A Reevaluation of Seven Sites at Camp Bowie, Brown County, Texas

by
Leonard Kemp

Texas Antiquities Permit No. 8620

REDACTED
Principal Investigator
Paul Shawn Marceaux

Prepared for:
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Archaeological Report, No. 482

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Abstract:

In November 2018, The University of Texas at San Antonio Center for Archaeological Research (CAR), in consultation with the Texas Military Department (TMD), relocated and collected site assemblage data on seven previously recorded archaeological sites located on Camp Bowie, Brown County, Texas. These sites are 41BR269, 41BR301, 41BR394, 41BR400, 41BR410, 41BR431, and 41BR466. Camp Bowie contains both federal and state-owned lands. Four of the sites investigated are on state property, and the remaining three are on federally owned land. Consequently, this work is conducted under two separate permits. The contract between TMD and CAR constitutes the Archaeological Resources Protection Act permit required for work on the federal portion of the property. The work on sites located on state-owned land was conducted under Texas Antiquities Permit No. 8620. Dr. Paul Shawn Marceaux served as the Principal Investigator for the project, and Leonard Kemp was the Project Archaeologist.

The primary goal of the current project was to relocate the seven sites, assess their location using GPS, and update site documentation, including assemblage level data. The CAR subsequently used this updated information to reconsider National Register of Historic Places (NRHP) and State Archeological Landmark (SAL) recommendations. This was done to assist the TMD in future Traditional Cultural Properties investigations. In all, CAR surveyed approximately 50,680 m^2 or 12.5 acres.

The CAR proposes that the boundaries of five sites should be changed to reflect the updated information generated by this project. These sites are 41BR269, 41BR301, 41BR400, 41BR410, and 41BR466. The site boundaries for 41BR394 and 41BR431 remain unchanged. The CAR recommends two sites, 41BR410 and 41BR466, for further investigation to determine if they are eligible for inclusion to the NRHP. For the remaining five sites, 41BR269, 41BR301, 41BR394, 41BR400, and 41BR431, there is no recommended change in their eligibility status. They are not recommended for inclusion to the NRHP or as nomination as SAL. The THC concerned with these recommendations. In addition to these seven sites, an area was discovered east of 41BR410 that contained two features and a projectile point. The CAR did not systematically survey the area. It was not the focus of this project. CAR recommends a resurvey of this area in the future. In January of 2021, the THC concurred with these recommendations.

All artifacts collected, project related records and a copy of the report are curated at the CAR facility. The facility is state certified repository on the UTSA campus. The project accession number is 2194.

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Chapter 1: Introduction

The University of Texas at San Antonio Center for Archaeological Research (CAR), in consultation with the Texas Military Department (TMD) Cultural Resource Manager Kristen Mt. Joy, relocated and collected site assemblage data on seven previously recorded archaeological sites located on Camp Bowie, a 9,297-acre training facility, in Brown County, Texas. These sites are 41BR269, 41BR301, 41BR394, 41BR400, 41BR410, 41BR431, and 41BR466. Camp Bowie contains federal and state-owned lands. Four of the sites investigated here are on state property. The remaining three are on federally owned land. Consequently, this work is conducted under two separate permits. The contract between the TMD and CAR constitutes the Archaeological Resources Protection Act permit required for work on the federal portion of the property. Texas Antiquities Permit No. 8620, issued to Principal Investigator Dr. Paul Shawn Marceaux, covers CAR's work on the sites located on state lands. Leonard Kemp served as the Project Archaeologist during the project that was conducted in November 2018.

In 2014, the TMD, in consultation with the Comanche Tribal Historic Preservation Officer (THPO) Jimmy W. Arteberry, the Mescalero Apache THPO Holly Houghton, and the Elders of the Comanche Nation and the Mescalero Apache Tribe, created six Traditional Cultural Properties (TCPs) and one Apache Ethnographic Landscape (Figure 1-1) on Camp Bowie (Galindo 2014). While a specific definition of a TCP was never stated by Galindo (2014), it is assumed that they followed guidance given by National Parks Service (NPS) National Register Bulletin 38, which states that:

> a traditional cultural property then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community [Parker and King 1990:1].

All the Camp Bowie TCPs were recommended as eligible for inclusion to the National Register of Historic Places (NRHP) under Criteria A and D (36 Code Federal Regulations 60.4). The NPS Bulletin on criteria for evaluation defines Criteria A as a property (site), which is "associated with events that have made a significant contribution to the broad patterns of our history" (NPS 1997:11-13). Criteria D states that the site will "have yielded, or may be likely to yield, important information in prehistory or history" (NPS 1997:21-24). Both the Comanche and the Mescalero Apache THPOs and Elders recommended additional work in an area containing 18 archaeological sites (Figure 1-1) to determine if these sites have a Comanche and/or an Apache component (Galindo 2014:172, 174-184).

