

ANCIENT ECHOES



VOLUME 6
2011

JOURNAL OF THE
HILL COUNTRY
ARCHEOLOGICAL
ASSOCIATION

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2011 VOLUME 6

Bryant Saner, Jr., Editor

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ABOUT THE COVER: Drawing made from a pictograph at the Hatfield Shelter, 41KR493 by Bobby Rector

MANUSCRIPTS: Send to Hill Country Archeological Association, P. O. Box 290393, Kerrville, Texas 78028

Library of Congress Number, pending

ISSN No. 1542-6939

The Hill Country Archeological Association is a non-profit organization and all contributions are tax deductible

Website: HCArcheology.org

Dedicated to Eldred Thomas Miller

Tom was awarded the first Honorary Lifetime Membership in the Hill Country Archeological Association on January 21, 2006. He was a cheerful and steady influence during the formation of the organization in 1999, an experienced and encouraging guide in all the field work, while his wit and event recall always amazed the members.

Born May 27, 1915, Tom was gifted with an almost perfect photographic memory. This gift served him well once he retired from his Postal Service career at age 55, moved to Kerrville and became involved in archeology. After he was asked to be on one south Texas project, he became in great demand because of his strong work ethics, attitude and abilities. It was no time until he was called, "Table Top Tom" because he could dig almost perfectly flat surfaces in a unit. His field notes were always precise and in fine handwriting. Tom was held in the highest esteem by both professional and non-professional archeologists.

Tom was also recognized for being a generous supporter of medical centers, animal shelters, archeological programs at universities, and elsewhere in south and central Texas. HCAA was the receiver of his generous nature also. He lived frugally and comfortably, enjoying what he wanted to in life. He was truly one of the 'Great Generation' of gentleman, and our association experienced a great loss when he passed away on November 3, 2011.





AN ARCHEOLOGICAL SURVEY OF THE S RANCH IN KIMBLE COUNTY, TEXAS

John H. Benedict Jr.

ABSTRACT

In 2010, a walking archeological survey was conducted by members of the Hill Country Archeological Association on about 200 acres of a 640 acre ranch in central eastern Kimble County. The survey identified 2 new prehistoric sites, a large lithics quarry site, Chertville, 41KM272, and a small burned rock midden site, Indian Kitchen, 41KM273. The quarry site contained lithic scatter, two lithic concentrations, and a small fire cracked rock scatter. The lithics scatter consisted of tested cobbles and cultural materials such as, thick and thin bifaces, primary and secondary flakes, edge modified flakes, cores, core/tools, quarry blanks, a Frio dart point, and a Williams dart point. The two sites lay about 1,200 feet apart in separate valleys near seasonal dry creek beds, with a limestone ridge between them. Based on the diagnostic points and cultural assemblage found at the quarry site, we believe it is a typical stone procurement site where hunter-gatherers of the Edwards Plateau collected quality chert and prepared early stage chert tools and weapons during the Middle into the Late Archaic Periods, approximately 5,000 to 1,400 years ago. The burned rock midden site may have been used during the same period of time.

INTRODUCTION

In 2009 the property owner of the S Ranch requested a survey of his land for archeological sites and information about the artifacts discovered during the survey. In 2009 and 2010, members of the Hill Country Archeological Association (HCAA) conducted the archeological survey on this private ranch, located in central-eastern Kimble County, Texas. Our purposes were to: locate new sites using a walking survey of the surface; record them in the TexSite Data System (<http://www.utexas.edu/research/tarl/records/records.php>) provide the property owner a report of our findings, and to inform him of the location and significance of his sites and their value to our understanding of prehistoric cultures in Texas.

Approximately one third of the 640 acre Ranch property was surveyed using pedestrian surface methods (Feder 1997). The area surveyed was chosen based on information from the owner, and on promising topography and presence of chert outcroppings.

This report presents our discovery of two prehistoric sites, Chertville 41KM272, a lithics quarry site, and Indian Kitchen 41KM273, a burned rock midden site. It also describes and discusses the artifacts and features we found, and their relationship to the regions prehistoric sites and hunter-gatherer life-ways.

ENVIRONMENTAL BACKGROUND

The area surveyed is located on a 640 acre parcel of the S Ranch in central area of eastern Kimble County and is part of the southern Edwards Plateau. It is 2-3 miles from a spring fed creek. The spring fed drainages east and west of the ranch flow in a northerly direction and eventually join with the Llano River. The elevation of the land varies from about 2,275 ft to 2,110 ft amsl.

The geology of the area is dominated by Cretaceous Edwards Limestone formation, Segovia member, forming the underlying mantle and exposed on hill sides, creek beds, and mesa tops. The Segovia member is chert bearing, along with Fort Terrett, and Devils River members of the Edwards group (Banks 1990). The S Ranch is located on the border of the Segovia member based on the Texas Geological Atlas (<http://www.twdb.state.tx.us/GwRD/GTA/GAT/lano.htm>) (Barnes 1981). Soils on the ranch for the most part are thin except in valleys where water movement has created thicker deposits. The alluvial soils in the valleys of the ranch are classified as Tarrant soils, which are very shallow to shallow, undulating, very cobbly soils on uplands (Blum 1982).

The Edwards Plateau limestone contains an abundance of fossils (Matthews 1982) due to the shallow seas that advanced and retreated over this area of Texas during the Cretaceous period, 80 to 100 million years ago. The limestone is made up of the calcium bearing shelled organisms and coral that were deposited on the sea floor when they died. Certain silica containing organisms, such as sponges, diatoms, and radiolarians were also deposited on the sea floor as these organisms died and became part of the sediment. Then through mineralization processes, known as diagenesis, the silica was deposited in the limestone as chert layers, nodules and cobbles.

The hills and valleys in Kimble County are the result of heavy erosion of the original sedimentary limestone over the last 80 million years from rain water runoff, rivers, and streams. Through time as this weathering removed the upper layers of the Edwards limestone mantle, the chert deposits were exposed and today are frequently found as tabular and globular cobbles, from an inch up to a 6 inches thick or thicker, in stream beds, gravel bars, and spread on the surface of hill sides. Edwards limestone chert is of good quality and was highly sought after by prehistoric inhabitants to make the tools and weapons needed for survival here (Banks 1990).

It is believed that during the Miocene time period, 10 to 20 million years ago, that the Edwards Plateau was elevated approximately 2,000 feet creating the Balcones (Spanish for balcony) Fault Line. This fault line runs from near Waco to Austin to San Antonio, then it turns west and runs to Del Rio. Others believe the lifting occurred much earlier and the southeast side of the Balcones Fault dropped during the Miocene (Spearing 1991). The faulting and erosion cut through older cracks and tunnels in the porous and fractured limestone where water from rainfall moved downhill underground, and thus formed surface springs throughout the Hill Country, and especially along the Balcones Fault Line. These springs formed permanent sources of fresh water for prehistoric inhabitants. One of these springs is north east of the S Ranch.

The diversity of plant and animal life of the Edwards plateau is quite rich, providing an abundance of year round food sources for those skilled enough to exploit them (Blair 1981). This is in part due to the wide variety of habitats produced by the geography, relatively high rain fall, moderate climate, and especially the availability of fresh water in springs and spring fed creeks.

ARCHEOLOGICAL BACKGROUND

Humans have occupied the western hemisphere for at least 13,500 years and may have arrived here as long ago as 33,000 years (Gore 1997). There are many sites across Texas and in the Hill Country dating to 11,000 years ago (Bousman 2004). Until recently these Clovis sites were thought to be the oldest, but now pre-Clovis sites dating to more than 14,000 years ago have been discovered in Texas and other states, as well as South America (Fagundes et al. 2008, Fiedel 2000). One site near Corpus Christi maybe 18,000 years old (Lewis 2009). The Gault site just north of Georgetown, Texas, is the largest and oldest Clovis site know in the area, about 13,000 years old. But this site contains older, deeper pre-Clovis deposits that are thought to be 14,000 years old or older (Collins & Bradley 2008; <http://www.texasbeyonhistory.net/gault/index.html>). However there is debate over the age and validity of these pre-Clovis sites (Fagan 2005, see Chapter 4; Waters & Stafford 2007). A recent review of prehistoric archeology, genetics, and languages of these first Americas suggests that they enter the Americas by crossing the Bering Strait, some by boat, then down along the west coast, and then spread across the Americas. Further, that all American Indian tribes, past and present, are likely the descendants of this original central Asian group or groups of maybe 5,000 total individuals that migrated to the Americas over 14,000 years ago (Goebel et. al. 2008).

The time period from about 12,000 years ago (called BP, Before Present, by archeologists) to 8,500 years BP has been called the **Paleo-Indian Period**. Archeologists have good data and agree on these people's culture and presence across the Edwards Plateau and the Americas. The period began at the end of the last Ice Age when now extinct Ice Age mammals, mega fauna, roamed north America and Texas. The Indians of this period lived by hunting mammoth, mastodon, ancient bison, and other now extinct mega fauna (McReynolds 2003). The ancient bison was larger than our modern buffalo and the last to become extinct in Texas.

These first hunter-gatherers are called the Clovis people, named after their highly fluted stone spear points—the first and oldest diagnostic point in North America (at least until we have better consensus among archeologists on the pre-Clovis sites and artifacts). Clovis points have been found in Kerr, Kendall, Kimble, and other counties near Kimble county, indicating human presence in this area at least 11,000 years ago (Bever & Meltzer 2007; McReynolds 2003; Priour 1985;). I am not aware of any Paleo-Indian sites recorded in Kimble county. However the largest and best known Paleo-Indian sites in the US, the Gault and Buttermilk Creek sites, are located together in the Hill Country in Bell county, near Belton, about 130 miles north east of the S Ranch sites discussed here (Waters et al. 2011; Waters & Stafford 2007).

As the climate gradually warmed, and mammoth and mastodon became extinct, there was a shift to hunting the ancient bison, deer, antelope, and other smaller game, around 10,000 years BP. Along with this shift in game hunted there was a shift to a new form of fluted projectile, the Folsom point. In the late Paleo-Indian Period the point favored by hunters changed to non-fluted lanceolate points such as Angostura, Barber and Golindrina, about 9,000 years BP (Collins 2004; Turner & Hester 1999; Turner et al. 2011).

Sites of the following **Archaic Period**, 8,500 years BP to 1,250 BP, are common in Kimble County as they are throughout the Hill Country Region (Collins 2004, Suhm 1958; Weir 1976). This period is differentiated from the Paleo-Indian on the presence of stemmed projectile points, more dependence on hunting and gathering subsistence rather than primarily hunting, and

a complete absence of all Ice Age mega fauna. The environment of the period was similar to the present.

The chert projectile points used to tip darts (often incorrectly called "arrowheads") change in shape through time and with geographic areas of Texas, from 8,800 years BP to 1,500 years BP. Archeologists use these different forms to define more specific time frames in the Archaic Period (i.e. Early, Middle and Late Archaic) (Prewitt 1981; Turner et al. 2011). The nomadic hunters and gatherers of this period lived in an environment and climate very similar to those of modern times before European settlers changed the vegetation with farming, ranching, introduction of cattle, goats, hogs, horses, and sheep, and especially overgrazing; and spring flows were far greater (Brune 1975). Much of the Edwards Plateau was Oak grasslands, with thick gallery forests along rivers and streams.

In Kimble County, as well as most of the Hill Country, the most distinctive Archaic site is the ***burned rock midden site***, identifying an important occupational area for gathering and food processing (Black et al. 1997; Johnson 1994, pp.12-14; Young 1986, p. 5). These oven rocks were heat fractured into smaller angular pieces during the heating and cooking process. The rock fragments forming the midden are commonly a light grey or sometimes pinkish color, and when struck with another rock, the smell of sulfur from heating in the oven coals can be detected today, thousands of years later. Burned rock middens are usually large accumulations of this fire-cracked limestone, varying from 3 to 6 feet deep and 30 feet to several hundred feet across, that developed over years as a result of repeated use of the same site for earth-oven cooking. This method of cooking became common about 5,000 years BP and is thought to reflect an increased use of plants for food, especially toxic plants like sotal, yucca, and acorns. When baked for 48 hours in a hot rock oven the toxic and indigestible components of these plants are simplified, detoxified, and made edible and nourishing.

The burned rock cooking features and/or stone *hearths* (usually a small single layer collection of limestone rocks use as a platform to build a cooking fire upon) were commonly part of ***campsites*** found throughout the Edwards Plateau region—the most likely place these nomadic hunter-gatherers would have called home. Also frequently present in and near burned rock middens are large amounts of flint debris from tool-making; animal bone (dietary remains); ash/charcoal from fires made for cooking, heating chert to make it more workable; and other uses (the charcoal can be used to date the site using radiocarbon dating). Archeological sites are composed of items that were discarded, lost or abandoned by these Archaic peoples—their "trash". The most durable artifacts left behind are those made of stone, such as stone scrapers, drills, knives, hammer stones, manos/metates, pipes, projectile points, chert cores, and waste flint flakes from making tools.

Other sites are ***rock shelter sites***, where Archaic peoples utilized shallow caves or cliff overhangs for occupation areas, and ***kill sites*** identified by butchered animal bones, stone knives, and projectile points. ***Pictograph sites***, which can be found in rock shelters, consisting of rock paintings thought to represent spiritual and significant activities, beings, and beliefs. Other site types include ***lithic procurement*** or ***lithic quarry sites*** (quarries where chert/flint cobbles eroded out of the Edwards limestone were partially processed for tools and other house-hold utility items, and weapons), ***lithic scatter sites*** (lightly-used areas probably representing short-term tool making, hunting and gathering activities; or more extensive tool making workshop activities, called a ***lithic workshop site***, identified by higher concentrations of debitage and failures from tool making), and rarely ***burial sites***. Archaic Indians often disposed of their dead by placing

them in sinkholes, caverns, and cliff shelters. Bodies buried in the open, in rocky limestone soils that are exposed to the elements of the Edwards Plateau, tend to entirely decay over time, leaving little bone or teeth remains as evidence of human presence.

The **Early Archaic Period** lasted about 4,000 years, from about 8,800 years BP to 4,500 years BP. It is characterized by a shift in climate from wet to extremely dry conditions with a short return to wet that lasted 500 to 800 years, before returning to dry conditions again at the end of this period (Collins 2004). Prewitt (1981) believes that plant food gathering and small to medium game hunting became more important during this time period. Based on the remains discovered at campsites, the diet emphasized acorns and other nuts, berries, bulbs, and grass seeds, as well as, deer, turkey, rabbit, and small easily captured rodents. Modern buffalo and prong horned antelope were absent or rare until the end of this period. Early in the period we see the appearance of stone-lined basin hearths and flat hearths for cooking, followed late in the period by the burned rock middens, starting about 5,000 years BP or earlier. Dart points styles with straight and notched stems arrived on the scene. Some of the more common points seen early are Angostura, Martindale, Gower, Wells, and Uvalde; with Bell and Andice appearing late in the period (Prewitt 1981). Clear Fork and Guadalupe biface tools appear. These scrapers were likely used for wood working.

The **Middle Archaic Period** lasted for about for 1,500 years, from 4,500 BP to 3,000 years BP (Turner & Hester 1999). The climate went for dry to wetter, cooler conditions (Collins 2004). An increase in the number of sites and lithic artifacts is seen as indicating an increase human population. Cemeteries containing many individuals are present late in the period along the Texas coast and other areas suggesting that permanent tribal territories are established. Trade networks are set up as shown by the Loma Sandia prehistoric cemetery, located in Live Oak County in South Texas, where caches of thinned bifaces (these are chert preforms ready to be made into the tool of choice) made of Edwards Chert were found (Turner et al. 2011). The number of burned rock middens increases rapidly indicating larger populations and greater reliance on plant food. There appears to be a balance between hunting and gathering. Hunting continues to be an important food source as indicated by the relatively large number of projectile points seen. Buffalo and antelope are abundant during much of this period, especially during the early wet episode. Near the end of this period there is a slight shift of importance toward gathering plant foods. Nolan and Travis dart points are seen early in the period with Bulverde found later. In the mid to late part of the period Pedernales dart points appear commonly followed by Marshall, Williams, and Lange points (Prewitt 1981).

The **Late Archaic Period** is described by Prewitt (1981) as lasting about 1000 years from 2,250 to 1,250 years BP. The cool moist climate of the earlier years gradually becomes warmer and drier (Collins 2004). Processing of food plants continues with an increased emphasis on gathering. Bison are present at the beginning of the period but soon disappear. They did not seem to be a significant food source when present (Prewitt 1981). The accumulation of burned rock middens decreased during this period (Johnson 1995). Early in the period Marcos, Montell and Castroville dart points are the most common types. Whereas Ensor, Frio and Fairland points are found more commonly in the middle to late portion, and Darl common in the late portion of the period (Collins 2004). The dart points found late in the period are much smaller than those found earlier (Johnson 1995).

By about 1,300 years BP (700 AD), the beginning of the **Late Prehistoric Period** or what some call the **NeoIndian Period**, several changes began to occur in the long hunter-

gatherer life way. The main change is the bow and arrow replacing the dart and atlatl as the weapon of choice for hunting and warfare (Collins 2004). This is followed by the use of pottery, and then late in the period by very limited agriculture based on the presents of cultivated plants (Collins 2004, p. 122). The period lasted about 1,000 years, and is divided by some archeologists (Prewitt 1981, Turner and Hester 1999) into an early Austin Phase and later Toyah Phase. In the Austin Phase, the climate continues to become drier and warmer. Burned rock middens continue to be used, especially in the western Edwards Plateau. But they accumulated at a very slow rate. Edwards and Scallorn arrow points are common (incorrectly called "bird points") and used to hunt buffalo, deer, rabbit, birds, and other game animals (Collins 1995). Hunting and gathering continue as in the previous period. Towards the end of the Austin Phase buffalo return to the region and are once again an important food source (Turner and Hester 1999). Burials at this time show an increase in individuals pierced with Scallorn arrow points that were likely the cause of death. This may indicate an increase in warfare between groups of early Austin Phase people (Johnson 1994; 1995). The early Austin Phase ended about 800 years ago (1200 AD).

