172, Bear Creek Boy Scout Reservation.



ZONE 1: Upper plow zone: dark, almost black, silty clay loam; scattered cultural materials (mostly flakes); gradual transition to Zone 2.

ZONE 2: Grey brown clay: fine grain; not silty; one chert chunk; no rock; very scattered cultural material.

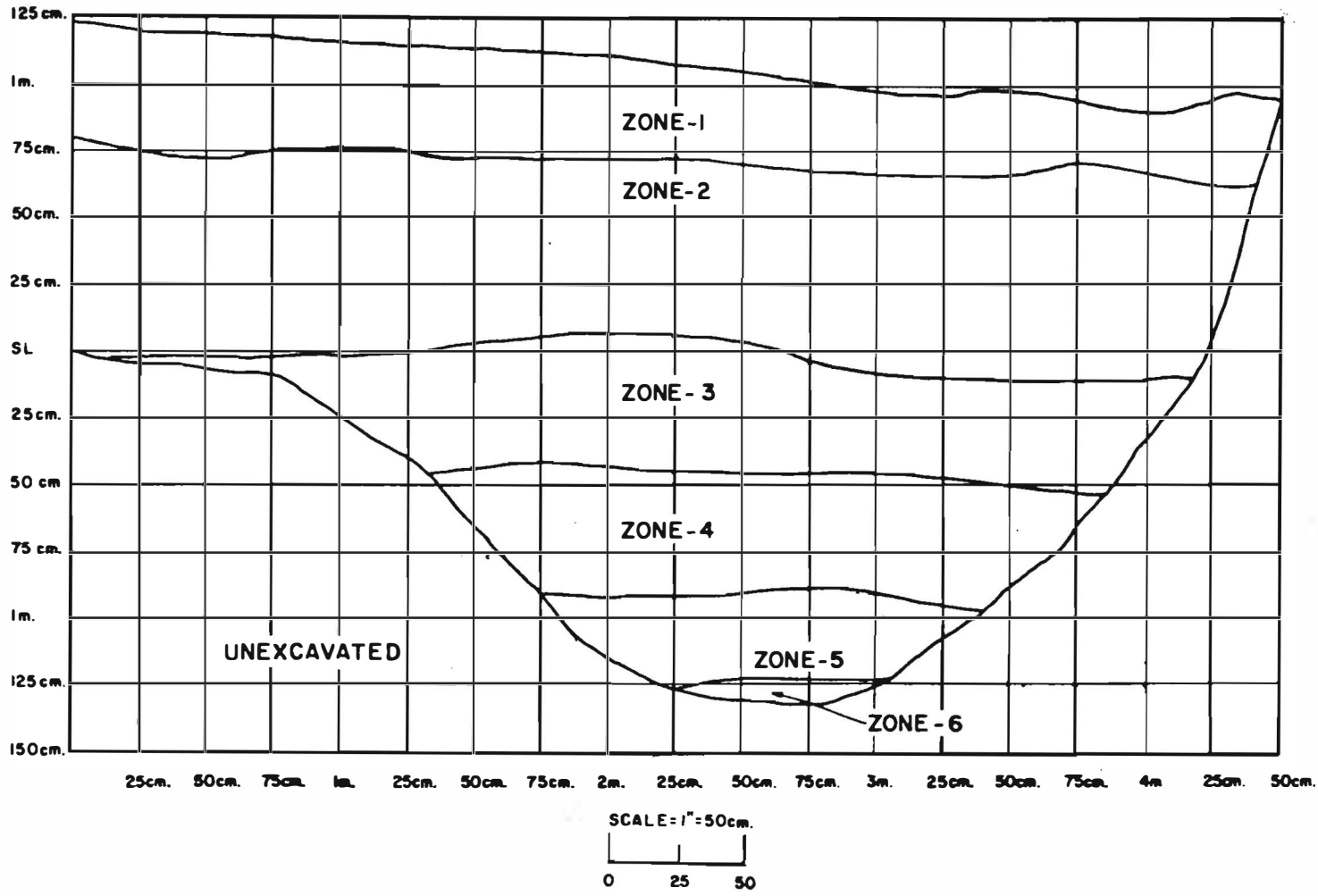
ZONE 3: Gravel Lens: poorly sorted; calcareous; fist size and smaller within reddish brown clay loam matrix.

ZONE 4: Thin layer reddish clay with calcareous sand: grades into Zone 5A (description also for 5B and 5C).

ZONE 5:
- A: Fine brown clay; calcareous.
- B: Thin layer, same sediment with scattered charcoal flecking within 10-cm band; one small burned limestone rock observed (no burned flakes or snails); likely natural fire!
- C: Same as 5A.