CAR, in consultation with the TMD Cultural Resources Manager, proposed to revisit seven of the 18 recommended sites to determine the accuracy of their location and begin to assess the archaeological material associated with those sites. The seven sites were selected as they were in close proximity to one another at the northern end of the area recommended for additional work. The TMD is obligated to follow federal regulations as mandated by the NHPA (as amended), which, under Sections 110 and 106, requires identification of cultural resources and consultation with interested parties, prior to any federal undertaking (NHPA 1966). The work conducted here is an initial step in that reevaluation. The Area of Potential Effect (APE) consists of the seven sites, whose original defined boundaries are shown in Figure 1-2.

Project Goals

The archaeological site definition used in the initial archaeological surveys of Camp Bowie are unclear (Wormser and Sullo-Prewitt 2001). Therefore, CAR was unable to apply the same site definition as that reported in Wormser and Sullo-Prewitt (2001). In addition, most sites on Camp Bowie were recorded in the 1990s. They were plotted on topographic maps without the use of GPS. Consequently, the accuracy of their locations is open to question. Table 1-1 presents a summary of site characteristics including current site size and location comments from the TMD Geodatabase (2019). The primary goals of the current project were to relocate the sites, assess their location using GPS, and update site documentation, including assemblage level data. CAR subsequently used this updated information to reconsider NRHP and SAL recommendations. In addition, this information, along with general observations on the landscape, may facilitate any future delineation of TCPs.

Site Evaluation

CAR evaluated the sites based on the three criteria (see Kemp et al. 2018). They first looked at the potential for chronological placement of the assemblage as indicated by the presence or absence of temporal diagnostic artifacts or