The later Toyah Phase is characterized by the addition of mostly locally made pottery called Leon Plain, and some Caddo pottery acquired thru traded with east Texas Caddo Indians (Collins 2004). Agriculture also is thought to appear during this phase, but is of little importance for the Edwards Plateau inhabitants (Collins 2004). Perdiz arrow points, large thinned bifaces, end scrappers and prismatic blades are also seen for the first time during this phase. These items are associated with bison, deer and antelope hunting, especially hide processing (Collins 2004). This period ends about 400 years BP, with Europeans landing on American shores and introducing new cultures, tools, materials, and diseases. Beginning in about 1519 AD, the European diseases spread across the entire Americas and by 1700 AD, they kill 50 to nearly 100 percent of the individuals in many Indian tribes (Fagan 2005, p. 512).

The most recent period, the **Historic Period**, began about 400 years BP (1600 AD) and ended at 100 years BP (1900's AD) (Collins 2004). This period is sometimes divided in to early and late phases depending upon the archeologist. Early in the period when the Spanish first arrive there were more than 50 different tribes that live in the Edwards Plateau and South Texas area (Hester 1980). These Indians continued to use chert tipped arrows and live as hunter-gatherers—buffalo were present then. The first recorded Spaniard to live with the Indians of the south Texas, Southern Edwards Plateau and Northern Mexico, was Cabeza de Vaca beginning in 1527 AD (Krieger 2002). He documented Indian life and the names of more than 50 tribes. By 300-250 years BP (1700-1750 AD) the Spanish were building forts and missions on the southern, eastern and northern edges of the Edwards Plateau, and New Mexico, and they passed through the Edwards using ancient Indian trails like the western branch of the Pinta that may have run from present day San Antonio, thru Comfort, Kerrville, Junction, and Menard to Mission San Saba. The Spanish were missionizing the Indians (i.e., placing them on missions and teaching them European farming and ranching) from Mexico to the north edge of the Edwards Plateau, while from the north and west other tribes such as Apache and Comanche were being pushed south by European settlers and tribes on the east coast. Later in the period 1750's the plains Indians, such as the Comanche and Apache, learned to train and ride horses, and became adept mounted warriors putting most other tribes and the Spanish at a disadvantage (Collins 2004). In the 1700's Indians began to obtain European ceramics, metal, and guns. Metal arrow points were used by those unable to acquire guns. Most indigenous tribes of the Edwards

Plateau were gone by early 1800's due to the combination of European diseases, pressure from Apaches and Comanches, missionizing, moving south into Mexico and joining other tribes, or governments offering bounties for their scalps or ears (Slotkin 2000), or being absorbed into the local Spanish/European culture developing throughout the Edwards and South Texas regions.

Beginning in about the 1850's European immigrants from the southern states move into Kimble county, and in 1890's Anglo-European settlers began moving into the area. These settlers establish the farming and ranching communities that we see today (<http://www.tshaonline.org/handbook/online/articles/hck07>). However non-indigenous Indian groups continued to raid across the Edwards Plateau, especially the Comanche and Lipan Apache, until the late 1870's (Fehrenbach 1974, Zesch 2004). The last Indian attack in Kimble County took place in 1876.

PREVIOUS INVESTIGATIONS

The Hill Country, including Kimble County, has a long history of human occupation by prehistoric hunter-gatherers and recently by Anglo-Europeans. Attracted by the abundant resources of this area, early indigenous peoples left a variety of cultural remains on the landscape. The oldest artifact recorded is a Clovis point from the Paleo-Indian period, suggesting prehistoric peoples were present in Kimble County at least 11,000 years ago (Bever and Meltzer 2007).

Currently Kimble County has about 275 registered archeological sites on the Texas Archeology Site Atlas with The Texas Historical Commission. They are found widely across the county with a high concentration in and around the city of Junction, likely do to ease of discovery during city development. Other sites have been discovered during road building. However, professional archeological excavations of these sites are limited, and many sites have been damaged and lost to looters and land development. To our knowledge only the Buckhollow site 41KM16 (Johnson 1994), located several miles west of Junction on the North Llano River, and six other sites have been thoroughly investigated and reported, 41KM58 thru 41KM63 (Young 1986) along a Farm-to-Market road not too many miles from the S Ranch sites.

The Buckhollow site is a large occupational site buried in river terrace alluvium. At the deeper levels in the terrace Johnson (1994) found Marcos points from the Late Archaic (2,600 BP – 1,800 BP) and several hearths. However the major findings were in the upper levels and consisted of artifacts, ecofacts, and features from the more recent Late Prehistoric Period, i.e., the classic Toyah culture—where Indians hunted buffalo and other animals with the bow and arrow and made pottery (800 BP – 400 BP). A radiocarbon date from charcoal in this level was 330 BP (1670 A.D.) (Denton 1985). The Toyah level contains multiple hearths, buffalo bones, Perdiz arrowheads, pieces of pottery, chert debitage, engravers and perforators, Harahey buffalo knives (also known as 4-beveled and 2-beveled knives), and many hide scrapers. This Toyah site was the location of several families living together as a small community on the river terrace. The Toyah peoples are thought to be recent immigrants to the Edwards Plateau following the buffalo from the high plains.

Wayne Young (1986) discovered and registered six sites not too many miles from the S Ranch sites reported here. Four of the sites were lithic procurement sites, and two are occupational areas characterized by burned rock middens, lithic scatters, dart points, flakes,

bifaces, scrapers, preforms, and choppers. The site on the west bank of the spring fed river contained the diagnostic points: Bell, Travis, Pedernales, Montell, Marshall, Frio, and Perdiz. Thus covering most of the Archaic Period and Late Prehistoric Period Toyah Phase—maybe 8,000 years of prehistory from Bell to Perdiz points.

The site on the east bank of the same river was 20 acre in size and much larger than the west bank site. The east bank site had three large burned rock middens, a lithic procurement area on a ridge, and contained diagnostic points: Noland, Pedernales, Frio, and Castroville. Thus covering the Middle Archaic Period to Late Prehistoric Period—maybe 6,000 years from Nolan to Frio. This site also contains Leon Plain pottery shards, which suggest it was in use as long as the site on the west side of the river, that is in to the Toyah Phase 400 years ago. There is a large spring near these two sites.



Figure 1. Part of the survey team in a Lithic Concentration area, Feature 1, of this quarry site, 41KM272 on the S Ranch, Kimble County, Texas. Photo shot facing north-east Part of the survey team from left: Bill Csanyi, John Benedict, Ed Rendon, Jose Contreras, and Dorothy Grayson not in the photograph because she was taking the picture.

CURRENT SURVEY METHODOLOGY

We first visited the S Ranch in late 2009 at the request of the landowner who had discovered chert artifacts in what became the quarry site (Fig. 1). In 2010, revisits were

conducted to survey, map, and collect/record significant features and artifacts in the quarry site, and to survey the ranch for additional archeological sites. Additional surveys were focused on those areas and elevations that were likely to have chert quarry sites due to presence of eroded chert cobbles and outcroppings, or camp sites with hearths or burned rock middens. The walking surveys, also known as pedestrian surveys, were conducted on foot using survey crew members walking parallel lines about 90 feet apart. All discovered site boundaries, significant artifacts, and features were measured and mapped, and the most significant artifacts/features (i. e. temporally and functionally) were collected/recorded, photographed, sketched, and documented. The field sack and isolated finds artifacts were recorded, bagged and tagged. No shovel tests or test units were excavated anywhere on the ranch. Possibly a third of the ranch was examined using pedestrian surveys. The TexSite reports were submitted and registrations for the two new sites were received on September 1, 2010. The field survey records and field notes are on file with Hill Country Archeological Association. All artifacts collected were returned to the landowner at completion of this report. Most of the artifacts will go in to a display the owner will keep and share with his neighbors and friends about local prehistoric peoples.

FINDINGS

SITE DESCRIPTIONS

41KM272 Chertville Site

This site was a surface lithic quarry area about 350 meters N-S and 300 meters E-W, and littered with cultural and noncultural chert cobbles, and flakes (Figs. 1 & 2). The site was somewhat "U" shaped following elevation contours above an intermittent stream drainage. The site was located between elevations 2,140 and 2,120 feet amsl. There was much brush, tree, and grass cover making it impossible to thoroughly survey the site area. Bedrock is exposed in some places, and in others the soil was too shallow and rocky to produce much vegetation, but here artifacts and debitage were most common and easily observed. The site appears to extend east on to the adjoining private property, where we could not survey

The chert cobbles discovered, both tabular and globular, likely had eroded from surround limestone bedrock, and were dispersed across this area and down slope by man and natural forces. This is a large quarry site, occupying about 20 acres. Within the site we found prehistoric cultural material such as: tested cobbles, cores, core tools, scrapers, points, thick and thin bifaces, edge modified flakes, and flake debitage (Figs. 3 & 4). Historic artifacts found were: one iron metal fragment, one purple glass fragment. We also found one modern single-shot pistol (Fig. 5). We discovered two lithic concentration features, possible workshops, Features 1 and 2 (Figs. 2, 4, 6 & 7); and a small fire cracked rock scatter feature, a possible hearth, Feature 3 (Figs. 2 & 8). Significant prehistoric artifacts collected were: dart points, untyped point fragments, thick and thin biface and uniface fragments, a complete thick biface, and two cores (Fig. 3). Significant historic and modern artifacts collected were: one historic purple glass fragment, one historic rusty sheet metal fragment, and one modern ca. 1980's Thompson/Center Arms 41 magnum Contender single-shot hunting/target pistol (Fig. 5).

Feature 1 is a lithic concentration near the center of the site (Figs. 1 & 2). The dimensions are about 40 m long (NE/SW) by 12 m wide. It is on a slightly sloping surface just 13 meters north of the dry creek bed. The area is littered with tested and untested chert cobbles, and

primary, secondary and some tertiary flakes. A rough quarry blank was collected FS-5 (Fig. 3, n). This area has a higher concentration of debitage flakes than most of the site, suggesting an early stage workshop area.

Feature 2 is another lithic workshop area with a relatively high concentration of tested cobbles and flake debitage (Fig. 2). It was located in the south east area of the site and 50 m south of the dry creek and across the creek from the first lithic concentration discovered, Feature 1. The dimensions for this work shop area are about 29 m N/S by 24 m E/W. An untyped point fragment, FS-16, and a spoke shave, FS-17, were collected here (Figs. 3, c & g).

Feature-3 is a fire cracked rock scatter on the east side of the site just north of the dry creek (Figs. 2 & 8). It is characterized by a scattering of 22 typical angular smoky smelling fire cracked rock (FCR)—likely scattered down slope by erosion and animals. The FCR scatter occupies an area of about 10 m N/S by 8 m E/W. Present among the fire cracked rock were chert cultural fragments such as: primary, secondary and tertiary flakes; tested cobbles, biface fragments, and a core. Also found was a biface fragment (FS-14) likely from a knife or dart point (Fig. 3, b). This feature likely was a short term campsite.

41KM273 Indian Kitchen Site

This site contains a burned rock midden (BRM) feature, that is flat on top and oval in outline, and of relatively small size, about 20 meters N-S by 15 meters E-W, at elevation 2,140 feet amsl (Figs. 9 & 10). The midden lies in the alluvium of the valley floor beside an intermittent creek entrenchment. Based on the depth from ground surface to the bedrock in the bank of this nearby dry creek entrenchment, the BRM is likely less than a meter deep. Considerable grass covers the ground around and over the BRM, making it difficult to locate surface artifacts. Down slope the fire cracked rock is scattered for about 10 meters and mixed with a light scattering of secondary and tertiary chert flake debitage. No diagnostic points were found, only chert flake and chip debitage, one triangular edge modified flake (Fig. 3, p), and an isolate find of a biface fragment (Fig. 3, o) about 45 meters north of the BRM in the dry creek bed (IF-1; Fig. 9). Also in the creek bed, we found tabular and nodular chert partially eroded from the surrounding bed rock (Fig. 11). This eroding chert was just a few meters upstream from the biface fragment and 45 meters north of the BRM,. The elevation of this chert seam in the limestone is approximately 2,135 feet AMSL, in the same range as the chert quarry site 41KM272 found in the next valley north—suggesting this chert seam continues across the area at this elevation. No shovel tests or test unit excavations were conducted.

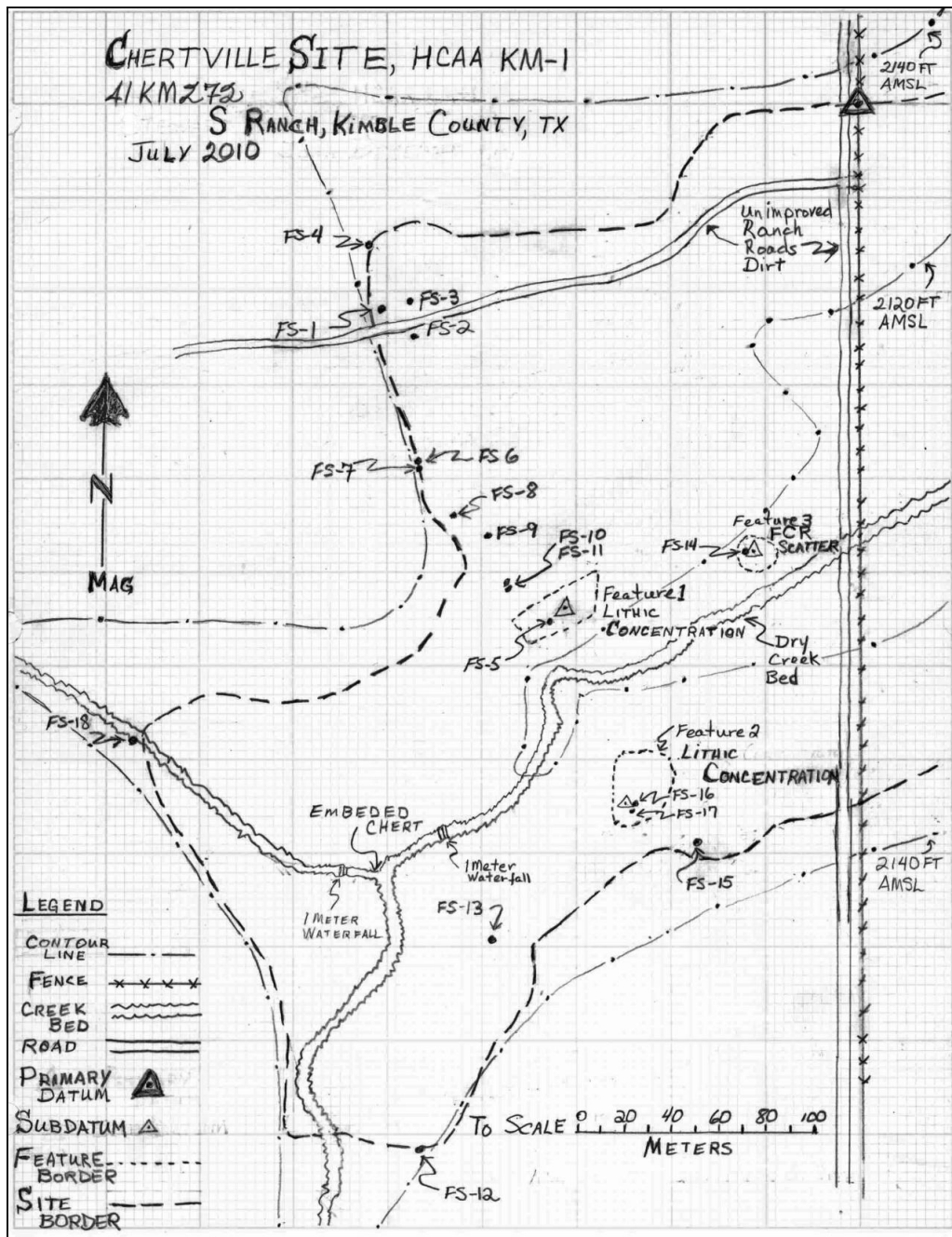


Figure 2. Sketch map of the Chertville Lithic Quarry Site 41KM272: including Feature 1, a Lithic Concentration; Feature 2, a Lithic Concentration; and Feature 3, a Fire Cracked Rock Scatter. The site is located on the east side of the S Ranch in eastern Kimble County, Texas.



Figure 3. Significant prehistoric artifacts collected from the surface of the Chertville Site 41KM272: (a) Thin biface fragment (FS-11); (b) Thin biface fragment (FS-14); (c) Untyped dart point fragment (FS-16); (d) Untyped dart point fragment (FS-1); (e) Frio dart point fragment (FS-2); (f) Williams dart point (FS-8); (g) Uniface spoke shave (FS-17); (h) Uniface scraper (FS-7); (i) Biface scraper (FS-6); (j) Edge modified flake (FS-4); (k) Thick biface core fragment (FS-13); (l) Thick uniface scraper (FS-12); (m) Thick biface core (FS-15); (n) Thick biface core (FS-5). And from the Indian Kitchen Site 41KM273: (o) Thin biface fragment (IF-1); and (p) Thick edge modified triangular flake (FS-1).



Figure 4. Tested chert cobble in center, with the 20 cm arrow facing north. This was located in Feature 2, a Lithic Concentration area, of the Chertville Site 41KM272, on the S Ranch, Kimble County, Texas.

ARTIFACT DESCRIPTIONS FOR BOTH SITES

During the surface survey of the S Ranch we collected a total of 21 artifacts, including two historic and one modern artifact, as listed above and described below, and seen in Figures 3 & 5. The locations where they were found are listed in Figure 2 for the Chertville Site, 41KM272, and Figure 9 for the Indian Kitchen Site, 41KM273. These artifacts are representative of the range of artifacts seen on the ground surface during the walking survey.