All Zones dip to south towards modern Bear Creek.

Figure 9. Profile of Trench 3, 41 KR 172, on Bear Creek Boy Scout Reservation.



ZONE 1: Plow Zone: gray silty loamy soil with few flakes.

ZONE 2: Massive gravel deposit: light gray brown; fist-size to small gravel; the matrix is silty toward upper one-half of Zone 2, lower one-third very coarse, calcareous sand.

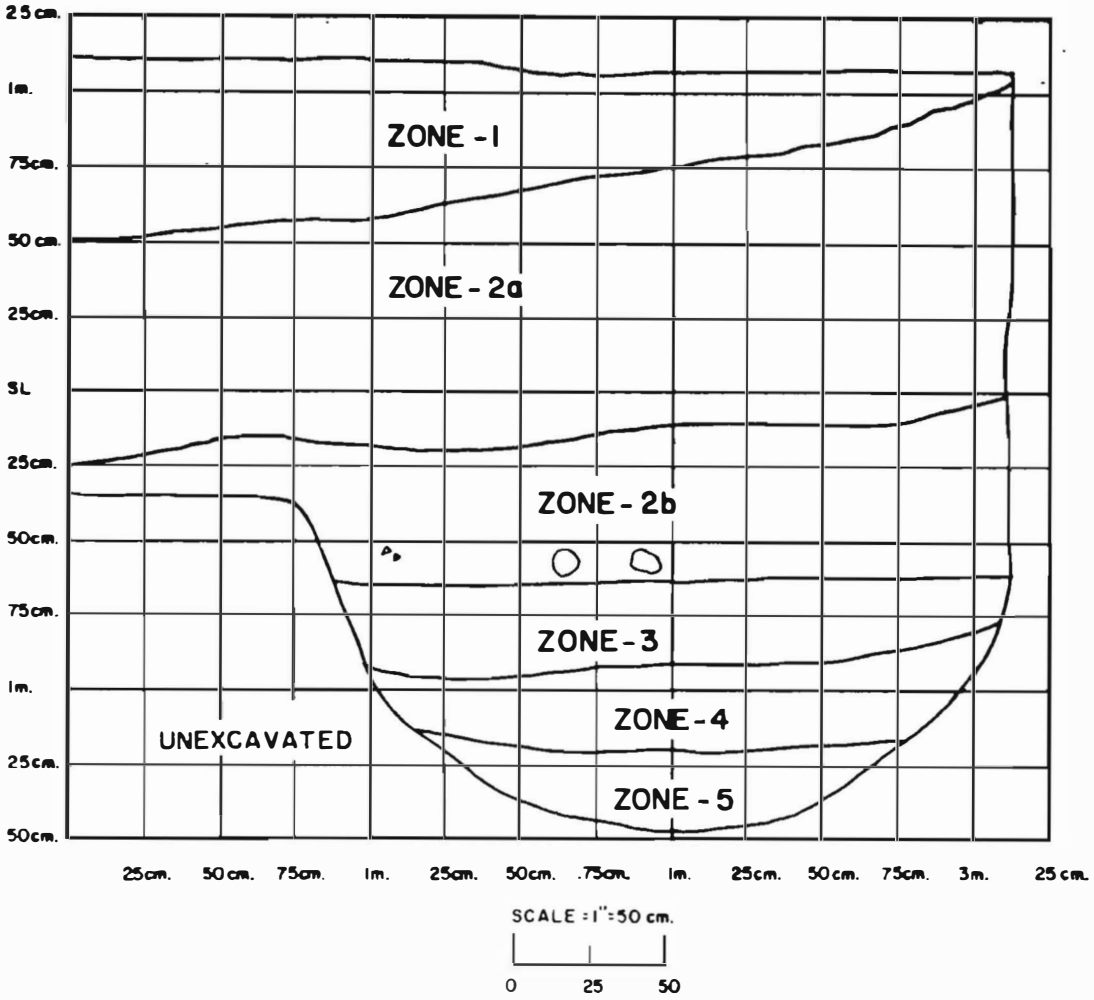
ZONE 3: Light gray brown sandy clay: mostly fine texture.

ZONE 4: Gravel Zone (mostly small) with calcareous sand and clay matrix.

ZONE 5: Fine Clay (light brown).

ZONE 6: Gravel Zone (barely exposed at bottom of trench).

Figure 10. Profile of Trench 4, 41 KR 172, on Bear Creek Boy Scout Reservation.