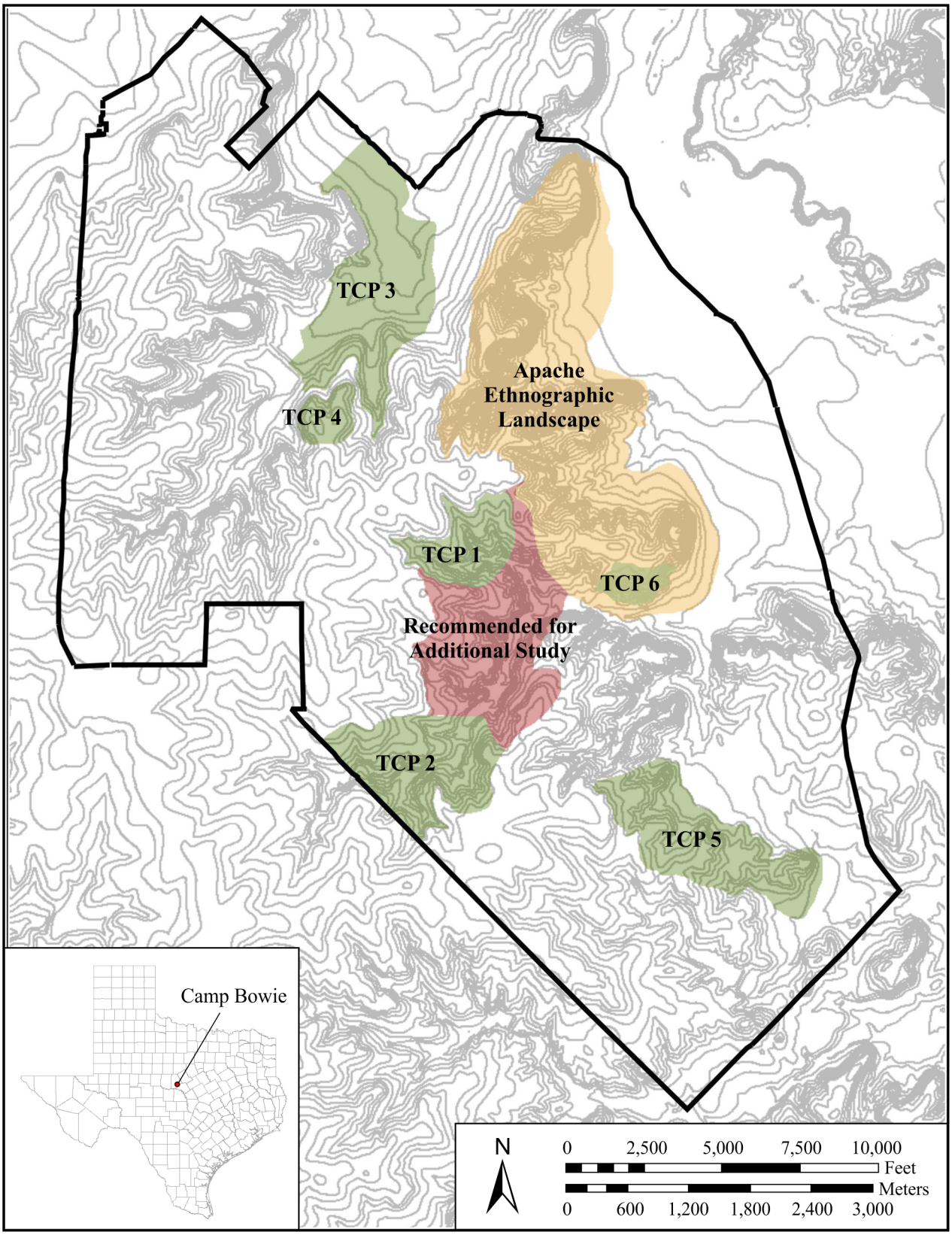

Figure 1-1. Map showing the boundary of Camp Bowie (in black) with the locations of the TCPs, the Apache Ethnographic Landscape, and the area recommended for additional study (red) in which the seven sites are located (Galindo 2014:172). The inset shows the location of Camp Bowie in Texas.

the potential for radiocarbon dating of a feature. In the initial Camp Bowie surveys, three of the sites contained temporal diagnostic points, though none of the sites were dated by radiocarbon analysis (Wormser and Sullo-Prewitt 2001).

The second criterion is focused on the site assemblage. In general, the greater the quantity or density of artifacts present at a site, the greater the variety of research questions that the site assemblage can potentially address. While this clearly discriminates against smaller assemblages, given the current lack of understanding of adaptations in the region, this discrimination seems justified. CAR used artifact density as a measure to quantify site assemblage. This is defined as the number of artifacts divided by site area. CAR used the same standards as the original Wormser and Sullo-Prewitt (2001:36) survey, with high density sites having more than 0.4 artifacts per square meter, moderate density sites having between 0.1>x<0.4 artifacts per square meter, and low