Diagnostic Dart Points

Williams (FS-8): This point (Fig. 3, f) was found on the surface near the west-north-west edge of 41KM272 (Fig. 2). The distal end has been broke off, possibly 1.0 cm missing; likely from an impact to the tip. The break is old. However a recent chip is also present on the distal end. This dart point was commonly made and used in Central Texas during the Middle Archaic Period—possibly 4,500 to 3,000 years BP (Turner et al. 2011). There is a heavy, light grey patina on both sides of the point. Dimensions: length 56 mm, width 26 mm, thickness 8 mm, stem length 15

mm, stem width at blade 17 mm, stem width at base 21 mm, and stem thickness 5 mm. It appears to be made from local Edwards Chert—it is light brown in color (Munsell pale red 10R 6/2).

Frio (FS-2): This point (Fig. 3, e) was found on the surface near the north-west edge of site 41KM272 (Fig. 2). Approximately one third of the distal end is missing, 1.5 cm, possibly due to an impact fracture. One distal corner of the base is chipped and there is a minor chip in the blade just above the base. This dart point was commonly made and used in Central, South and Pecos regions of Texas during the Late Archaic Period—possibly 2,200 to 1,400 BP (Turner and Hester 1999). Dimensions: length 41 mm, width 33 mm, stem length 13 mm, stem width at blade 19 mm, and stem width at base 22 mm. It appears to be made from local Edwards Chert—it is light brown in color.



Figure 5. (a) Historic purple glass and ferrous metal fragments, and (b) a modern Contender 41 magnum single-shot pistol, found on the surface of the Chertville Site 41KM272, S Ranch, Kimble County, Texas.



Figure 6. Feature 1, a Lithic Concentration and possible workshop, in the 41KM272 Chertville Site, S Ranch, Kimble County, Texas.

Untyped Points and Other Artifacts

Thin Biface Fragment (FS-11): Midsection fragment (Fig. 3, a) with both breaks likely manufacturing fractures. No patina. Dimensions: length 29.5 mm, width 36 mm, and thickness 8.6 mm. Color: dark brown, commonly known as "root beer" (Munsell: blackish red 5R 2/2). From 41KM272 site.

Thin Biface Fragment (FS-14): Distal end fragment (Fig. 3, b) resulting from possible manufacturing fracture (perverse). Distal end shows some polish on both sides and edge wear, possibly from use. No patina. The dimensions are: length 51.1 mm, width 39.9 mm, and thickness 7.9 mm. Color: dark brown, commonly known as "root beer" (Munsell: brownish grey 5YR 4/1). From 41KM272 site.

Untyped Dart Point Fragment (FS-16): Blade fragment (Fig. 3, c) with snap fracture likely where hafted. The entire stem is missing. Possible impact fracture and heat fracture damage to tip. Some light grey patina on both surfaces. Dimensions: length 50.8 mm, width 28.8 mm, and thickness 7.2 mm. Color: dark brown, commonly known as "root beer" (Munsell: brownish grey 5YR 3/2). From 41KM272.



Figure 7. Looking north across Feature 2, a Lithic Concentration, in the 41KM272 Chertville Site, S Ranch, Kimble County, Texas.

Untyped Dart Point Fragment (FS-1): Blade fragment (Fig. 3, d) with impact fracture to tip and snap fracture to base where hafted. No patina present. Dimensions: length 49.2 mm, width 34.2 mm, and thickness 6.2 mm. Color: medium brown and dark brown mix (Munsell: grayish brown 5YR 3/2). From 41KM272.

Uniface Spoke Shave (FS-17): Uniface edge modified flake (Fig. 3, g) with possible use wear on one modified lateral edge. Cortex on both ends. No obvious patina. Dimensions: length 107.9 mm, width 48.0 mm, and thickness 10.7. Color: light brown and dark brown (Munsell: pale brown 5YR 5/2 and dusky brown 5YR 2/2). From 41KM272.

Uniface Scraper (FS-7): Edge modified uniface flake (Fig. 3, h) with some use wear. One side has higher quality root beer chert and was the end most modified and used as tool. This shaped similar to a Sequent Flake Uniface. Slight patina on both sides. Dimensions: length 58.1 mm, width 51.0 mm, and thickness 13.8 mm. Color: medium brown and dark reddish brown, "root beer," and a stripe or two of light tan (Munsell: moderate reddish brown 10R 4/2 and grayish brown 5R 2/2). From 41KM272.

Biface Scraper (FS-6): Two edges modified on opposite sides as uniface scraper so it appears beveled (Fig.3, i). Both modified edges with use wear and some polish. Fracture of base may be manufacturing break. No patina. Dimensions: length 73.3 mm, width 45.8 mm, and thickness 12.5 mm. Color: medium brown and dark reddish brown, "root beer," with several light tan stripes (Munsell: moderate reddish brown 10R 4/2 and grayish brown 5R 2/2). From 41KM272.



Figure 8. Fire Cracked Rock Scatter, Feature 3, facing North across feature. Pin flags show location of individual FCR. Each FCR is wrapped with red survey tape. Chertville Site, 41KM272, on S Ranch, Kimble County, Texas.

Edge Modified Flake (FS-4): Possible scraper with three edge modified sides (Fig. 3, j). Edges with possible uniface use wear, and with some recent chipping, likely animal tromping damage. Light patina on both sides. Dimensions: length 51.1 mm, width 34.3 mm, and thickness 9.3 mm. Color: dark reddish brown, "root beer" (Munsell: grayish brown 5YR 3/2). From 41KM272.

Thick Biface Core Fragment (FS-13): Possible quarry blank fragment with manufacturing fracture about middle of piece (Fig. 3, k). Small area with cortex on middle of one side. Some crushing on edges likely from tool use. Heavy whitish patina covering all sides of piece. Dimensions: length 67.0 mm, width 79.4 mm, and thickness 35.6 mm. Color: dark brown (Munsell: grayish brown 5YR 3/2). From 41KM272.

Thick Uniface Scraper (FS-12): Scraper shows tool use wear (chipping) on most of the modified edge (Fig. 3, l). Some cortex on dorsal basal end. Heavy tan patina on dorsal surface and whitish on all other surfaces. Dimensions: length 84.6 mm, width 73.2 mm, and thickness 25.2 mm. Color: dark brown (Munsell: grayish brown 5YR 3/2). From 41KM272.

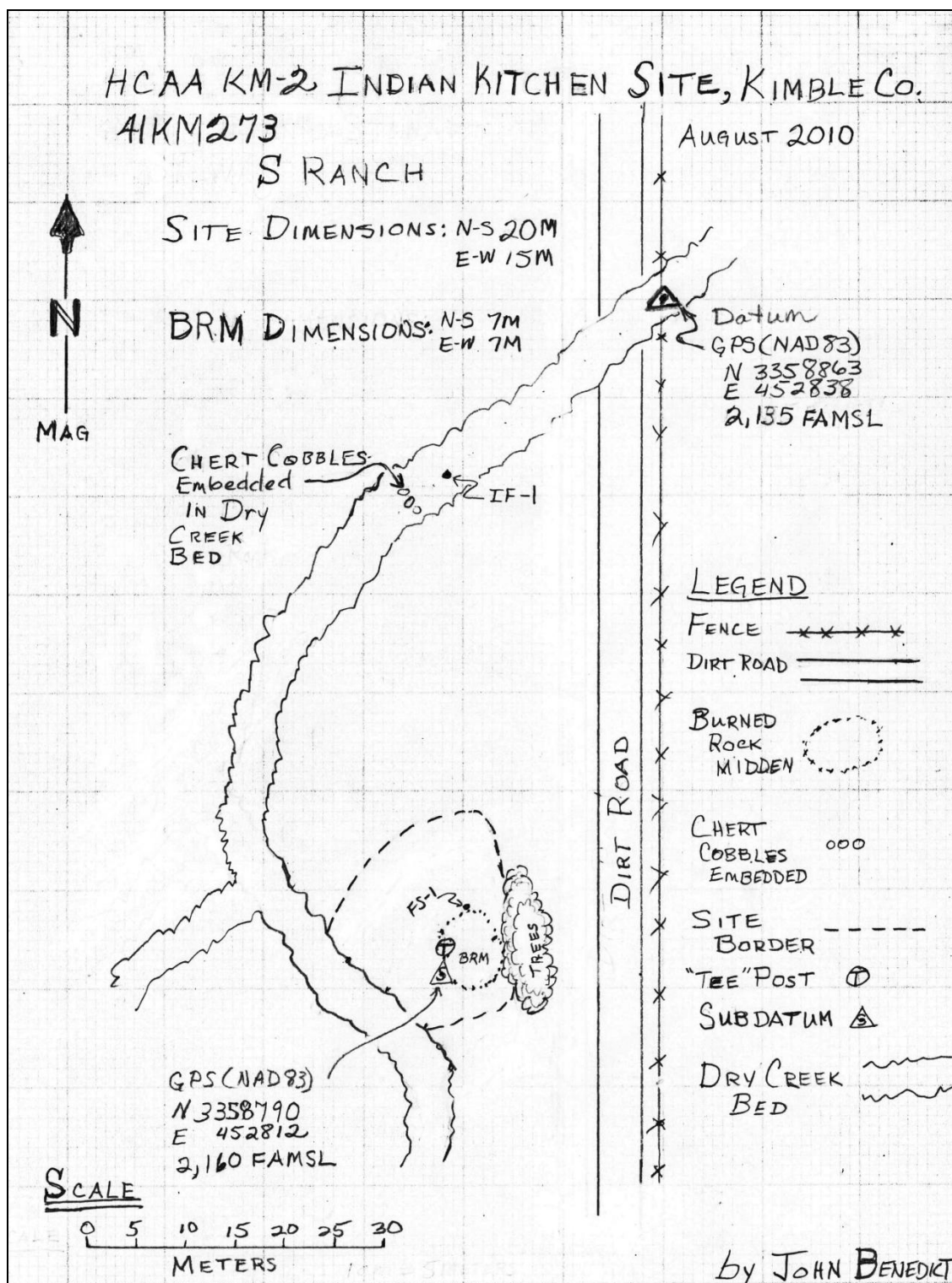


Figure 9. Sketch map of the Burned Rock Midden Site, Indian Kitchen, 41KM273. This site is in a small valley near the south-east corner of the S Ranch, in eastern Kimble County, Texas.



Figure 10. Looking due south across the Burned Rock Midden Site, Indian Kitchen, 41KM273, on the S Ranch, eastern Kimble County, Texas. The outside edge of the BRM is marked with pink pin flags, and a tee post is located in the middle of the west edge.

Thick Biface Core (FS-15): Core distal edge shows some crushing and chipping possibly from tool use (Fig. 3, m)—a possible core tool. Thick cortex on basal end, on both sides. Basal end chert and cortex with some heat fracture damage resulting in several "pot lid" scars. No patina. Dimensions: length 155.0 mm, width 116.0 mm, and thickness 48.9 mm. Color: dark brown, high quality chert layer about 10 mm thick, just under the cortex on the base, and shading to a much lighter brown on the remainder of the artifact (Munsell: grayish brown 5YR 3/2 on base to pale brown 5R 5/2). From 41KM272.

Thick Biface Core (FS-9): Core distal edge shows some crushing and chipping wear possibly from tool use (artifact not shown). Distal end with edge modified chipping. Some cortex on the basal end with heat fracture damage. Light spotty patina on both sides. Dimensions: length 116.7 mm, width 89.9 mm, and thickness 46.3 mm. Color: dark brown high quality chert layer about 10 mm thick on base under the cortex, and shading to a lighter brown on the remainder of the piece (Munsell: grayish brown 5YR 3/2 on base to pale brown 5R 5/2). From 41KM272.

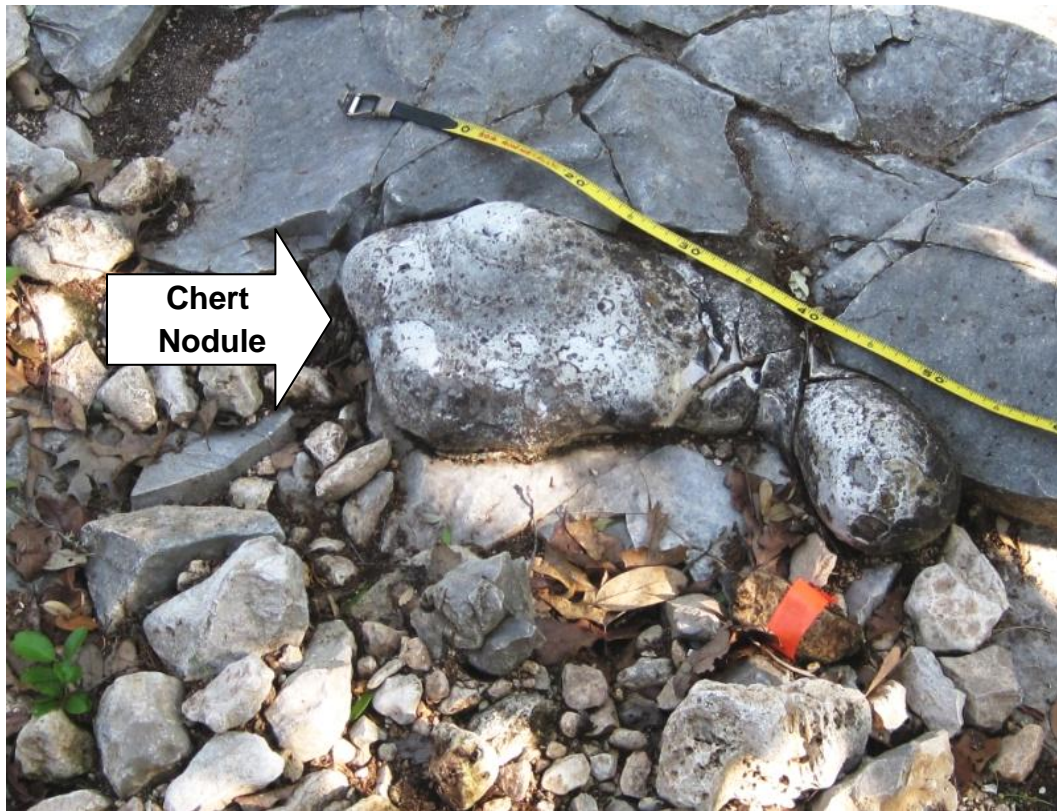


Figure 11. Chert outcropping at approximately 2,135 feet AMSL in the dry creek bed 45 meters north of the burn rock midden site 41KM273, Indian Kitchen, S Ranch, Kimble County, Texas. The nodule is about 60 cm long and 15 cm thick. Just a meter north of this nodule, a seam of tabular chert was exposed, ranging from about 8 to 10 cm thick.

Thick Biface Core (FS-5): Very roughly chipped, possible discarded quarry blank (Fig. 3, n). About 2/3 of dorsal side with cortex. Several fractures present. Some light patina on ventral surface. Dimensions: length 126.8 mm, width 66.8 mm, and thickness 34.3 mm. Color: dark brown to light brown (Munsell: dusky brown 5YR 2/2 to pale brown 5YR 5/2). From 41KM272.

Rusty Sheet Metal Fragment (FS-3): This fragment was discovered next to the purple glass fragment (Fig. 5, a) in 41KM272. The fragment contains iron. It may be historic if placed on the site at the same time as the purple glass fragment below.

Purple Glass Fragment (FS-3): A historic purple glass fragment (Fig. 5, a) was discovered on the surface of 41KM272. The approximate date this glass was made is between 1888-1915, when manganese oxide was added to glass during manufacture. The purple color of the glass is produced when the manganese oxide in the glass is exposed to ultraviolet light, as for example in sunlight, thus indicating the glass is from this period in history. Based on the curvature of the glass fragment, the original bottle was about 10.5 cm in diameter.

Single-Shot 41 Magnum Contender Pistol (FS-18): This modern pistol was manufactured between 1967 and 1984 by Thompson/Center Arms (Fig. 5, b). It was found in a dry stream bed in 41KM272. Surprisingly it was loaded and cocked. The land owner had no knowledge of the pistol or how it arrived in the stream bed.

Edge Modified Triangular Flake (FS-1): This is the only artifact other than chert flake debitage found at the burned rock midden site 41KM273 (Fig. 3, p). The thinnest edge appears to have been modified with unifacial chipping. Cortex is present on the side. No patina present. Dimensions: length 70.9 mm, width 58.2 mm, and thickness 13.5 mm. Color: light and dark brown (Munsell: dark yellowish brown 10YR 4/2).

Thin Biface Fragment (IF-1): Isolated find (Fig. 3, o) in a dry stream bed, 45 meter north of the burned rock midden site 41KM273, Indian Kitchen. Likely the distal one third of a projectile point. Impact may have caused the basal fracture and chip missing from the tip. The artifact is covered in a thick white patina, resulting in the color being entirely white. The patina has tiny orange spots of iron oxide that can be seen at 10x magnification. Dimensions: length 32.2 mm, width 22.5 mm, and thickness 5.6 mm.

SUMMARY AND DISCUSSION

The total area surveyed was about 200 acres of the 640 acre ranch. Two prehistoric sites were found, 41KM272 a large surface chert quarry site, and 41KM273 a burned rock midden site containing one midden. The midden site is located on a valley floor about 2,100 feet due south of the quarry site. The quarry site was used as a lithics procurement, workshop, and camp site by prehistoric peoples. It was used to obtain early stage tools, cores, core/choppers, scrapers, blanks, preforms and other lithic household items that were further developed and used elsewhere. Based on other nearby recorded archaic occupational sites on a spring fed river and the two diagnostic dart points and the other artifacts found at this 41KM272 quarry site, we suggest that the lithic materials taken from this quarry site may have been utilized by prehistoric peoples from at least the Middle Archaic to the Late Prehistoric Period or longer—5,000 years BP to 1,400 years BP. Moreover this quarry site was likely used by those living on the nearby river less than 10 miles away. However we cannot say exactly when or how frequently the quarry was used.