ZONE 1: Dark grey silty clay loam: light mottling by calcareous grit; thickens towards south to Bear Creek; scattered cultural materials.

ZONE 2: Massive streambed load deposit of pebbles, cobbles, boulders bigger than basketball-size limestone chert.

2A: Upper: thickest; light grey/cobbles and gravels are well rounded; matrix is silty.

2B: Lower: most massive boulders with calcareous coarse sand and small pebbles.

At bottom of 2B at the contact with Zone 3: Cultural horizon: considerable quantities of chert, trimmed chips, core, flakes resting upon or within top of Zone 2.

ZONE 3: Pure deposit; coarse calcareous sand and small pebbles.

ZONE 4: Sandy clay; much finer than Zone 3; charcoal flecking (15 cm thickness).

ZONE 5: Clay loam mixed with some smaller gravels.

Figure 11. Profile of Trench 5, 41 KR 172, on Bear Creek Boy Scout Reservation.

Possibly the Archaic midden users may have been attracted to the area because of the quantity of chert that was available. A significant number of lithic cores were excavated with some having been uncovered from within hearth areas. Bear Creek is a known quarry area and slab (tabular) chert can be found in ledges on the valley slopes overlooking the creek. A ledge of chert is located on the hill (N 528.50/E 512.34, elevation 138) directly above the 41 KR 172 midden. In analyzing the 1976 site survey map and forms, Table 2 was compiled. It became clear that each of the known middens along Bear Creek is in close distance to a quarry site or quarry workshop site. This suggests a spatial function of the middens to the quarry locations. Furthermore, at 41 KR 172, a high concentration of secondary pressure flakes were uncovered with no completed projectile points. The author speculates that the Bear Creek middens may have served as locales to heat treat their quarried chert for tool-making/maintenance. While the quality of the chert at Bear Creek is not poor, it may have benefited from this heating process. Further research might include experimentation with heat treating some Bear Creek chert specimens. This theory might also be tested by studying the flakes as to the ratio of heat treated versus untreated flakes.

The Bear Creek middens are similar in many ways to the others found in Central Texas. For example, they are located by the waterway in modern stands of oak. Consideration of a chert heat-treating function of the middens does not preclude any of the other possible functions believed to have occurred at midden sites elsewhere. It is far more likely that the Bear Creek middens served a multi-function capacity. The burned angular limestone rocks may have accumulated by any process summarized by Black and McGraw (1985), thus providing a decent locale for building the fires desirable for treating chert. Fires built upon the rockpile could be safely contained. Possibly such fires could leave a powdery ash pit as may be indicated by Levels 5 to 7 in Unit C, noting also that a rough core scraper and a lithic core were excavated from the base of this hearth. That the 14 middens at Bear Creek are located near quarry and quarry-workshop sites may support the theory that midden accumulations represent communal dump sites (Hester 1970). In this case the discarded rocks may have been deposited near a chert ledge for convenience.

SUMMARY

About 500 Boy Scouts, Scoutmasters, and visitors were exposed to archaeological methods, principles, and ethics through participating in, or touring the Bear Creek excavation. They learned about the heritage of the camp area, and at the same time, pothunting was stopped. The council camping committee, which now governs the Reservation, issued rules prohibiting digging but allows surface collecting. Scouts were encouraged to bring their surface collections to the lab/museum to be traced and recorded. Usually the Scout donates his find. The excavation is now closed.

In 1946, Samuel D. Bogan wrote **Let the Coyotes Howl**, an account of the initial archaeological investigations at Philmont Scout Ranch. I concur with Clark Wissler (Curator Emeritus, Department of Anthropology, the American Museum of Natural History) who wrote in the forward to this book: "...no problem in natural history is too 'high and mighty' to be above the comprehension of boys, if reduced to concrete situations and clear statements... and the need for accuracy of observation and precision in logic would appeal to the boy and inspire him to value the dignity and integrity of the truth" (Bogan 1946).

ACKNOWLEDGMENTS

I am grateful to the Alamo Area Council of the Boy Scouts of America, especially to Council Executive, Mr. Robert Shoemaker, for his full support and encouragement. Over one hundred Scouts volunteered their help during their week at camp acting as diligent excavators and dedicated laboratory assistants. More than 400 Scouts reserved part of their camp time to tour the excavation site and laboratory, and agreed to protect archaeological sites from rampant digging and

potholing. I am grateful for the help provided by Scoutmasters Vern Harden and Paul McKeough throughout the project. Scouter Amil Baker was totally committed with his surveying and drafting abilities, and I thank him for his valuable skills and time.