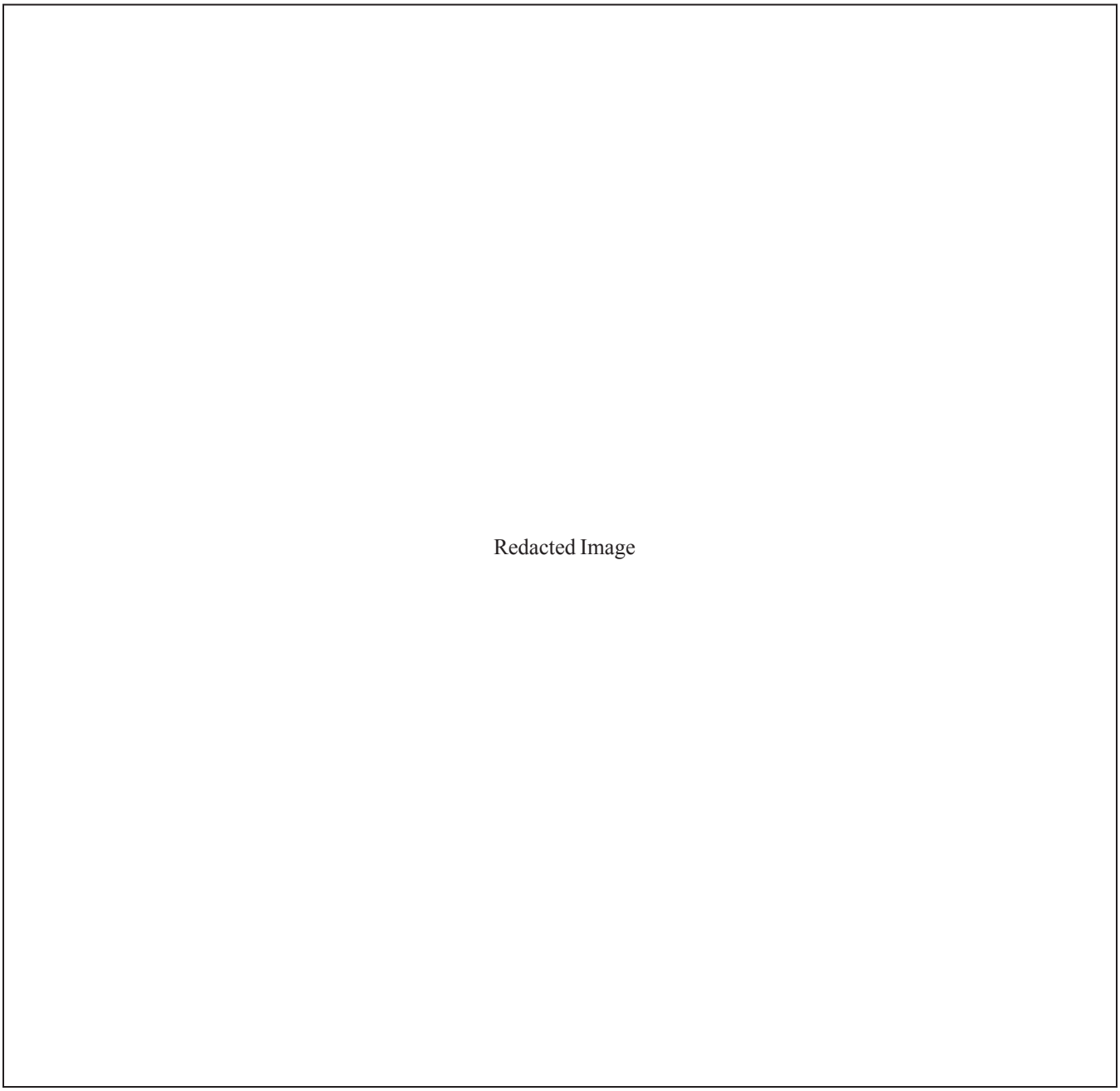

Figure 1-2. Map showing the locations of the seven Camp Bowie sites as defined in the current TMD Geodatabase (2019) reevaluated during the current project. The map also shows their proximity to TCP 1 and the Apache Ethnographic Landscape. The boundary between state and federal controlled properties is also shown with four sites in the former and three sites in the latter.

Table 1-1. Investigated Site Characteristics

Site	Current size (m^2)	GIS Location Comments
41BR 269	12,985	Landform/contours does not align well with roads. Report map boundary overlaps with current boundary of 41BR400.
41BR301	2,975	Only field sketches available. Site appears to be in correct general location.
41BR394	5,085	Only field sketches available. Site appears to be in correct general location.
41BR400	2,819	Report map boundary overlaps with current boundary of 41BR269. The road on the field map does not appear in the vicinity of where CAR data currently places the site.
41BR410	26,177	Only field sketches available. Site appears to be in correct general location.
41BR431	5,447	Only field sketches available. Site appears to be in correct general location.
41BR466	3,835	No map available.

density sites having less than 0.1 artifacts per square meter. Wormser and Sullo-Prewitt (2001) classified all seven sites as low density occurrences.

The final criterion is site integrity. Site integrity can be problematic given that all archaeological sites are affected, to some degree, by post-occupational processes. In this case, all the sites are surface sites. Generally, surface sites are considered to have little to no integrity due to erosion and displacement of artifacts or overprinting of artifacts caused by multiple occupations. However, a surface site may have integrity if it has not been subjected to erosion and if it is not overprinted by multiple occupations. One indicator of overprinting may be high artifact densities. In the case of these seven sites, all are described as being shallow and eroded or shallow with rocky soils, and as noted, all are low density (Wormser and Sullo-Prewitt 2001:Table 2).

Results

Using these criteria, CAR recommends two sites, 41BR410 and 41BR466, for further investigation to determine if they are eligible for inclusion to the NRHP or listing as a SAL. For the remaining five sites, 41BR269, 41BR301, 41BR394, 41BR400, and 41BR431, there is no recommended change in their eligibility status. They are not recommended for inclusion to the NRHP or nomination as SAL under standard archaeological criteria.

CAR proposes that the boundaries of five sites should be changed to reflect the updated information generated by this project. These sites are 41BR269, 41BR301, 41BR400, 41BR410, and 41BR466. The site boundaries for 41BR394 and 41BR431 remain unchanged. Following comments from the TMD and THC, site revisit forms and revised boundary shapefiles were submitted to the THC.

In addition to these seven sites, an area was discovered east of 41BR410 (outside the APE) that contained two features and a projectile point. These features fit CAR's definition of an archaeological site. CAR did not systematically survey the area due to time constraints and recommends a survey of this area in the future.

Report Organization

This report contains seven chapters. In addition to the introduction, Chapter 2 provides background on the regional climate, environment, and fauna and flora resources. Chapter 3 presents the prehistoric and historical background to provide context for this investigation. Chapter 4 provides the methodologies used by CAR to conduct the survey and to define sites and features followed by laboratory and curation procedures. Chapter 5 describes the past and current archaeological work at the seven sites and the findings from those sites. Chapter 6 provides a brief discussion that may be helpful in future TCP work, and Chapter 7 summarizes project recommendations.