Sites like the burned rock midden site 41KM273, were commonly used from about 5,000 years ago in to the Historic Period. Some Apache use rock ovens to this day. We can speculate that this earth and rock oven cooking site was likely used during the Middle and/or Late Archaic, as were the burned rock midden sites downstream. However again we cannot say exactly when or how frequently it was used.

The midden and quarry sites we discovered on the S Ranch are connected, in that the quarry was the source of stone tools and weapons used here and elsewhere, and the midden is the site of cooking and living, in daily tribal life. They both represent typical prehistoric cultural materials, and settlement and land use patterns for prehistoric hunting and gathering peoples living across the Edwards Plateau for the last 5,000 to 8,000 years (Collins 2004, Turner et al. 2011, Weir 1976).

ACKNOWLEDGEMENTS

We are most grateful to the landowner Bernie S for inviting HCAA to survey his property and record the archeology sites we found; and to his biologist for suggesting that the landowner contact us. A special thanks to Bryant Saner for his patience and leadership, and for providing me the opportunity to record this site. Also many thanks to all of the HCAA survey team members: Jose Contreras, Bill Csanyi, Terry Farley, Dorothy Grayson, Ed Rendon, Bryant Saner, Steve Stoutamire, Kay and Woody Woodward, and Curtis and Thomas Woodward. They are so expert at finding and identifying diagnostic and significant cultural material, I could have stayed home. Without them this paper would have little cultural material to discuss.

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TESTING AND EXCAVATIONS AT BRM 41BN201
BANDERA COUNTY, TEXAS
“MECHLER’S PROJECT”

Kay L. Woodward
and
T. G. “Woody” Woodward

ABSTRACT

A phone call to Texas Historical Commission, regarding a large burned rock midden and lithic scatter led to an initial survey by the Regional Archeologist, Dan Potter, who in turn contacted the authors. Following contact with the landowners, the authors involved members of the Hill Country Archeological Association in a further walking survey which indicated more fire cracked rock and evidence of surface lithic cultural debris. Desire for more information by the land owner prompted shovel tests on the outside circumference of the burned rock midden and two one-meter test unit excavations. This report discusses the results of the surveys and tests.

HISTORY

Early Native American inhabitants of Bandera County include Lipan Apache and Comanche. They were in the area from the 1700’s into the 1800’s. The few men brave enough to try shingle making or families wanting to homestead were often driven out by the Indians. Between 1841 and 1843 (exact date unknown), John Coffee Hays led a troop of Texas Rangers against a large party of Comanche at Bandera Pass and defeated them. This became known as the “Battle of Bandera Pass”. Thereafter, the presence of the military fort at Camp Verde increased settlement in the area near Medina River. Three men, John James, John Herndon, and Charles DeMontel surveyed an area of the Medina River that had been occupied by the Indians. They filed the plat with the first county court in 1856, for the formation of a settlement in the newly-designated county seat of Bandera County. The town and county were named for the nearby Bandera Pass. These founders had formed a partnership in 1853 to build a water powered lumber mill. They recruited help from Polish families who lived in Karnes County. These families arrived in 1855 and each received purchase rights to town lots and farmland.

After the Civil War, the town became a staging area for cattle drives up the Western Trail. The drive went north through Bandera Pass and continued through Kerr County and onward. The town grew as it supplied the fort and shopkeepers contracted as outfitters for the cattlemen. Cotton was a commercial crop during this period. Sheep and goats proved more profitable on the shallow limestone soil than cattle, but cattle was still a necessary supply item for the fort.

The economy and population declined after 1900 due to a series of floods which destroyed sawmills, gins homes and businesses. It wasn’t until the 1920’s and 1930’s that Bandera became known as a resort and

dude ranch area, despite not having easily passable roads. The San Antonio Highway was constructed in 1936, but most of Bandera remained almost inaccessible, depending on the weather. Bandera was incorporated in 1964. It took the major killer flood of 1978, to get the state and city of Bandera to work together to create strict control of the floodplain. Roadways through town and out into the county were gradually paved in the 1950's. None of the towns in Bandera County have grown large, but each has its own charm and individuality.

INTRODUCTION

This project was located in northeastern Bandera County on the David and Annette Mechler property near Medina, within a high fenced, gated property of 43 acres. The landowners have cattle grazing in the leveled field of thick growth King Ranch blue stem, side oats grama, and little blue stem grasses surrounding the burned rock midden (Fig. 1). The land slopes westward from steep yellow hills with a



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Author: Dan Potter

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Figure 1.

varied growth of prickly pear, twisted leaf yucca, agarita, sotol plants, cedar elms, some wild cherry, walnut, Spanish and live oak trees. The burned rock midden is located in an alluvial flood plain in a west facing exposed slope. Benton Creek and a dry spring site are approximately 200 meters west of the burned rock midden. Benton Creek continues south and eventually joins the North Prong of the Medina River, and, further on, the San Antonio River. On the project property, just east of Benton Creek and south of the BRM, there is a grove of old growth native pecan trees. With this combination of natural resources, the probable reason for the large burned rock midden location is established. The purpose of this study was to investigate and, if worthy, register this archeological site with the Texas Historical Commission and Texas Archeological Research Laboratory.

VIEWS ON BURNED ROCK MIDDENS

During the past 25 to 35 years, there have been various opinions expressed and written about the purpose and use of burned rock middens of central Texas by many archeologists (e.g., Prewitt 1976, 1996; Weir, 1976, 1991; Peter 1982; Black 1985, 1989a; Creel 1986, 1991; Gearhart 1987; Ellis 1994). There were others who conducted much earlier investigations of burned rock middens and their work, while lacking publication of some of their research in many instances, contributed greatly to the overall study and provided a more comprehensive view of type, usage and deposits of the middens.

The use of middens as a means for cooking acorns was first written by Tom Hester (1985) and Darrell Creel (1986:153). At first, Steve Black agreed with these suggestions of how hot rock cooking took place within the underground ovens (Black and McGraw 1985). Black began to rethink this argument the more he studied middens. He also put forth the theory they were used for cooking of such starch-based foods as sotol, prickly pear, lechuguilla, and members of the lily bulb family. When one considers the growth cycles from year to year, it is possible middens were utilized in different food processing due to seasonal and environmental changes.

It is believed the earliest creation and use of burned rock middens in central Texas predates the latecomers to the area (the Apache, Comanche and the Tonkawa), as those aboriginal hunters-gathers left evidence they were in the area during the Pleistocene (Ice Age), at least 11,500 years ago. By 6000 B. C., the climate easily provided for larger family groups at a site surrounding a midden because of the abundant water and food sources (cf. Hester and Evans 2000). The burned rock midden site was not a permanent home for these people, but one they, and perhaps other families, used long term.

Linda Ellis approached midden investigation without preconceived ideas of their use. She arrived with totally differing opinions and proposals not made by the other archeologists based on her studies of the hunter-gather technology (Ellis 1992). While cooking may appear the prime event at a midden, Ellis pointed out the other activities involved. For an example, they might have been: In what does one gather acorns or prickly pear pads to carry to the cooking area? Who makes the basket, clay, or skin container? Who knows how to make a sharpened heavy stick for digging sotol bulbs? With what is it sharpened on the end? Ellis brought forth the questions of all the other techniques possibly taking place around these

Central Texas middens, and saw them not just cooking areas, but rather the full aspects of life ways to be explored for the involved technological processes (Ellis 1997: Vol. I: 43-81).

A common terminology (not necessarily view points) came into use following a 1988 Council of Texas Professional Archeologists symposium on burned rock midden research (Hester, ed.1991) and from opinions expressed by researchers polled in late 1991 and early 1992 (summarized in Black, et.al.1992). The physical shape of the midden, the deposits therein and the distribution range were all considered important. There are two distinct forms of burned rock middens in central Texas. The annular or ring-shaped dome is found more often in an east to west direction, continuing westward even beyond the Edwards Plateau.

The dome form, which is the type most often seen in central Texas, is easily recognized even when it has eroded. The midden at 41BN201, is a dome midden (Fig. 1) The irregular-sized midden at Mechler's is about .9 m in height and has a circumference of approximately 45 m.

Increased attention has been paid to the comparison of midden and off-midden artifact distribution, especially of the chipped stone tools and tool making debitage (Hester 1971; Luke 1980; Lukowski 1987; Sorrow 1969; Suhm 1959). For example, the Shep site in Kerr County may consist of a single-component midden and at least one associated activity area next to one edge where limited sorts of lithic tool reduction and refitting took place. (Luke 1980:30-31). The indications are that this may have been the same situation at the 41BN201 site. By use of this means of comparison, chipped tools and associated debris have been used to gain an approximate age of this midden. Techniques such as radiocarbon and mass spectrometry may provide more accurate dating of the charcoal, bone and like matter had it been done, however this was not undertaken. No excavation of the actual midden took place and it is protected by the landowner. A State Archeological Landmark application for it is in process at this writing.

METHODOLOGY

Dan Potter recorded this site with the Texas Archeological Research Laboratory at UT-Austin and received the trinomial, 41BN201. We followed up with some members of HCAA doing a walking survey of the 43 acre property, whereby determining there were no other site locations on the property. We then placed a datum in the center of the burned rock midden and plotted four shovel tests 20m in the cardinal directions from the datum. The soil was first cleared, then the shovel tests were excavated in 10cm levels. All soil was screened through ¼ inch wire mesh. Due to three concluding factors, (results in two of the shovel tests, erosion at those locations, and the landowner's desire for more property history), two test units were excavated. Debitage and artifacts were recovered from all shovel and test units and placed in bags with corresponding provenience recorded. All data and artifacts collected during this investigation were analyzed, and then returned to the owners. A copy of the written and published report of the investigation would then to be given to the landowners. An SAL presentation will be held with the landowners, the HCAA project workers, and the Regional Archeologist, Dan Potter, when it is approved.

SHOVEL TESTS

SHOVEL TEST 1, on the west, was taken down to 50 cmbd, with soil ranges of 10YR2/1 to 10YR/4/6 on the Munsell chart. In total, 10 fire cracked rocks (FCR) were recovered, 59 flint chips, 4 tertiary flakes, 37 *Helicina* and one *Rabdotus* snails.

SHOVEL TEST 2, on the north, was non-productive and only two levels were dug.

SHOVEL TEST 3, on the east, was taken to 40 cmbd. No flint was recovered in levels 1 or 2. Level 3 soil became a moist sandy loam which had 10 *Helicina*, 2 *Rabdotus* snails and 4 flint chips. Level 4 was non-productive and had no FCR, so the unit was closed.

SHOVEL TEST 4, on the south, was dug to 60 cmbd. After level one's dry hard compacted overburden, the soil became somewhat moist and a silty loam, 10YR4/1. Level 1 was non-productive. Level 2 had 3 tertiary flakes, 1 *Helicina* snail and 2 FCR. In level 3, seven small flint chips were found, 2 *Helicina*, 1 *Rabdotus* snail and 3 larger FCR. In level 4, six flint chips, including 1 tertiary were found and 6 FCR, 2 being large ones. Level 5 soil was easy to dig silty loam (10YR4/3) and contained only flint chips. In level 6, there were 1 primary, 2 secondary, 1 tertiary, and 12 flint chips, along with eight *Helicina* and two *Rabdotus* snails. In all there, were 16 FCR in ST-4.

TEST UNIT ONE

This test unit was located 20m west of datum, which was located at the center of the midden. The unit was a 1m x 1m square using ¼ inch wire mesh for screening. **Level 1** soil was hard, packed, difficult digging and screening. In **level 1**, 81 burned flint chips, 129 other chips, plus 29 secondary flakes, 34 tertiary flakes, 308 *Helicina* snails, and 55 FCR were recovered. In **level 2**, the soil again was hard and dark brown. Recovered were 172 chips, 24 secondary flakes, 28 tertiary flakes, 46 pieces of burned flint, and eight FCR. **Level 3** had six fire-cracked flint chips, 17 secondary flakes, 176 tertiary flakes, and 282 *Helicina* snails. Additionally, in the NW corner, there was a reworked, unidentified tool at 22 cmbd, which measured 56 mm long, 34 mm wide and 1 mm thick. There was also a point fragment found in the same area, possibly a Tortugas or Matamoros preform (fig.3). **Level 4** soil was easily worked due to being soaked in advance by the owner. A small amount of burned clay was located in the northeast corner at 35 cmbd. An area of charcoal fragments was found in the SW corner at 38 cmbd, and an area of small gravel began about 39 cmbd in the SE corner. Recovered were 18 burned flakes, 54 flint chips, 16 secondary flakes, 13 tertiary flakes, 217 *Helicina* snails and 35 FCR. **Level 5** had 513 *Helicina* snail shells, no flint and no FCR. Because the gravel bed continued throughout, no further excavation was done on this test unit.

TEST UNIT TWO

This test unit was located 10m south of datum, which was located at the center of the midden. The unit was a 1m x 1m square, using ¼ inch wire mesh for screening. The surface was shovel cleared of grass to 10 cmbd (**level 1**.) 6 fire-cracked rocks (FCR) were recovered.

Seven persons, including the authors and the landowner, continued work on **level 2**. Due to the extreme drought conditions at the time, the soil was hard, solid clumps which made screening difficult. Only small flint chips were found in this level, along with 142 FCR.

Once again, the soil was dry, hard and lumps were hard to screen in **level 3**. This level had more flint chips, a distal tip point fragment, and snail fragments. 85 FCR were recovered.

Level 4 soil was much easier to work because the owner had soaked the soil prior to our arrival. A small amount of burnt clay was found in the NE corner at 35cmbd. One distal tip, 1 medial, 1 midsection point fragments, 1 edge modified tool, debitage and shell fragments were recovered, along with 52 FCR.

Level 5 had a Pedernales point with minor breakage to the tip and one shoulder at 41 cmbd, a Montell point fragment at 44 cmbd, a partial drill at 43 cmbd, and one reworked Ellis point fragment at 44 cmbd (fig. 3). Faunal bone fragments were found at 50 cmbd. There was much debitage, 378 *Rabdotus*, 2 *Polygyra* snails and 215 FCR. There were areas of rocks throughout the unit, with most being removed.

Level 6 contained burned clay and burned bone fragments at 50 cmbd, a Montell point fragment at 58 cmbd, a preform, a biface, a biface tool fragment, an unidentified point and red and yellow ochre in small pieces (fig. 3). A broken smooth sided rock was secured from the 86 FCR removed from this level. We were off site for a month, so we brought the test unit back to level before starting on the next level. In doing so, we uncovered another Pedernales point fragment at 46 cmbd, a Montell point with minor breakage at 41 cmbd, and an unidentified point 44 cmbd. A lanceolate point was uncovered by owner Dave Mechler 54 cm W of the S corner at 58 cmbd. It was incomplete (fig. 3). There were 76 FCR removed.

Level 7 had a layer of *Rabdotus* snails along both the south and east walls, which continued for almost 6 cmbd in width. A carnivore tooth was removed 13 cm from the SW corner at 65 cmbd. A biface fragment, a Nolan point fragment (fig. 3), and a point distal fragment were found along with scattered pieces of yellow ochre in the SW corner at 68 cmbd. There was a semi-circular pattern of medium and larger rocks on the west side at 64 cmbd. These were left in place and the unit leveled at 70 cmbd around them. There were 86 *Helicina*, 20 *Rabdotus*, 22 secondary flakes, 96 tertiary flakes, 7 bone fragments and 173 FCR in this unit.

Level 8. A significant amount of small pieces of yellow ochre continued to occur scattered throughout the unit as it was dug. Some red ochre appeared in the southwest corner wall at 76 cmbd. Many *Rabdotus* protruded from the east wall and continued around to the north wall, but soon discontinued. There was a large, continuous amount of *Helicina* snails throughout as this level was excavated. There was no change in the soil content other than occasional areas of small rock and very minor charcoal dust and bone fragments. The bone was saved. The rocks in the west wall area left in Level 7 were removed as there was no indication of a hearth once this level was dug. A Fairland or Uvalde point fragment was plotted in at 61cm from the west wall (fig. 3), 76 cm from the south wall and 75 cmbd. In this level, 943 *Helicina*, 20 *Rabdotus*, 1 bone fragment, 12 burned chips, 1 primary and 81 tertiary flint flakes were located.

Level 9 held larger flint flakes than the prior levels. All the rocks were removed as we worked at this level as none showed a pattern and most were small to medium in size. The soil was easy to dig as the owner had soaked it the day before. Small scatters of charcoal pieces and bone chips were found throughout this unit, along with some broken rock fragments (not FCR.) This level had 10 burned flint chips, 64 flint chips, 25 secondary flakes, 76 tertiary flakes, 11 bone fragments and 20 *Helcinia* snails.

Level 10 soil was easily dug loam and progress was made rapidly to the next level by the many members on site. This was a training day for new crew members and those interested in being in charge of site investigation, so there was an enthusiastic group working. Tiny ants seemed to come from anywhere out of the walls from time to time. Small particles of charcoal began appearing in the northwest corner at 92 cmbd. These were too small to collect. At 93 cmbd, the soil became slightly lighter in color and there was increased small gravel. A uniface scraper was found at 47 cm east, 18 cm north and 94 cmbd. At 94 cmbd an edge modified flint tool was found at 8 cm from the east wall and 12 cm north of the south wall. A Martindale point was uncovered at 75 cm east, 86 cm north and 94 cmbd (fig 3.). There were 10 burned flint chips, 64 flint chips, 25 secondary flakes, 76 tertiary flakes, 11 bone fragments, 20 *Helicina* snails and 35 FCR in this level.