The cooperation of the Southern Texas Archaeological Association and the University of Texas at San Antonio Center for Archaeological Research were instrumental in every phase of the investigation. I wish to express special thanks to Dr. Thomas R. Hester for his support. I wish to express special gratitude to Stephen Black, Margaret Greco, Tom Miller, George Nelson, Rita Neureuther, Ray Smith, Ralph Snavely, Frances Ward and Paul Ward for their voluntary expertise. Don Broussard and Bill Bryant, professional archaeologists for Espey Huston, contributed field work, drafting and thoughtful opinions, and I appreciate their help. My gratitude is extended to C. William Steele for his staff leadership within the Alamo Area Council to make this project a reality.

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LET'S GIVE EQUAL TIME

The Southern Texas Archaeological Association Journal, **LA TIERRA,** has been outstanding in the presentation of papers concerning prehistoric evidence of man's occupation of Texas and his dominance over the environment. But let's not lose sight of the fact that 'time marches on', and of the Europeans who moved into this area to establish permanent urban settlements, seeking a parcel of land similar to that which was left behind in their homeland. Many STAA members have information and documentation of pioneering peoples who built log cabins, native stone houses, mills and factories, some of which still stand after 150 years or more. These settlements are also of archaeological significance and should be considered for manuscript material.

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ARCHAEOLOGICAL INVESTIGATIONS AT 41 BX 1, BEXAR COUNTY, TEXAS. By Paul D. Lukowski, with contributions by Robert F. Scott, IV, and Richard F. Shoup. Published by the Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report No. 135, 1988. $10.00 + .80 tax + 1.50 p/h ($12.30)

This report provides a detailed study of an Archaic period Indian cemetery behind what is now Olmos Dam in San Antonio. Excavations resulted in documentation of use between Late Archaic and Early to Late Transitional Archaic occupations. Thirteen human burials were found, accompanied by a variety of grave offerings including deer antlers and marine shell ornaments. Radiocarbon dating showed a span of time between 1680 B.C. to A.D. 260. In addition to the cemetery two distinct occupational areas, horizontally separated from the cemetery, were investigated.

OBSIDIAN AT COLHA, BELIZE. A Technical Analysis and Distributional Study Based on Trace Element Data. By Meredith L. Dreiss. Papers of the Colha Project, Volume 4. Jointly published by the Texas Archeological Research Laboratory (TARL) at the University of Texas, Austin, and the Center for Archaeological Research (CAR), The University of Texas at San Antonio, 1988. Forward by Dr. Thomas R. Hester. Available from CAR, UTSA, or from TARL, Balcones Research Center, 10,000 Burnet Rd., Austin, Texas, 78758. $8.00 + .64 + 1.50 p/h ($10.14)

Samples of 2,688 obsidian artifacts were studied and tested. Distribution patterns were revealed by X-ray fluorescence analysis of obsidian blades from Colha and other sites in the Belize periphery. There were two major shifts in the obsidian source usage -- Late Preclassic period El Chayal obsidian supplanted earlier Preclassic at lowland Maya sites. Obsidian acquisition patterns differ in different environmental zones depending upon the accessibility to Tikal's sphere of influence via overland or riverine trade routes, or proximity to coastal exchange networks along the coastal littoral of Belize.

AUTHORS

CURTIS DUSEK grew up in rural McMullen County near the town of Calliham. His home was about one mile from the graves of Morris and Taylor, which is now covered by the waters of Choke Canyon Reservoir. Mr. Dusek received a BA in Archaeological Studies from the University of Texas at Austin in 1977. Following graduation he worked for two years with the Center for Archaeological Research at UTSA on various archaeological projects. Needless to say, his favorite was the Choke Canyon Project which allowed him the added pleasure of "working in his own backyard." Presently Mr. Dusek is employed as a computer Programmer/Analyst with Bexar County, and lives in San Antonio with his wife and two children. Prehistoric and historic archaeology in the Brasada of South Texas is a primary interest.

JANET FITZSIMMONS STEELE received a M.A. in Anthropology in August, 1987 from the University of Texas at San Antonio. Since 1985, she has directed research in Oaxaca, Mexico with the cooperation of the Instituto Nacional Antropología e Historia. Based upon archaeological remains discovered within a cave, she documented the previously unknown Classic culture of the Mazatec Indians, presenting innovative methods for conducting archaeological investigations using preservation techniques that do not disturb the site under examination. For her discoveries and research, Janet has been elected to the Society of Women Geographers and has been funded by The Explorer's Club. She has also worked in the field in Central Texas and Oklahoma, for Texas Parks and Wildlife, North Texas State University and UTSA.

THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among avocational and professional archaeologists working in the region; To develop a coordinated program of site survey and site documentation; To preserve the archaeological record of the region through a concerted effort to reach all persons interested in the prehistory of the region; To initiate probem-oriented research activities which will help us to better understand the prehistoric inhabitants of this area; To conduct emergency surveys or salvage archaeology where it is necessary because of imminent site destruction; To publish a quarterly journal, newsletters, and special publications to meet the needs of the membership; To assist those desiring to learn proper archaeological field and laboratory techniques; and To develop a library for members' use of all the published material dealing with southern Texas.

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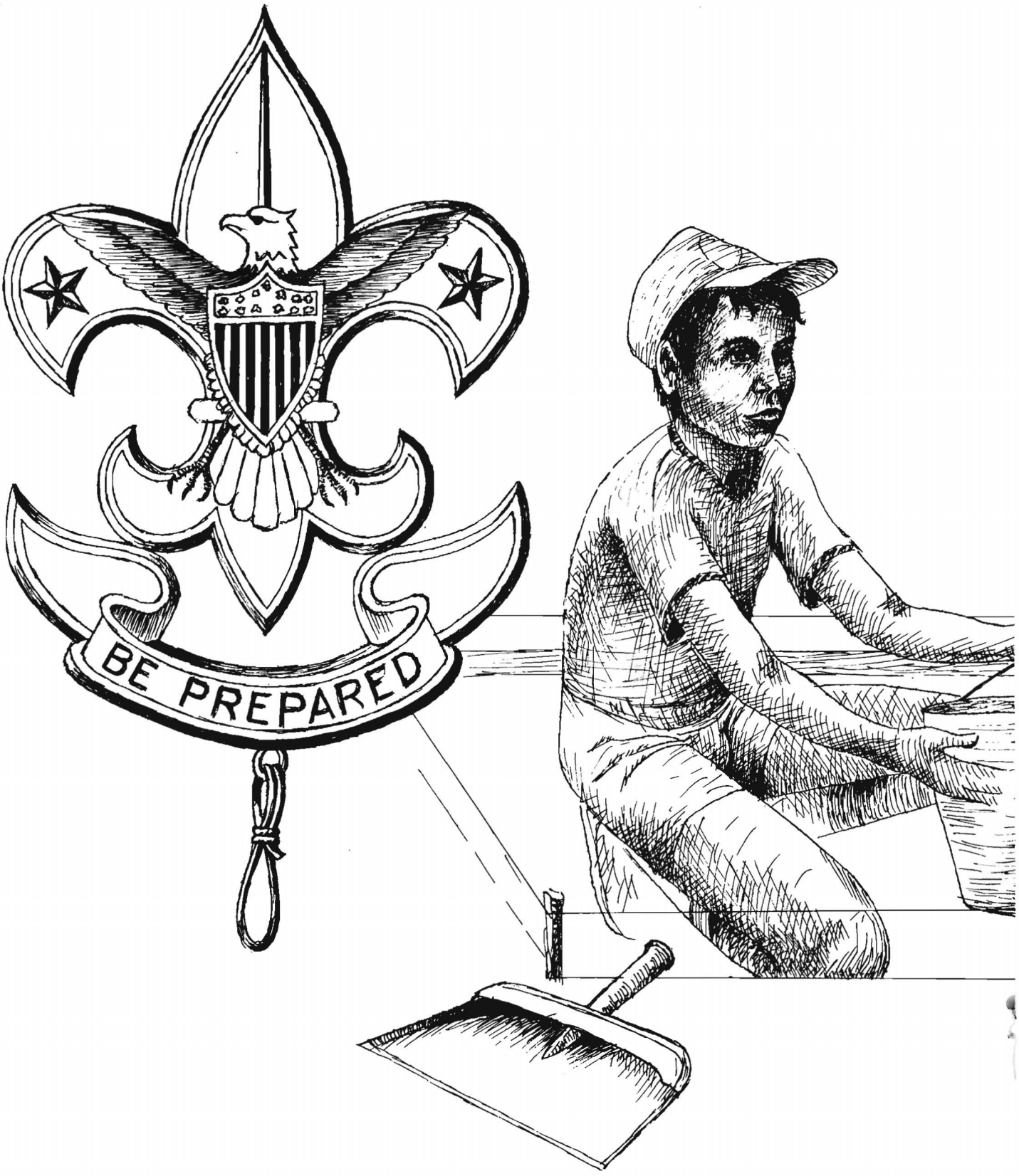
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