Chapter 2: Project Environment and Setting

The project area is located in North Central Texas. This chapter summarizes the modern and historic climate and environment of the region. The modern data serves as a baseline for a summary of the Central Texas paleoclimate. It is followed by a regional environmental description and a project specific review of the soil and drainage data. A brief review of North Central Texas plants and animal communities, including archaeological record data and the observations of tribal specialists from the 2013 TCP study. It is followed by an account of those documented in the archaeological record as well as observations from Comanche and Mescalero Apache Elders during the TCP survey.

Climate

Modern Climate

Hot summers and cool winters characterize the climate of Brown County (Clower 1980). Occasionally, the region is subject to Arctic fronts resulting in very low temperatures, freezing rain, and sleet. Figure 2-1 shows the average monthly low and high temperatures for Brown County from 1981 to 2010 (National Oceanic and Atmospheric Association [NOAA] 2019a). The hottest months of the year are June, July, August, and September with an average daily temperature ranging from 91.8°F to 89.4°F. January is the coldest month of the year with an average daily temperature of 30.1°F followed by December at 31.5°F and February at 34.3 °F.

Mean total rainfall is 77.79 cm (30.44 in) per year from 1981-2010 (NOAA 2019a). The region has a bimodal rainfall pattern (Figure 2-2) with the greatest amount of rainfall falling in May and June with an average of 20.9 cm (8.24 in) for the period. September and October have the second highest rainfall amount with an average 15 cm (6 in) for the period. The driest months are in late fall and winter. There is a dramatic decrease in precipitation in July and in August. This decrease coupled with higher temperatures will create adverse conditions for plant growth as well as the wildlife that rely on plants for sustenance.

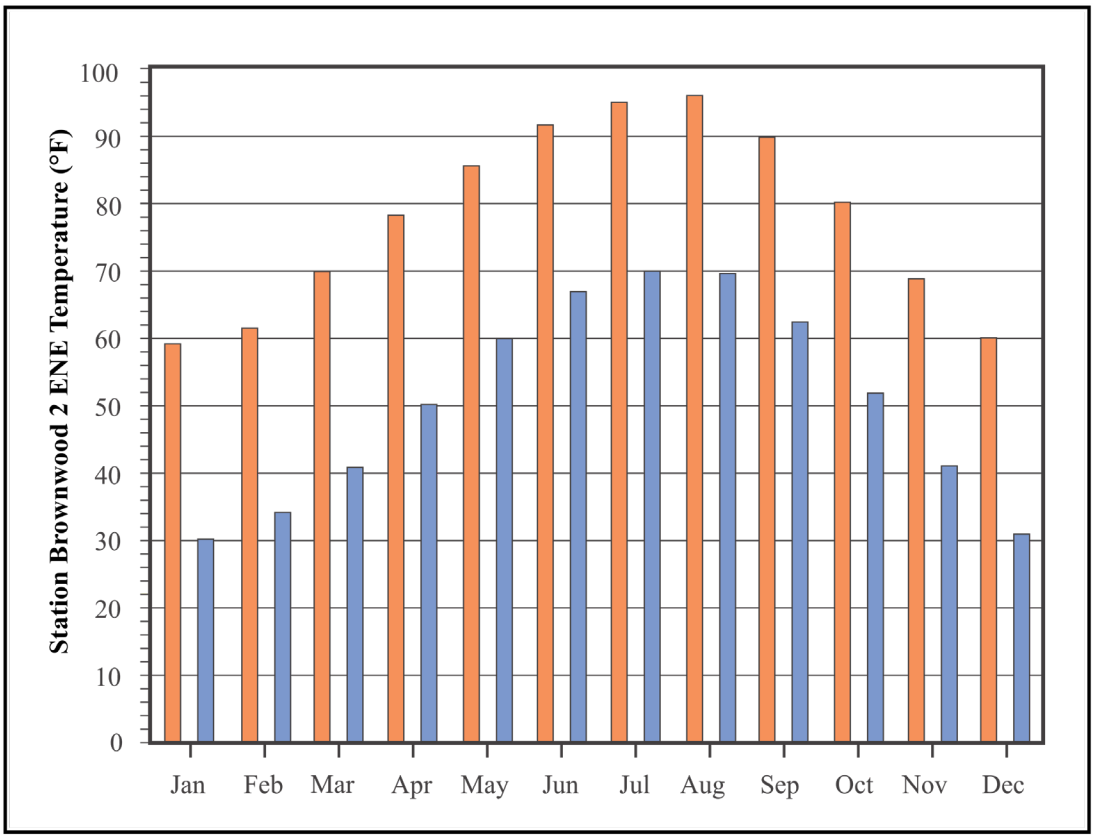

Figure 2-1. The average monthly high and low temperatures for the year based on data from 1981 to 2010 (NOAA 2019a).