Level 11 soil was a sandy loam intermixed with fine gravels. The ant problem seemed to have resolved, although we still had them in seams from time to time. Fortunately, they did not bite. A small amount of charcoal was found at 119 cmbd level in both the northwest and the southwest corners, but it was too small to collect. There were 13 flint chips, 3 *Radotus*, 184 *Helicina* snails and 1 FCR in this level.

Level 12. A one-side smooth, broken rock was found by Dave Mechler at 18 cm east, 57 cm north, 112 cmbd; it showed no signs of being burnt. A rounded matching corner was found earlier in the screen. Both pieces could be part of a small matate, so were saved. A 20 cm diameter dark circle of damp soil was noted in the center at 119 cmbd. The soil felt slightly more moist than the light loam mixed with fine gravel and clay in the rest of the level. There was also a 7 cm long rodent hole noted in the east side. Tiny ants came out of the west/northwest walls. Found were 6 flint chips, 10 burned flint chips, 1 distal point fragment, 6 secondary flakes, 15 tertiary flakes, 13 *Rabdotus* and 1 *Polygyra* snails, 3 FCR, also 1 bone fragment in screening.

Level 13+ (figure 2). We had to bring the TU back to level of 120 cmbd, which was almost culturally sterile with only a few flakes and the decision was made to stop digging. A 50 cm x 50 cm square was opened in the northeast quadrant of the floor to verify the sterile conditions. This was dug to 138 cmbd. This soil was screened and verified the excavation would be terminated. The soil from 120 cmbd to 138 cmbd had gradually become more yellow in color, it contained light clay, fine grains of limestone sand and was quite damp.

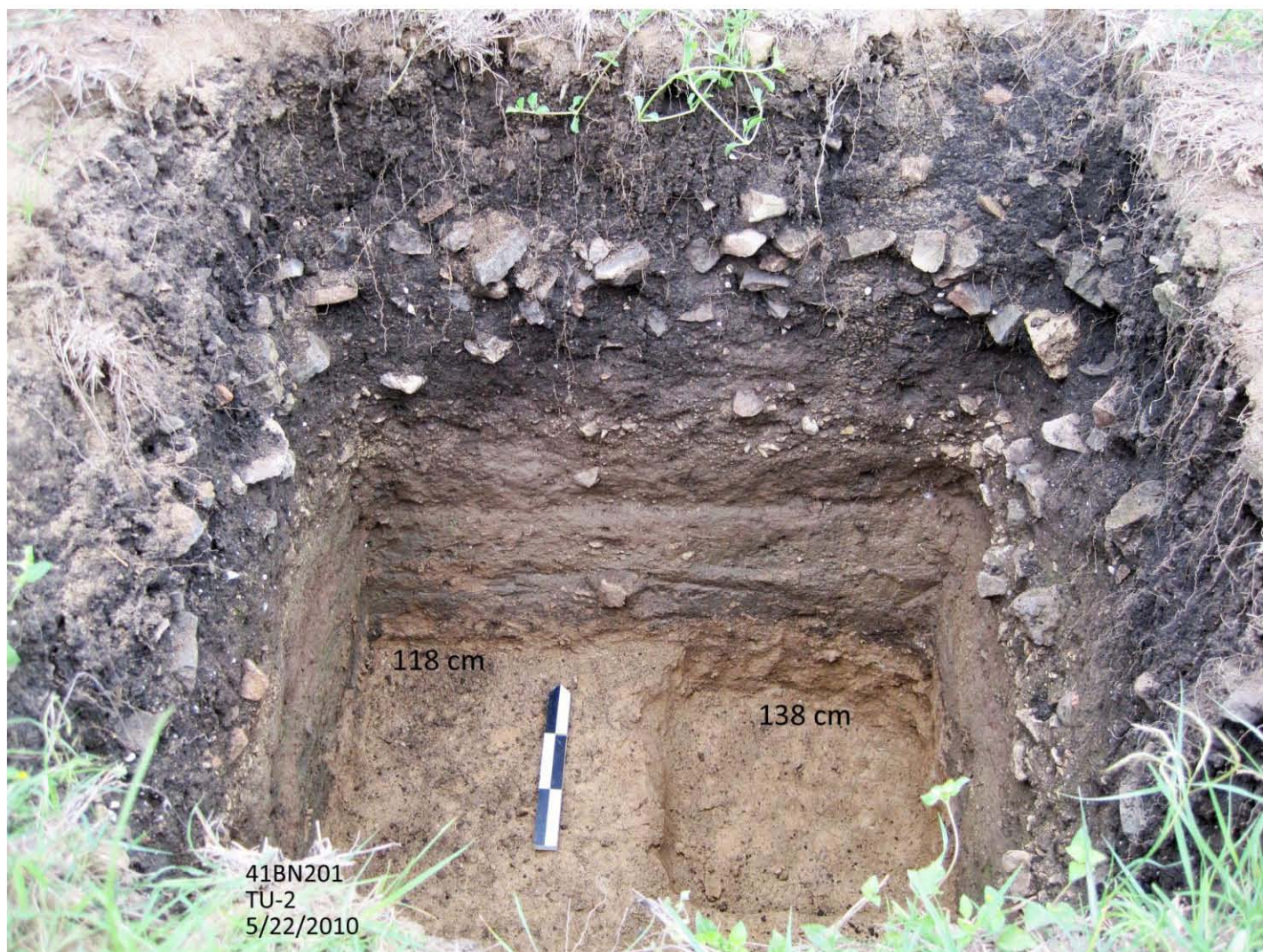


Figure 2.

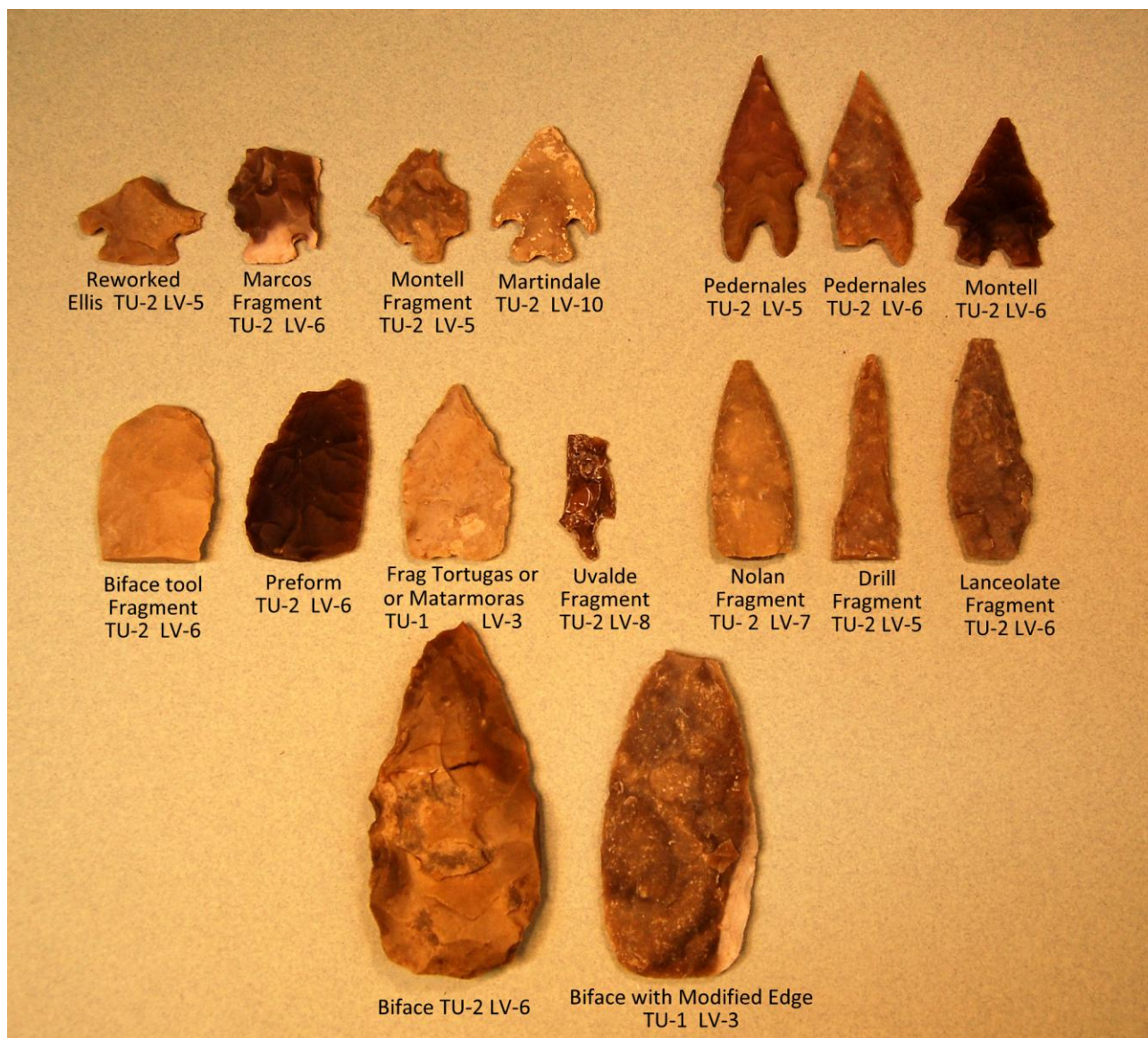


Figure 3.

The owner did not wish to fill in the unit at that time, so the workers helped cover it over with heavy railroad timbers, so his cattle would not fall in it. Four of us came back later, however, and helped Dave fill in the unit with the FCR and all the back-fill.

GPS readings, as well as measurements were taken on the midden at approximately 20 m intervals with compass and metric measuring tape.

CONCLUSIONS

It is the senior author's opinion that due to the condition of the majority of the recovered flint points having heat damage of potlids, thermal fractures, and such, further investigation may be warranted at this site away from the midden. This may give a more precise dating. Also, while funds are not currently available to undertake testing on the faunal, snail, or charcoal preserved from this site, they may become available in the future. Further investigation could potentially add to the knowledge about the early inhabitants in this region of Bandera County and the Texas hill country.

Based on the diagnostic artifacts found in these test units, it is probable this site was in use from Early Archaic (5,000 B.C. – 3,000 B.C.) until Transitional Archaic (300 B. C. - A.D. 700), or earlier.

ACKNOWLEDGEMENTS

Our appreciation to Dan Potter, THC Regional Archeologist, for his efforts on this project, and for work completed to obtain the State Archeological Landmark.

Special thanks go to owner, David Mechler, who not only hauled water to wet down the units during the drought and heat to make digging easier, but always worked with us. His energy and enthusiasm were contagious. We are indebted to both Mechlers for the food bounty they shared with us and to Annette Mechler for sharing her lunchroom porch and home, and for bringing us Dot Hatfield (now deceased) historian for the Bandera area, who told of her experiences as a young woman when she followed a plow and picked up "arrowheads" in the field below the BRM.

To the HCAA members who worked tirelessly on this project: Edward Rendon, Dorothy Grayson, Steve Stoutamire, John Benedict, Teresa "Terry" Farley, Stephanie Ertel, E. Tom Miller, John Eoff, Cleste Hall, Bill Csanyi, Judy Carswell, Deborah Bauer, John Forister, Rudi and Jan Winzinger and Ron Holm, we owe our deep and heartfelt gratitude. These were real troopers who endured the heat, the wind, and cold, and drove the distance.

Our friends, E. Thomas Miller, Steve Stoutamire and Bryant Saner, were very kind to share knowledge and loan of books. Tom Hester's personal communications were especially appreciated. We gratefully thank Terry Farley and those members who provided photographs, because all will be used. We are most indebted to Terry for her valuable computer help with this report, and thank both she and John Benedict for reviewing it.

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ARCHEOLOGY AND CHERT RESOURCES OF A 700 ACRE AREA IN CENTRAL KERR COUNTY, TEXAS

Steve Stoutamire

ABSTRACT

The study area encompasses approximately 700 acres consisting of upland, upland edge, valley wall and valley floor elevations. Within or adjacent to this area, five prehistoric sites had been recorded prior to the author's work. Work by the author and field teams of the Hill Country Archeological Association has resulted in the recording of another eleven sites. In addition to these, there are five other sites which were identified and surveyed but not recorded, due to land owners wishes.

The site types mentioned above range from a historic stone fence, to prehistoric occupation areas with middens, lithic procurement areas and lithic surface scatters. When considering all 16 sites surveyed by the author as well as the other 5 recorded by others, the morphology of projectile points found spans an age range of Early Archaic through Late Prehistoric.

Abundant chert (flint) resources were available to Native Americans within the study area. Three vertically separated stratigraphic zones of chert occur within the study area at elevations ranging from 1905 to 1990 feet above mean seal level (amsl), all within the Edwards Formation. With this abundance of chert, and water from the nearby Guadalupe River and seasonal/annual springs and streams within the study area and the abundance of sites, likely Native American frequented this area at least throughout the last 7,000 years.

INTRODUCTION

In March of 2010 the author, with the aid of other HCAA members, began a series of archeological surveys on a 40 acre tract containing upland, upland edge, valley wall and valley floor settings.

Once the survey work began a variety of different sites were recognized, surveyed and recorded. These are more fully described later under specific site discussion.

In consultation with Mr. Bryant Saner, Field Committee Chairman for the HCAA, it was decided to expand the search beyond the 40 acres to include adjacent lands which would eventually total a study area of 700 acres. A total of nine additional sites were found and surveyed on this additional land during the first eight months of 2011. Four of these were recorded. The

remainder were not, due to land owners request. Limited excavation was also done in 2011 on one of the middens on the original 40 acres in order to better determine its boundaries. The categories of sites found from this field work of 2010-2011 include quarry, surface lithic scatter, midden, fire crack rock scatter and a historic stone fence of approximate 1850-1880 vintage.

Artifacts found included chert debitage, bifaces, cores, blade flakes, manos, a preform, a broken knife and broken undiagnostic dart points. Diagnostic material included Nolan, Uvalde, Bulverde, Langtry, Pedernales, Frio and Ensor dart points.

As mentioned, five other prehistoric sites had been previously recorded by others either within or adjacent to the study area, during 2004-2010. Descriptions of these sites are included herein but are brief. They are included because of their proximity to the author's surveyed/recorded sites and their possible relationship to those sites.

ENVIRONMENTAL BACKGROUND

Kerr County is one of approximately 28 counties within the Edwards Plateau which comprises over 30,000 square miles. The surface of the Edwards Plateau consists of rock outcrops and soils principally from the Lower Cretaceous aged Edwards and Glen Rose Formations. Soils created from erosion and weathering of these Lower Cretaceous formations form relatively thin soil horizons in upland, upland edge and valley wall settings. Valley floor settings tend to have thicker soil horizons varying from a few feet in thickness in the younger valleys to greater than 50 feet of thickness in older, mature valleys such as that of the Guadalupe River. The specific soil types within the study area, which has all of the four elevation settings mentioned above, include Eckrant - Rock , Tarpley- Rough Creek, Eckrant Comfort, Kerrville Real and Krum Silty Clay Associations (Dittermore and Coburn 1986).

The Edwards Formation is made up of limestones and dolostones but is primarily limestone in the study area. The formation was deposited under shallow marine conditions in a shallow inland sea which eventually stretched from the Gulf of Mexico to the Arctic Ocean. The Edwards was deposited 110-105 million years ago (mya). The underlying Upper Glen Rose Formation was also deposited under marine conditions 115-110 mya, but with more fluctuation ranging from submarine to supratidal conditions. Resultant sediments consist of marls, shales and limestones. Principally carbonate deposition continued throughout the Middle and Upper Cretaceous until the inland sea became filled. Gravels, sands, silts and clays of Early Cenozoic age were then deposited on this carbonate base as a result of erosion of the emerging Rocky Mountains resulting from the Laramide Orogeny which began 65 mya.

The area now comprising the Edwards Plateau did not begin to uplift until the Late Miocene, approximately 10 mya. Previous to the Edwards uplift, the Balcones Fault Zone had developed

along what is now the eastern and southern margins of the Edwards Plateau. Erosion of the Edwards Plateau has stripped away as much as 2000 feet of overlying sediments of the Cretaceous and Cenozoic. With this erosion, extensive weathering and karsting have particularly developed within the Edwards Formation creating a desiccated landscape of canyon lands, caves and very porous and permeable rocks yielding a very good aquifer. With direct recharge by rain fall to surface Edwards sediments, abundant springs have developed throughout the Edwards Plateau, particularly along the contact between the Edwards and Upper Glen Rose.

Abundant chert also formed within the Edwards Formation yielding a wide spread lithic source for Native Americans to use for tools and weapons. This chert formed over an expanse of geologic time throughout the Plateau. Silica rich volcanic ash and siliceous exoskeletons of select marine organisms deposited on the sea floor during the Edwards underwent diagenesis at depths after burial to eventually re-crystallize as chert. With extensive erosion of overlying sediments, these chert deposits were eventually exposed at the surface and made available for human use.

PREHISTORIC BACKGROUND

The following has been borrowed from Saner, 2009 and partially modified;

The Edwards Plateau has been occupied by humans for at least 11,000 years (Turner and Hester 1999:51). It is possible the area was occupied as early as 11,500 Before Present (BP), (Collins 1995:380). The area can be divided into four major cultural time periods: Paleo-Indian, Archaic, Late Prehistoric and Historic periods. Each of these major periods can be further sub-divided. Each period is marked by changes in environment, food, tools and location of sites. The projectile points are temporally diagnostic and provide a time line for sites and areas within the Edwards Plateau.