Figure 2-3 shows the annual rainfall amounts for Brown County from 1900 to 2019 (NOAA 2020). The mean of the 120-year period is 69.01 cm (27.17 in) suggesting that the longer time span shows drier conditions than the 30-year mean of 77.79 cm (30.63 in; NOAA 2019). The driest year on record was 1901 with 32.43 cm (12.77 in) below the average, while the wettest year was in 1919 with 39.09 cm (15.39 in) above the average (NOAA 2020). Below average annual rainfall is more common (51.66%) than above average rainfall. The longest rain shortfall was for seven consecutive years occurring from 1950 to 1956 (NOAA 2020). The wettest consecutive period was from 1994 to 1997 (NOAA 2020).

Paleoclimate

Mauldin and colleagues (2003) synthesized the Central Texas regional paleoclimate based on multiple datasets (see Bousman 1994, 1998; Brown 1998; Fredlund et al. 1998; Humphrey and Ferring 1994; Nickels and Mauldin 2001; Nordt et al. 1994). The Central Texas paleoenvironment sequence is divided into four periods: the Late Pleistocene, the Early Holocene, the Middle Holocene, and the Late Holocene. This section summarizes that work.

The Central Texas environment during the Late Pleistocene period (ca. 18,000 to 10,000 BP) is generally characterized as moist and cooler with woodlands and cool season grasses (C3) dominating the landscape. At approximately 13,000 to 11,800 BP, there is a shift to drier conditions, although it is cooler and wetter than present. The boundary between the Late Pleistocene and the Early Holocene (ca. 10,000 to 8000 BP) sees a return to cooler conditions and the return of woodland by 9500 BP as evidenced by pollen in the Boriack Bog dataset (Bousman 1998). The Morgan Playa dataset suggests that the environment between ca. 10,000 and 7900 BP was wetter with C3 grasses and warm season (C4) grasses (Fredlund et al. 1998).

The Middle Holocene (ca. 8000 to 4000 BP) was initially wetter until approximately 6500/6000 BP when drier and hotter conditions prevailed and lasted to about 4800/4000 BP (estimate depends on the database used; Bousman 1994; Humphrey and Ferring 1994; Nordt et al. 1994). Conversely, Patschke pollen suggests a grassland setting during the entirety of the Middle Holocene with a drop in the percentage of grass pollen that may suggest a wetter interval between 6000 to 5000 BP (Nickels and Mauldin 2001).

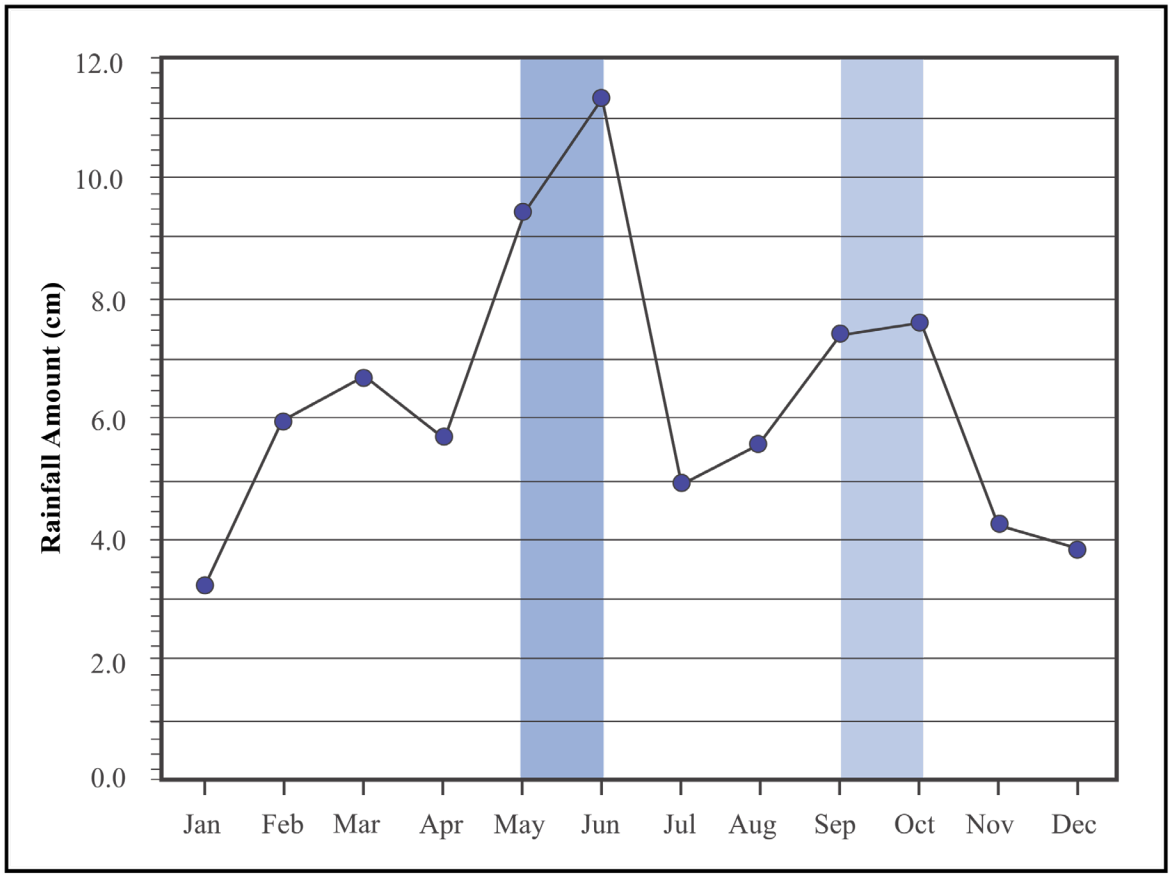

Figure 2-2. The average monthly rainfall for the year based on data from 1981-2010. The blue bands show the two peak rainfall amounts with the largest peak in May and June followed by a less intense peak in September and October (NOAA 2019).