The Paleo-Indian Period lasted from approximately 11,500 years BP to 8,000 years BP. During this period humans lived on the same terrain with large mammals such as mammoths, mastodons and large bison. The people of this period most likely scavenged these large mammals, but they were also hunted. Small animals were hunted and many types of plants were part of their diet (Collins 1995:381). The mammoths and mastodons disappeared in the early part of this period. The large bison were gone by the end of this period. The inhabitants began to rely on medium to small animals for food as well as plants. The first half of this period was highlighted by the fluted Clovis projectile point followed by the Folsom projectile point. Plainview, Golondrina, Barber and Angostura points were seen in the latter half of this period (Turner and Hester 1999). A cool and moist climate was evident during most of the Paleo-Indian period, while toward the end of this period the climate changed to more dry and warm (Collins 1995:377).

The Early Archaic Period lasted from approximately 8,000 years BP to 4,500 years BP (Turner



Site Locations (except 621) Not
Shown to Protect Landowner
Privacy

Portions of Topo Map Deliberately
Omitted to Protect Land Owner
Privacy

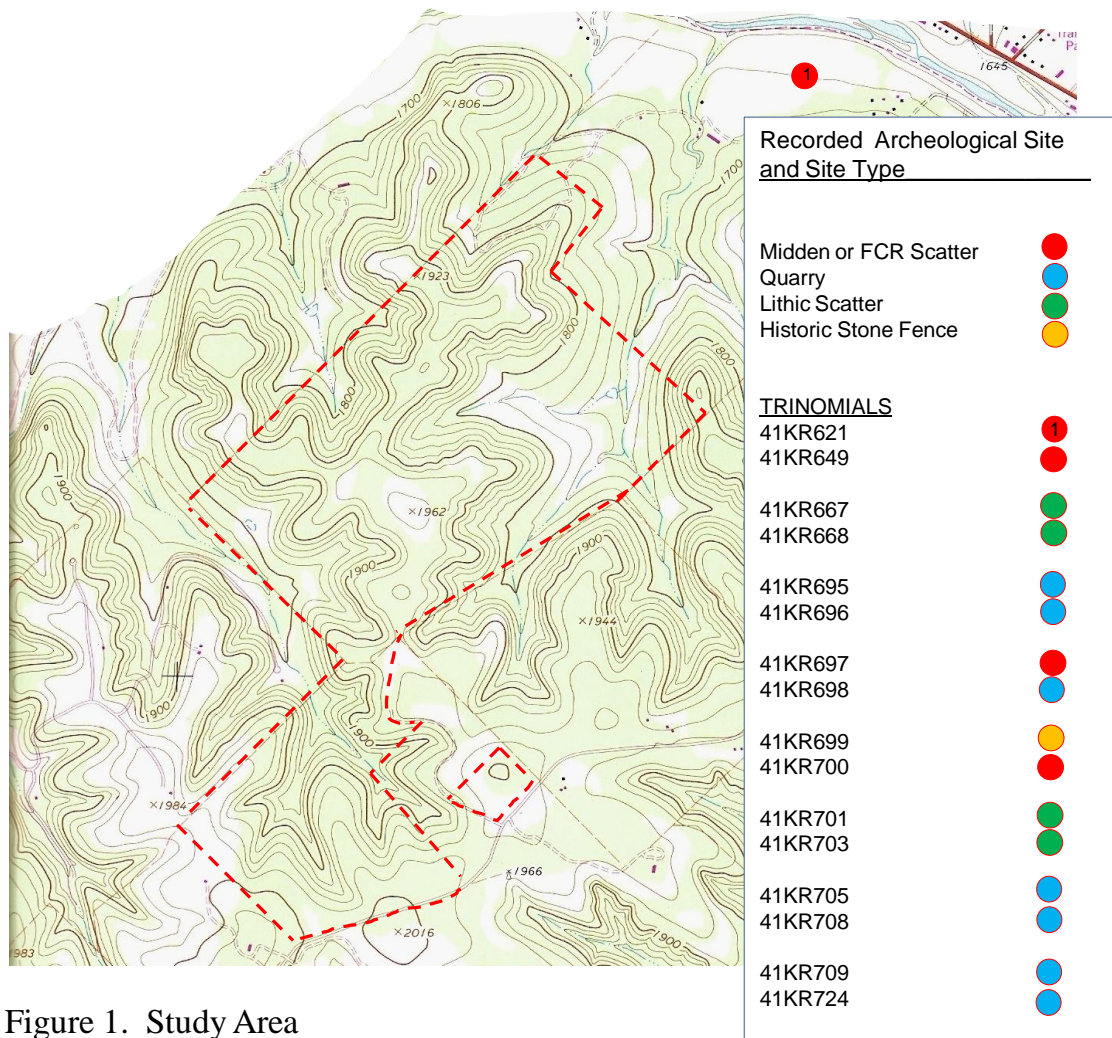


Figure 1. Study Area

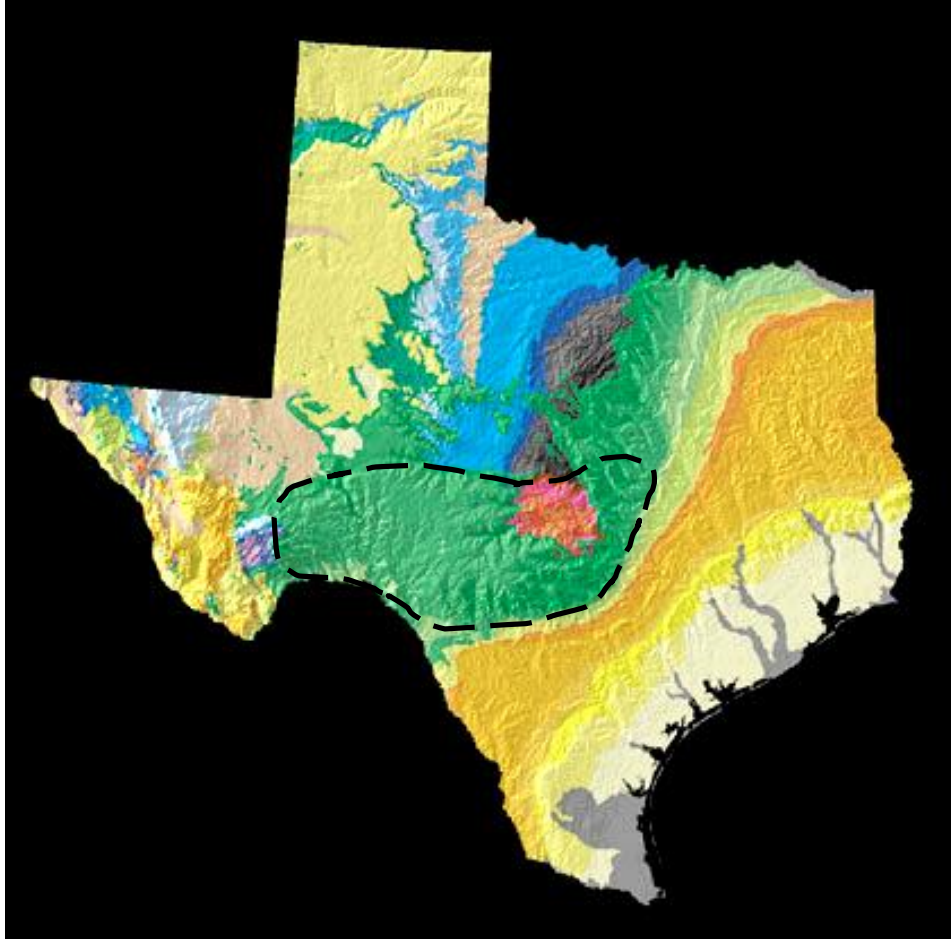


Figure 2. Edwards Plateau

and Hester 1999:55). The climate shifted from wet and moist to one that was more dry and warm. However, a slightly cooler and moister climate was seen between approximately 6,500 years BP to 6,000 years BP. At the end of this short period, the climate returned to hot and dry conditions (Collins 1995:377). Plant food was a large part of the diet and smaller animals were hunted (Prewitt 1981:73). Burned rock middens are first seen late in this period (Collins 1995). Andice, Bell, Gower, Martindale, Uvalde, and Wells dart points were in use, along with Clear Fork and Guadalupe gouges (Prewitt 1981:77-79).

The Middle Archaic Period lasted from approximately 4,500 years BP to 3,000 years BP (Turner and Hester 1999). Prewitt (1981:80), however, states that the Middle Archaic ended about 2,250 years BP. The climate was dry and hot in the earlier part of this period and changed to cool and

moist by the end of the period (Collins 1995:377). An increase in the number of sites and lithic artifacts occur during this period. This indicates an increase in population. Cemeteries are seen late in this period indicating some territorial tendencies among the inhabitants. The number of burned rock middens increased significantly indicating heavy plant processing. Hunting continued to be an important food source as indicated by the large number of projectile points found at Middle Archaic sites. Near the end of the period a slight shift is seen towards gathering.

Bulverde, Nolan and Travis dart points are seen in the early part of the period. Pedernales, Marshall and Langtry are common dart points seen throughout this period (Prewitt 1981:79-81). The Late Archaic Period lasted about 1,000 years from approximately 2,250 to 1,250 years BP (Prewitt 1981:80-81). Collins (1995:384) states this period lasted from approximately 4000 to 800 years BP. Turner and Hester (1999:57) date the Late Archaic from 3000 to 2300 years BP and describe the period from 2300 to 1300 years BP as the Transitional Archaic. The climate was cool and moist for all of this period (Collins 1995:377). Processing of plants for food continued with an increase emphasis on gathering. Bison were present at the beginning of the period, but not in substantial quantities and may have decreased even more by the end of the period (Prewitt 1981). Castroville, Marcos and Montell dart points were seen in the early portion of this period. Ensor, Frio and Fairland were common in the later portion (Collins 1995:376). These dart points are generally smaller than those seen in the early portion of the period (Johnson 1995:98). Turner and Hester (1999:57) described the small dart points as part of the Transitional Archaic period.

The Late Prehistoric Period began approximately 1,250 years BP and lasted until approximately 200 years BP. The early part of this period is known as the Austin Phase which lasted from approximately 1,250 to 650 years BP. The later part of the Late Prehistoric Period is the Toyah Phase. This period lasted from approximately 650 years BP to 200 years BP (Prewitt 1981:82-84). At the beginning of the Late Prehistoric Period the bow and arrow made an appearance and the atlatl and dart point fell out of favor. Burned rock middens continued in use, especially in the western Edwards Plateau. They accumulated at a slower rate than the previous period. Edwards and Scallorn arrow points were common in the Austin Phase (Collins 1995:376). The Toyah Phase was marked by the importance of buffalo once again being an important food source (Turner and Hester 1999:61). The phase was characterized by locally made pottery called Leon Plain, Perdiz arrow points, large, thin bifaces, end scrappers and prismatic blades. These tools and pottery were most likely associated with bison hunting (Collins 1995:385). Burials from the Late Prehistoric Phase show more arrow points as the cause of death. This may indicate that an increase in warfare occurred between groups in this period (Johnson 1995:99). The climate in the period was cool and moist and changed to warm and dry by the period's end (Collins 1995:377).

The Historic Period started when Europeans arrived in Texas, but the exact time is not agreed upon. (Collins 1995:386) believes it to be about 250 years BP. While Turner and Hester

(1999:61) infer that it began about 400 years ago, and called the early part the Proto-historic. This Proto-historic was a time when Europeans first arrived in the western hemisphere, but had little or no effect on the indigenous people. It was approximately 500 to 250 years BP (Hester 1995:449-450).

The early part of the Proto-historic Period was characterized by the continued use of flint for tools and arrow points. The life style was similar to the previous period. The last remnants of the Toyah Phase may have extended into the Proto-historic Period (Turner and Hester 1999:61). The European settlers arrived in Texas during the later part of the Historic Period about 250-300 years BP. The Spanish established themselves in Texas at a time when the Southern Plains Indians were being pushed into south Texas by other groups of Indians (such as the Comanches) from the north and west.

Native Americans were also being pushed west by advancing Europeans from the east coast and by the Spanish from the south. The disrupted groups moved into central and east Texas. During this time many Native American groups began to obtain European ceramics, metal, guns and most importantly horses. Flint arrow points were being replaced by metal arrow points, and guns. The Europeans brought diseases that were devastating to the Indians. Some Indians chose to live at Spanish missions (Collins 1995:386-387). No indigenous Indians were living on the Edwards Plateau by the early to mid 19th century. Indian raids into this area were common from the early to mid 19th century (Black and McGraw 1985:40).

PREVIOUS INVESTIGATION

Sites 41KR621, 41KR649, 41KR667, 41KR668 and 41KR703 had been previously recorded by others during the period of 2004-2010. Site 41KR621 was recorded by the SWCA in 2004 on behalf of the Texas Department of Transportation. Sites 41KR649 and 41KR703 were recorded in 2007 and 2010, respectively and sites 41KR667 and 41KR668 in 2008.

41KR621 (Gatlin Site) This occupation site was found by the Texas Department of Transportation during the 2004 construction of Spur 98 across the Guadalupe River. It was excavated and recorded by SWCA on behalf of the TxDOT. It has been well covered in the literature (Houk et al 2008 and Houk et al 2009) but is mentioned here due to its significance and possible relationship to other sites now recorded within the study area. In addition to a burned rock midden of approximately 20 meters in diameter, the site also provided 409 projectile points for study. Numerous other stone tools, bone and debitage were recovered from the site.

SWCA's excavation and analysis indicated that this site is quite extensive and likely extends beyond the 30.5 to 61 meter right of way of Spur 98. The site's northern border is within the ROW at the scarp of the terrace of the Guadalupe River at approximately 1645 feet amsl and its

southern end, also within ROW, is up slope approximately 200 meters to an elevation of 1665 feet amsl.

The sites significance, as Houk et al, 2009, state is that “it yielded one of the most robust assemblages thus far recovered from a stratified Early Archaic to Middle Archaic site on the southern margins of the Edwards Plateau”. Houk et al, also explain that the radiometric dating gained from site specimens contributed greatly to the understanding of thus far poorly anchored “style” intervals in Texas. They further proposed new calendrical dates of ca. 4820 to 3980 cal. B.P. for Nolan and La Jita points, ca. 5320 cal. B.P. to 4140 cal. B.P. for Early Triangular and Andice/Bell points, ca. 6440 cal. B.P. to 5040 cal. B.P. for the Martindale, Martindale Narrow Stem and Bandy style points, ca. 7160 cal. B.P. to ca. 6290 cal B.P. for Gower points, and ca. 7560 cal. B.P. to ca. 6860 cal. B.P. for Early Barbed style points. The Gatlin Site has multiple occupation zones and might well have been a relative base camp from which Native Americans ventured into the adjacent study area for hunting, cooking, chert acquisition and tool making, creating many of the smaller sites listed herein.

41KR649 This site contains two burned rock middens in an upland setting. Toyah Phase points such as Perdiz and Austin Phase points such as Scallorn had been previously found by the land owners on the surface near these middens.

41KR667 This site is a surface lithic scatter in a valley floor setting.

41KR668 This site is a surface lithic scatter in a valley floor setting.

41KR703 This is a surface lithic scatter which yielded chert debitage in addition to one Perdiz arrow point, one Gower and two Pedernales dart points, one biface, utilized flakes and one hammer stone.

METHODOLOGY

Sites 41KR695, 696, 697, 698, 699, 700 and 701 were recorded by the author in 2010. Sites 41KR705, 708, 709 and 724 were also recorded by the author, but principally during 2011. Five other sites were surveyed but not recorded, due to landowner’s wishes.

For all sites the author and various field team members from the HCAA conducted initial transects approximately 5 meters apart to determine artifact presence and site boundaries. Location of virtually all artifacts within each site (except 700, due to volume of artifacts) were plotted into the site map along with constructing shot point logs, field sack logs, photo’s and photo logs, site maps, field notes, Tex Site Forms and selected satellite imagery. Topographic maps used were for the Kerrville, Texas 7.5 Minute Quadrangle, 1982 photo revised version at 1:24,000 scale.

All artifacts collected from sites listed in the first paragraph under controlled conditions were given Field ID or Field Sack numbers, proper provenience information and bagged individually. Laboratory work has not yet been completed on these specimens.

SITE DESCRIPTIONS

41KR695 This is a procurement (Quarry) site located on an upland and upland edge setting and is approximately 45 meters long by 22 meters wide. The site exists between 1935 feet to 1950 feet amsl. Chert cobbles on the surface average 10cm long and wide. Chert color is primarily moderate brown to dark reddish brown (per Munsell Rock Chart Color Guide). Quality of the chert is fair to very good. Some tested cobbles exist and thinning flakes are found in medium density. Three bifaces were also found. All chert observed is weathered from underlying host rock and is lying on the surface. Only one chert nodule was observed still contained within the host limestone (Fort Terrett Member of the Edwards Formation). This was a boulder of approximately 60 cm by 50cm that was eroded from the limestone outcrop.

This chert zone is part of the “1945 foot” zone that persists throughout the study area between elevations 1945-1950 feet above mean sea level (amsl). It is distinctly different in color and quality than chert found in the “1905 foot” zone at elevations between 1905 feet to 1920 feet amsl and the “1990 foot” zone at elevations between 1990 feet to 1995 feet amsl. See the section herein on “Chert Resources” for further explanation.

No diagnostic artifacts were found at this site.

41KR696 This is also a procurement site and is located on an upland edge to valley wall setting and is approximately 240 meters south west of site 41KR695. The site exists between 1900 feet to 1920 feet amsl and is approximately 120 meters long and 70 meters wide. This site is on the eroded surface of the Fort Terrett Member of the Edwards Formation but is 20-30 feet stratigraphically lower than the site and chert deposits at 41KR695. Chert nodules lie on the surface and chert color ranges from light brown to pale yellowish orange to grayish orange to dark yellowish orange to moderate yellowish orange. Chert quality ranges from poor to good. The chert here is also more abundant than at 41KR695 and is from the “1905 foot” zone. A few tested cobbles exist and thinning flakes are of medium density. A small scarper was collected and recorded but no diagnostic artifacts were found.

41KR697 This site is a fire cracked rock scatter with associated lithic scatter. The site exists on a gentle upland edge setting. The site is 72 meters long and has a width varying from 8 to 16 meters. The site appears to have been at least partially disturbed, likely by earth moving equipment which likely took place within the period of 1997 and 2005.

An area of 24 meters by 10 meters contains the FCR scatter within the site. A sparse scatter of secondary and tertiary flakes, bifaces, a scraper, an arrow point preform(?) and a mano were found within and around this scatter. Almost all of the chert type of the artifacts appears to be from the “1905 foot” zone. No diagnostic artifacts were found.

41KR698 This procurement site is approximately 160 meters in length and 20 meters in width. It is located on a steep valley wall setting between elevations of 1900 and 1920 feet amsl. Its length parallels nearly horizontal beds of the Fort Terrett member of the Edwards Formation. Chert is found in tabular and nodular form on the surface as well as embedded within the limestone outcrop. Some of the tabular chert is up to 10cm in thickness and 60cm in length. Chert quality here ranges from poor to very good. Chert color ranges from light brown to pale yellowish orange to grayish orange to dark yellowish orange to moderate yellowish orange. Chert quality ranges from poor to good. This chert accumulation is part of the “1905 foot” zone within the study area.

Some tested nodules and tabular chunks occur as well as sparse amounts of primary flakes. Four bifaces approximately 12cm in length by 8cm in width were recovered within the site area, as well as a broken dart tip 2cm in length. No artifacts were diagnostic.

41KR699 This site consists of a historic stone fence that is in variable stages of preservation. Its positioning resembles the letter “U” but with the arms of the “U” opened wider (Figure 8). The length of the fence within the recorded site is 240 meters long, but with four intermittent gaps. The largest of these is a 72 meter section on its north eastern end which has been completely removed by excavation and construction of a paved road. The other gaps range from 2 meters to 12 meters in length. In addition there is another 82 meters of the fence which extends from the site in a north westerly direction. This last segment is on separate private land and has not been mapped or recorded.

The maximum height of the fence is 1.2 meters and .6 meters in width. The average height and width of the undisturbed portions of the fence is 1 meter by .5 meters. The fence is composed of local limestone rock boulders from the Edwards Formation which are generally 30-45cm long by 20-30cm wide by 15-20cm thick. Almost the entire section of the fence is in a gentle upland edge setting with elevations ranging from 1935 to 1945 feet amsl. The unrecorded north western portion of the fence continues downhill until it ends at an approximate elevation of 1895 feet amsl.

The weathered condition of the fence rock suggests that the construction is quite old. It might be assumed that it pre-dates the use of barbed wire which was introduced into the Hill Country in the 1880’s. Other similar stone fences occur in Kerr and adjacent Gillespie County and many were a product of German immigrants who settled in this area in the 1840’s and 1850’s (Jordan 1982).

After these first settlements in the hill country by Anglos, livestock was allowed to range on

open land. Fences were usually built to keep livestock out of cultivated areas or living areas rather than confine them (Jordan 1982). At first fences were usually of the “split rail” type made of cedar or oak. Cedar (Ashe Juniper) fences were still preferred until 1859 but the abundance of limestone rock on the surface made this the preferred building material of fences after 1859 (Jordan 1982). Since labor costs were prohibitive to the average farmer, whole families would sometimes labor for 3-4 years in order to construct stone fences.

The function of the fence in this site is unknown. It does not appear to have been an enclosing structure since it is open ended. Based upon its orientation, and the use of such other stone fences in the Hill Country, it might possibly have served as a catchment area in which to drive livestock herds.

41KR700 This is a midden site with surface lithic scatters in a valley floor setting. The site is 72 meters long and widths vary from 40 meters to 12 meters. There are two middens within this site that are approximately 25 meters apart. The larger of the two middens appears essentially intact but the smaller one has been extensively eroded.

Areas on and around both middens contain burned rock that varies in color from dark gray to light pink. Also present are lithic scatters of flakes, bifaces, cores and dart points (see Table I). An uncontrolled excavation on the northern side of the larger midden had been conducted during the 2008-09 period. Approximately 8 square meters were excavated to various levels, the deepest being 45cm. This yielded 2 Pedernales, 2 Langtry, 1 Frio (?) and miscellaneous undiagnostic dart points, preforms or bifaces and modest amounts of debitage. Four ochre chunks and modest amounts of *Rabdotus* shells were found. A disturbed hearth of 1 meter diameter was also found in this area at 30cmbd. Sterile soil was never reached in this excavation.

A controlled excavation of 1 square meter was done in 2011, approximately 10 meters east of the larger midden, to better define boundaries and cultural base for this midden. Excavation yielded 1 Bulverde point at 49 cm and 1 large broken knife at 70 cm. Several bifaces were found at multiple levels as well as a modest amount of debitage at all levels (see Table I). Burned rock with associated *Rabdotus* shells were also found in sparse amounts at all levels. Sterile soil was reached at 70 cm.

Surface finds within 41KR700 include 1 Ensor, 2 Pedernales and 1 Nolan dart point.

Considering all of the cultural lithic material found within this site, the dominant chert type for artifacts appears to be from the “1905 foot” zone. Two of the points (Nolan and Frio) and several bifaces and flakes consist of chert from the “1945 foot” zone. No chert appeared to be from the “1990 foot” zone.

41KR701 This site is a small lithic scatter located in a valley floor setting approximately 65 meters from quarry site 41KR698. The lithic scatter has dimensions that average 30m long by 10m wide. Four bifaces, one scraper and two core were found at 41KR701 along with a light

scattering of primary, secondary and tertiary flakes. No diagnostic artifacts were found. The chert type of all the artifacts appears to be from the “1905 foot” zone.

41KR705 This site is a lithic procurement area with lithic scatter. It is located on upland, upland edge and valley wall elevations. The site is variable in size ranging from 40-120 meters in both length and width. The elevations at the site vary from 1935 feet to 1895 feet amsl. Sparse amounts of secondary and tertiary flakes were observed throughout the site as well as 5 bifaces and 2 cores. The chert type of the artifacts appears to be from the “1905 foot” zone. Some chert was observed to be in situ within the limestone outcrop at 1900 – 1910 feet amsl. No diagnostic artifacts were found.

41KR708 This is a lithic procurement site. It is located on a valley wall setting with elevations that range from 1905 feet to 1915 feet amsl. The site is 18 meters long north/south and 15 meters wide. The cultural material found consisted of one biface, four thick cores and some thinning flakes. No diagnostic material was found. The chert type appears to be from the “1905 foot” zone.

41KR709 This is a lithic procurement site with associated surface lithic scatter. It is located on an upland edge setting with elevations between 1940 feet and 1945 feet amsl. Its dimensions are 7 meters long and 7 meters wide. Artifacts found consisted of tested cobbles, one thick core, secondary and tertiary flakes and one hammer stone. No diagnostic material was found. The chert type of the artifacts appears to be from the “1945 foot” zone.

41KR724 This is a surface lithic scatter and procurement site located on upland edge at 1910 feet to 1915 feet amsl. The dimensions of the site are 28 meters in a north-south direction and 9 meters in an east-west direction. Artifacts found include 2 scarpers, several secondary and tertiary flakes and five cores. No diagnostic artifacts were found. The chert type of the artifacts appears to be from the “1905 foot” zone.

Other Sites. There were three other lithic procurement sites and two lithic scatter sites surveyed within the study area. These were not recorded due to landowner request. Details of them will not be released.

SITE	41KR695	41KR696	41KR697	41KR698	41KR700	41KR701	41KR705	41KR708	41KR709	41KR724	ISOLATED FINDS
BULVERDE POINT					1 _ 1m, unt 10, level 5						
ENSOR POINT					1 _ 1m,						
FRIO POINT					1 _ 1m, ue						1 near 41KR700
LANGTRY POINT					2 _ 1m, ue						
NOLAN POINT					1 _						
PEDERNALES POINT					2 _1m, ue 2 _2m						
UVALDE POINT											1 near 41KR697
UNIDENTIFIABLE POINT				1	6 _1m, ue						
BIFACE	3		4	4	25 _ 1m, ue 5 _1m, unt 10	4	5	1			
BROKEN KNIFE					1 _1m, unt 10, level 7						
CORE	4	4	4		2 _1m, ue	2	2	4	1	5	

Table 1. Artifact Recovery and Provenience

SITE	41KR695	41KR696	41KR697	41KR698	41KR700	41KR701	41KR705	41KR708	41KR709	41KR724	ISOLATED FINDS
HAMMER STONE									1		
LARGE BLADE FLAKES					9_ 1m, ue						
MANO			1		1_ 2m						1 near 41kr697
OCHRE CHUNKS					4_ 1m, ue						
SCRAPER		1	1			1				2	
UNIFACE TOOLS					3_ 1m, ue						

Legend: 1m = midden 1; 2m = midden 2; ue = uncontrolled excavation; unt = unit. Artifacts are surface finds unless otherwise designated

Table I. Cont'd



Figure 3. Select Projectile Points From Sites

From Lower Left to Right- Nolan, Bulverde, Langtry, Pedernales, Broken Pedernales. Top Left To Right- Broken Pedernales, Broken Frio, Broken Ensor- From 41KR700. Upper Row Second From Right- Broken Frio- Isolated Surface Find Adjacent To 41KR700. Upper Row Far Right- Uvalde- Isolated Surface Find Adjacent To 41KR697

CHERT RESOURCES

Chert occurs within the Fort Terret Member of the Edwards Formation at three separate stratigraphic intervals and elevations within the study area. Most chert occurs as nodular or tabular pieces on the surface, eroded from the limestone host rock. Some chert was observed as still intact within the outcrops of the Edwards Formation. Within the study area, as is

characteristic of most of the Edwards Plateau, rock strata are nearly horizontal. Within the Kerr County area the strata have less than one half degree of dip (approx 20 feet/mile of vertical change) in a south to south easterly direction. Because of this near horizontal attitude of strata, chert zones that occur at one elevation above mean sea level are likely the same as those at similar elevations as much as a mile or more away. The chert does not occur in laterally continuous layers or beds but, rather, as disconnected nodules and tabular chunks within distinct zones of approximately 10-15 feet in thickness.

The lower most of the three zones has been termed the “1905 foot zone” because its base is always at approximately 1905 feet amsl. This zone can be 10-15 feet thick and has the most variable types of chert in both color and quality. The chert color (per Munsell Rock Color Charts) ranges from light brown to pale yellowish orange to grayish orange to dark yellowish orange to moderate yellowish orange. It occurs in both nodular and tabular form with some tabular pieces reaching one meter in length and fifteen centimeters in thickness. Its quality ranges from poor (rough, “grainy” surface with inclusions and poor flaking quality) to good (smooth surface with luster and good flaking quality).

The second chert zone, “1945 foot”, occurs between the 1945 to 1950 foot elevations. It is the highest quality chert of the three zones and is a distinctly dark reddish brown to moderate brown in color. Its quality is good to excellent (smooth surface with good luster and very good flaking quality). It is not as wide spread throughout the study area as the “1905 foot” zone and is noticeably absent at the 1945 foot elevations in the most southern portion of the study area. It has been observed only in nodular form.

The third zone, “1990 foot”, occurs between elevations of 1990 to 1995 feet amsl. Strata at this elevation have been entirely eroded away in most of the study area and maximum elevations only reach 1955 feet amsl there. It is only in the most southern portion of the study area that elevations of 1990 feet amsl occur and exhibit this type of chert. It is primarily of poor quality but does occur sparsely in good quality. It is very pale orange to yellowish and pinkish gray in color. It can also have inclusions of pelecypods within its matrix. Only nodular forms of this chert were observed.

Figures 4 and 5 illustrate the observed surface occurrence of these three zones as well as their relationship within the geologic section.

When comparing these three chert types/zones it is clear that the “1905 foot” zone is by far the most abundant chert source for the area and the “1945” and “1990” zones are almost equal for a very distant second place. Considering that ancient flint knappers probably avoided the poorer quality samples of all area chert, the chert type of all artifacts observed in the study area is still predominantly from the “1905” zone (see figure 6). The “1945” chert was represented in only one Frio and one Nolan point, as well as a few bifaces and small amounts of debitage. The “1990” chert could not be confidently attributed to any of the artifacts found by the author.

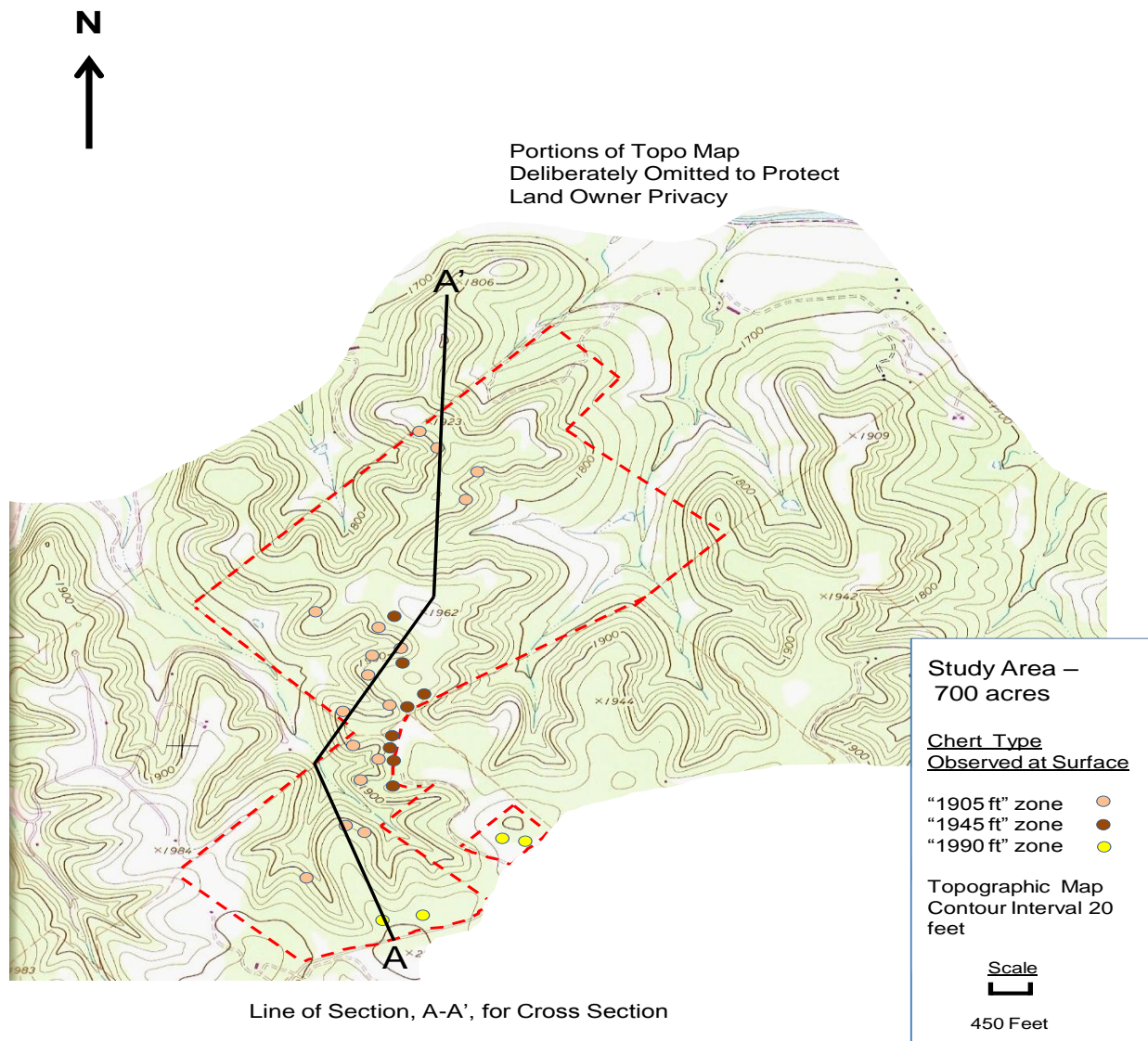


Figure 4. Surface Chert Occurrence and Geologic Cross Section Line of Section

SUMMARY

The study area consisted of approximately 700 acres. Within or immediately adjacent to this area five prehistoric sites had already been recorded by others between 2004 and 2010. The efforts by the author and field teams of the HCAA revealed another sixteen sites during the 2010-2011 period. Eleven of these were recorded and five were not, due to land owners wishes.

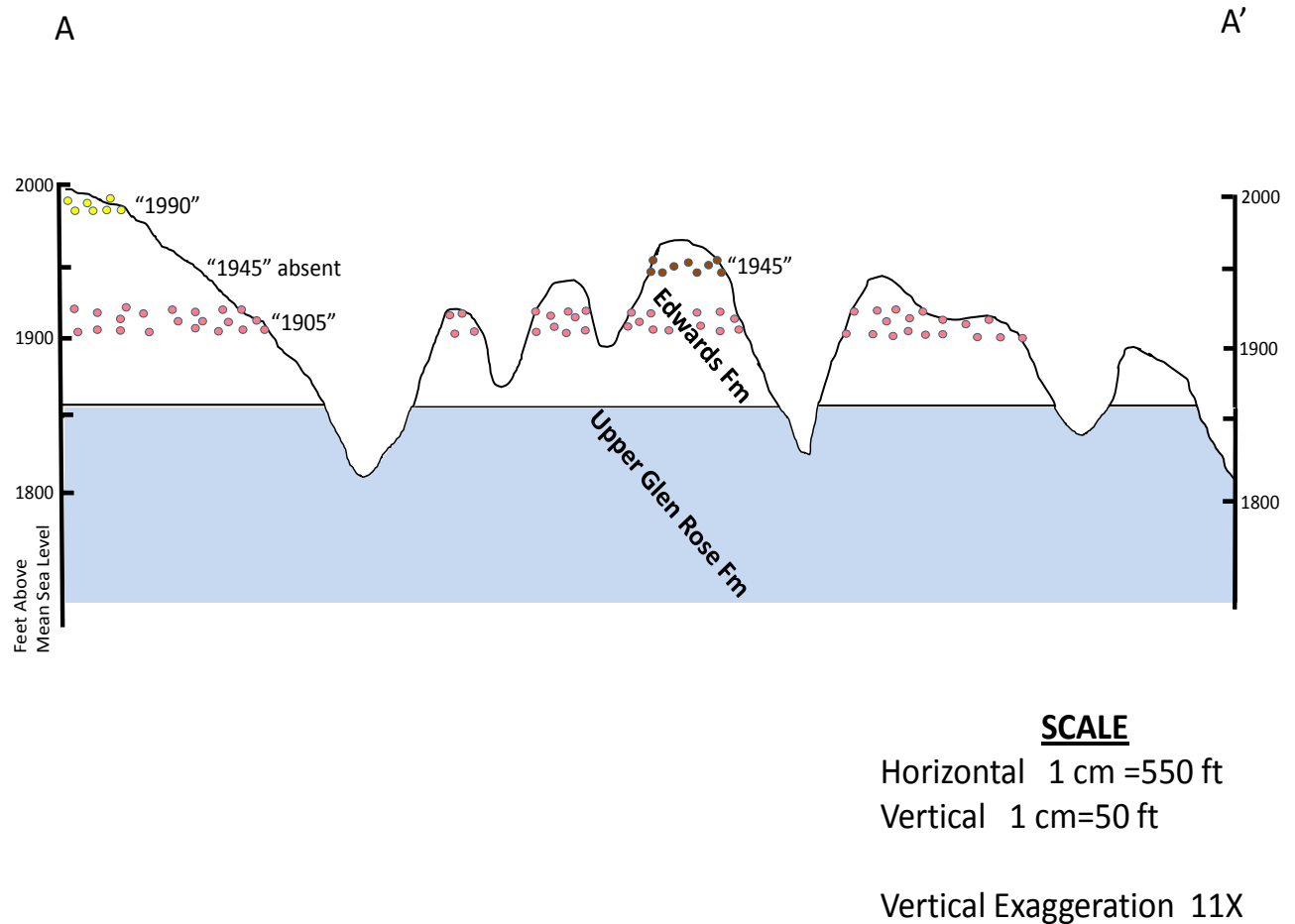


Figure 5. Geologic Cross Section A to A'

The sixteen sites consisted of two midden or fire crack rock scatters, ten quarries, three lithic scatters and one historic fence. Of the five sites recorded by others, two were midden/occupation sites and three were lithic scatter sites. Diagnostic material recovered from the 16 sites surveyed by the author included dart points that range in age from Early Archaic to Transitional Archaic. The two midden and FCR sites are in relatively close association to the quarry sites. The chert type of the artifacts from the midden/FCR sites matches closely in color and quality to the chert from these quarry sites.

Three distinctly different stratigraphic levels of chert were observed in the study area. The lowest level has been termed the “1905 zone” because it occurs generally at elevations of 1905 to 1920 feet amsl in the relatively horizontal beds of the Edwards limestone. Most of the artifacts



Figure 6. Nodular Chert in Outcrop in “1905 Zone”



Figure 7. Photo of Three Area Chert Types and Dart Points

Lower Left to Right – “1990” Zone, “1945” Zone, “1905” Zone

Top Row Left to Right – Nolan (Likely From “1945” Zone), Pedernales (Likely From “1905” Zone)



Figure 8. Historic Stone Fence

recovered from all sixteen sites appear to be from this most widespread zone. A second level of distinctly dark reddish brown chert was found to occur at levels from 1945 to 1950 feet amsl. It is termed the “1945 foot” zone. Only a few artifacts appear to be from this less widespread zone. The third chert zone occurs at 1990-1995 feet amsl and is termed the “1990 foot” zone. It is the poorest quality of the three chert zones and no artifacts appeared to be made from this chert. It is also the least widespread of the others since only a small area within the southern part of the 700 acre area contains these elevations.

Two seasonal creek systems are located within the study area and many of the sites are associated with these. All sites surveyed by the author are typical of midden, quarry and lithic scatter sites found within the Texas Hill Country. The historic fence is not a rare type of site in

Kerr County but is much more common in neighboring Gillespie County. German immigrant populations first arrived in Gillespie County in the 1840's and predominantly utilized the abundance of stone to build fences to manage livestock. A title search of land ownership has not been done for the land containing the fence at 41KR699. This could be future work which may lend some knowledge as to which families built the fence and during what time frame.

ACKNOWLEDGMENTS

My sincere thanks to Bryant Saner who edited this entire document and who offered much valuable advice during the field work for the area. My thanks also to the ten land owners who allowed their properties to be surveyed and from which provide much of the data for this paper. Their names are omitted to protect their property and privacy. My gratitude is also expressed to Kay and Woody Woodward, Terry Farley, Ed Rendon, Ron Holm, Dorothy Grayson-Kretzer, Rudi and Jan Winzinger and John Benedict for their assistance in performing the field work within the area.

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HARAHEY KNIFE FROM KERR COUNTY, TEXAS

Ed Rendon

ABSTRACT

The Harahey knife in this report was found in north central Kerr County, Texas. It was found on a hillside on private property. This knife is commonly associated with the Toyah Phase time period.

INTRODUCTION

The Harahey knife, also known as a double or two-beveled knife, was found in north central Kerr County, Texas (Turner and Hester 1999: 274) (Figs. 1 & 2). It was discovered by the landowner very near the surface while clearing a path through the hillside. The artifact was within the site boundary of a small chert procurement site at an approximate elevation of 1920 ft. This site is about 50 ft. below the peak of the hill. The chert on the site was mostly tabular cobbles with some nodular cobbles. There was some chert embedded in the limestone bedrock.

The Guadalupe River is 660 meters and at approximately 1700 ft. elevation from the location of the find. One BRM is 1175 meters is southwest and another BRM is located 1450 meters southeast from location where the knife was found. Both BRMs are between 1730-1740 ft in elevation.

ARTIFACT DESCRIPTION

The artifact is a first stage, not yet beveled Harahey knives described by Johnson and shown in Figure 52 B (1994:105-106). The surface has a waxy feel and some reddish brown coloring. This indicates the chert was heat-treated. Heat treating is when the chert is heated to less than 400-500 degrees F and allowed to cool before knapping begins. The proximal and distal ends of the knife were broken by heat, possibly a brush fire. The blade from proximal to distal end has a slight twist to the right. The artifact is mostly dark gray, 7.5YR4/1, with some reddish brown, 5YR5/4 (Munsell 2000) (Fig. 3).

The length of the knife is 125.0 mm. The proximal end is missing about 5.1 mm and the distal end is missing about 4.0 mm for a total of 9.1 mm. The estimated maximum length is 134.1 mm. The maximum width at 70.0 mm from the proximal end is 48.0 mm. The maximum thickness is 8.6 mm at 44.6 mm from proximal end. The width and thickness 20.0 mm from the proximal end is width 36.7 mm and thickness 6.3 mm. The width and thickness 20.0 mm from the distal end is width 30.8 mm and thickness 6.9 mm. The weight is 5 grams.

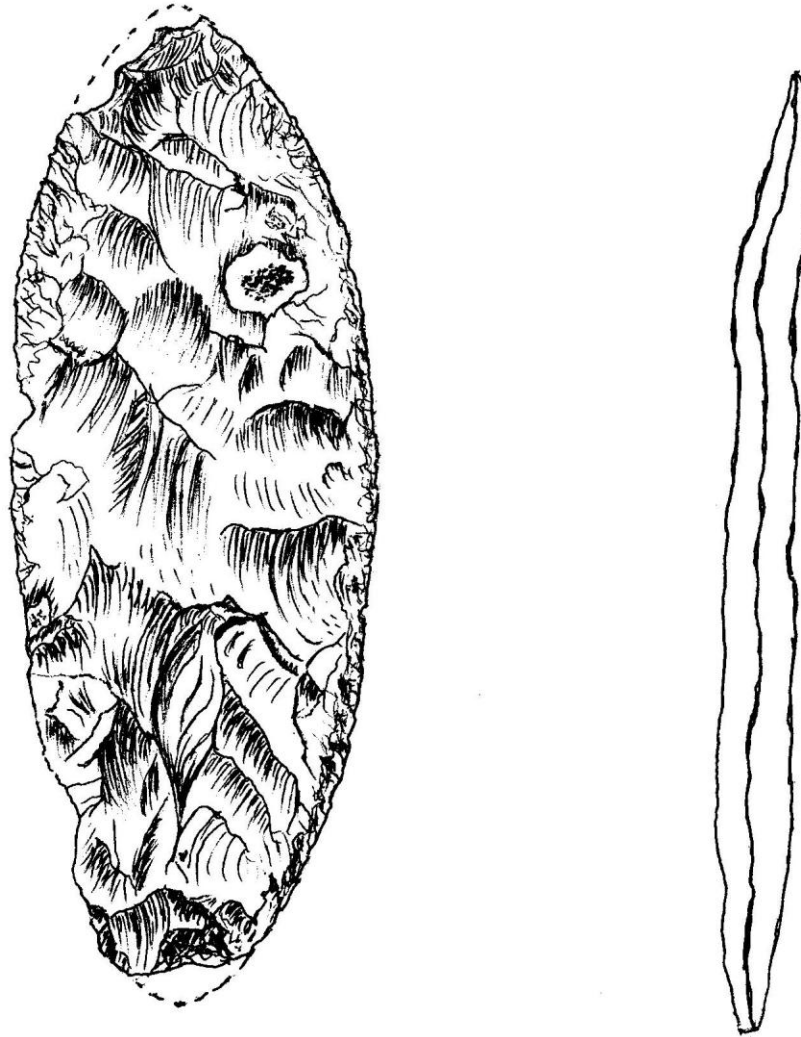


Figure 1. Harahey Knife side A and lateral edge A.

DISCUSSION

The Harahey knife is commonly associated with the Late Prehistoric Toyah Phase time period from about 1300 AD to 1750 AD (Turner and Hester 1999: 274). Perdiz arrow points, large thin bifaces, Harahey/two beveled knives, end scrapers, prismatic blades and locally made ceramics are all included in this phase. These artifacts are associated with buffalo hunting (Collins 1995:385).

The quarry site where the knife was found is a chert procurement site. No evidence of tool making, such as, small soft billet and pressure flakes was seen. A few large primary and secondary flakes and tested cores were seen. The knife is probably an isolated find and not associated with the site. The artifact may have been used to butcher an animal and left behind for some reason.

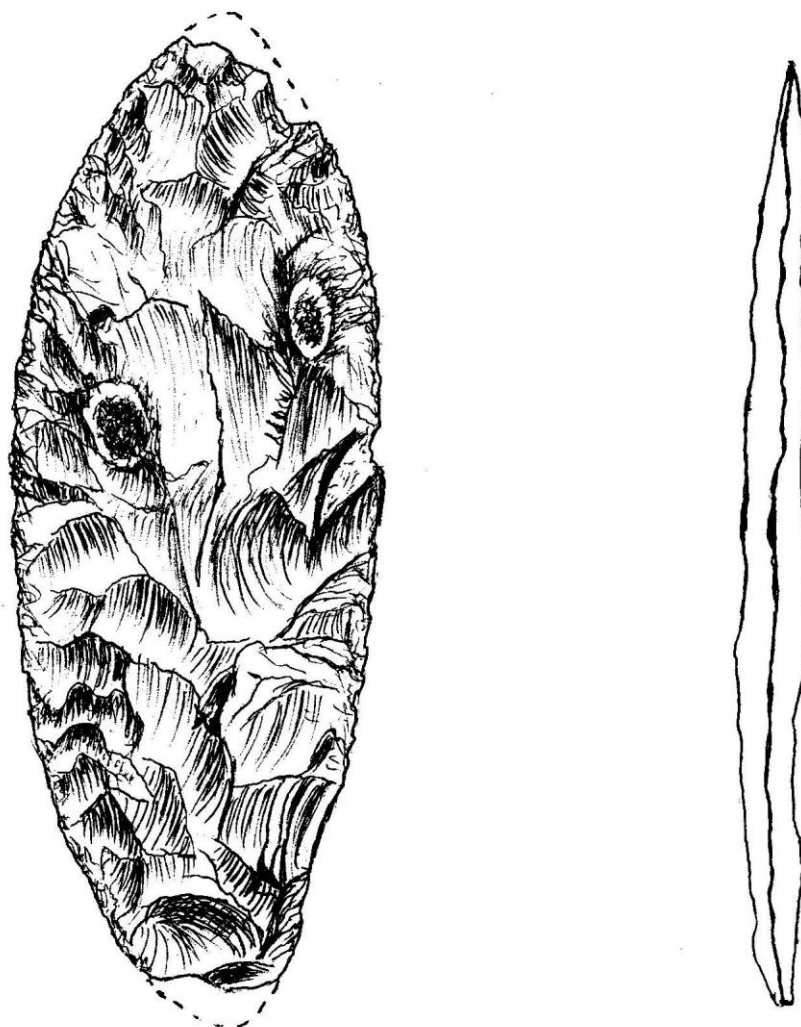


Figure 2. Harahey Knife side B and lateral edge B.

ACKNOWLEDGEMENTS

A debt of gratitude goes to the owners of the property for allowing me to examine the area where the knife was found and entrusting me to take it for examination and documentation. Also, thanks go to Bryant Saner for assistance and guidance, which are much appreciated.



Figure 3. Harahey knife photo of side A and Side B.

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BOOK REVIEW
John Wesley Arnn III
LAND OF THE TEJAS
NATIVE AMERICAN IDENTITY AND INTERACTION IN TEXAS
A.D. 1300 TO 1700
Austin: University of Texas Press, 2012

REVIEWER
Joseph Luther, Ph.D.
Kerrville, Texas
5 May 2012

This book is not for the novice or the faint of mind. This is a serious piece of scholarly work. While the casual browser may assume that the use of the word “Tejas” in the title implies that this is about the geo-political “Great Tejas” or Texas itself, this book is more sublime. It is a clear and compelling exploration and description of the Toyah social field in the early Historic Period manifested in the form of the Tejas Alliance.

The major strengths of this work are its focus on the Toyah Phase, the Jumanos and the great Tejas Alliance of Texas Indian tribes. The locality relevance is the Texas Hill Country, as if in my own back yard where I found the marquee of the Toyah – the Perdiz point. The empirical evidence is in the material culture, points and pots.

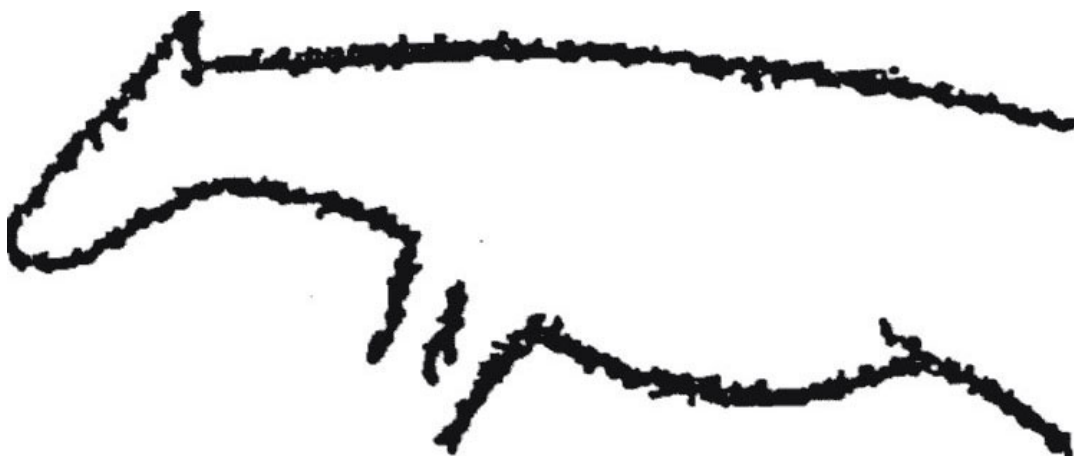
Arnn states that “The foragers of Central Texas sat atop the richest deposit of tool-grade material in the entire region for millennia.” The Edwards chert was a valuable market commodity that brought other tribes to the Hill Country to trade. Further, this book corroborates the Spanish record of trade fairs at the headwaters of the Guadalupe River.

The use of the term Toyah Phase has been perplexing to me. No more. The first line of the introduction, by Tom D. Dillehay, notes “This book considers the archeologically defined material culture known as the Toyah Phase in Texas and demonstrates how it represents a wide social field of cultural interaction in which various individuals and distinct groups participated in different social, economic, and political networks that linked them throughout the region.”

The principal characters in this book are the Jumano and among these people, Jumano governor and chief Juan Sabeata has the lead. In his right hand is the Perdiz point and in his left is the bone-tempered ceramic pot.

Late in the book, Arnn says “It is important to keep in mind that we have only scratched the surface of the archeological record in Texas and there is still much to learn.” Disappointing is the fact that no nearby sites were scratched. The work of Tom Hester and Harry Shafer in this geographical area deserves more revelation. Neither is listed in the index.

This book is a keeper. I would recommend it as a graduate-level resource.



HCAA thanks Herring Printing Company, Kerrville, Texas,
for the excellent printing of Ancient Echoes.

THE HILL COUNTRY ARCHEOLOGICAL ASSOCIATION

The Hill Country Archeological Association (HCAA) is a non-profit organization. Our purpose is to bring people together who have an active interest in the archeology and prehistory of the Texas Hill Country in an atmosphere conducive to the exchange of information and ideas. Foremost, in our activities, we promote preservation of archeological sites and offer proper training in archeological field and laboratory methods.

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ANCIENT ECHOES, Journal of the
Hill Country Archeological Association
P.O. Box 290393
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