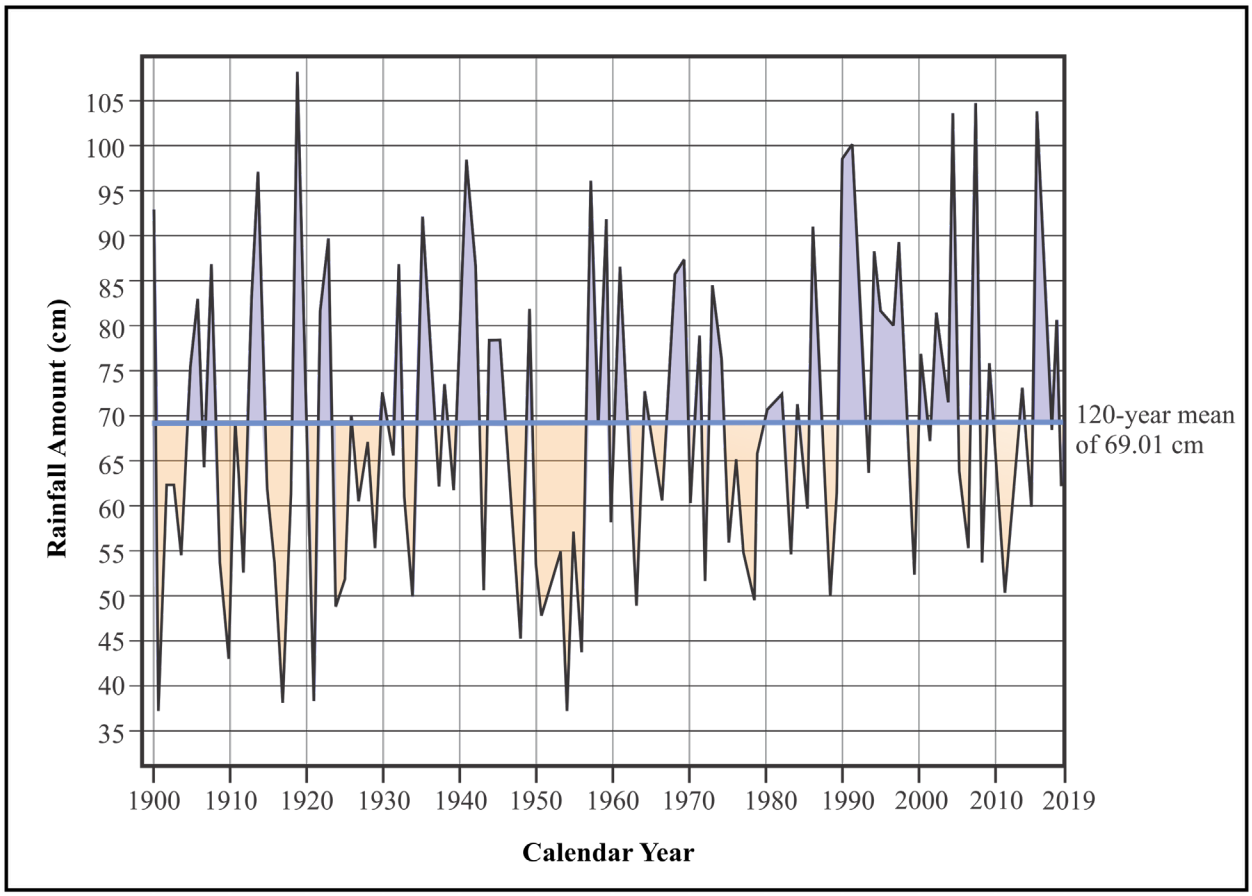

Figure 2-3. Annual rainfall amount for the period 1900 to 2019 (NOAA 2020).

Datasets for the Late Holocene (4000 to 0 BP) suggest fluctuating climate during the period. Humphrey and Ferring (1994) suggest that between 4000 and 2500 BP there was a mesic environment. At approximately 2000 BP, a 500-year period of drier conditions begins, returning to a wetter climate after 1500 BP. The Patscke data suggest dry conditions initially with wetter conditions after 1000 BP (Nickels and Mauldin 2001).

General Regional Setting

Camp Bowie is situated in the southwest portion of the Cross Timbers of Texas (Figure 2-4; Gould et al. 1961; Texas Parks and Wildlife Department [TPWD] 2019a; for in-depth information of the Cross Timbers region, see Dyksterhuis 1948; Peppers 2004). Prior to the late nineteenth century, the Cross Timbers was characterized by a mosaic of low to moderately dense north to south forest belt of *Quercus stellata* (post oak) with areas of tallgrass prairies (Dyksterhuis 1948). The region lies between the Blackland Prairie to the east and the Rolling Plains to the west with the Edwards Plateau lying to the south. At present, cattle ranches and farms dominate the rural landscape, while Dallas-Fort Worth is located in the northeastern portion of the region. The construction of infrastructure (road, power lines, gas and oil lines, etc.) have led to the reduction and elimination of the prairie and the post oak belt within the region (TPWD 2019a). Peppers (2004:24) estimates that only 6,210 ha or 1.2 percent of old growth post oak forest remain in the region of the 1.5 million hectares estimated by Dyksterhuis (1948). The Cross Timbers contain the watersheds of the Red, the Trinity, the Brazos and the Colorado Rivers running from the northwest to the southeast (Figure 2-4). The Colorado River forms the southern boundary of Brown County, and the Brazos River Basin lies to the northeast of the county line.

Project Setting

In Brown County, the landscape is hilly, interrupted by broad plains with elevation ranging from 365 to 609 m (1200 to 2000 ft) above mean sea level. The terrain of Camp Bowie consists of mesa escarpments of limestone and sandstone with alluvial and colluvial fans overlooking floodplains (Bousman and Hodges 2003: Appendix G). The project area lies in the central portion of Camp Bowie (Figure 2-5). It is in the uplands of the camp at an elevation of 446 to 460 m (1,465 to 1,510 ft) above mean sea level with a moderately sloped intermittent drainage bisecting the area. The area

overlooks the Devil's River that runs to the south and east of the study area and feeds into the Pecan Bayou.

Soils and Hydrology

The predominant soil class in Brown County is shallow to deep loamy and clay soils in the uplands and deep, loamy and clayey soil on the floodplains and upland (Clower 1980). Sites 41BR269, 41BR301, 41BR394, 41BR400, and 41BR431 are located within the Doudle-Real soil association (Do-Re). Sites 41BR410 and 41BR466 are located on the Real soil (Re) unit (Figure 2-5). The Frio soil (Fr) class is found in the drainages located on Camp Bowie. There are no project sites in this soil association. Clower (1980) describes the Doudle-Real association as found on sloping to hilly soils over limestone and loam. The Doudle soils are composed of a brown, cobbly loam 15.24 cm (6 in) thick over a light brown loam 17.78 (7 in) thick with calcium carbonate. The final stratum goes to a depth of 91.44 cm (36 in) and is a pink silt loam over sandstone. The Real soil is shallow with a brown gravelly to very gravelly clay loam 27.94 cm (11 in) thick over a weakly cemented limestone.

The Pecan Bayou is one of five major drainages to the Colorado River, and it runs slowly to the southeast through Brown County (Hanke 2010, shown in the inset of Figure 2-5). The Devil's River is a tributary to the Pecan Bayou. During the year of investigation, precipitation exceeded the average by 11.40 cm (4.49 in) with the Devil's River running full. However, there are years when it runs dry in sections as reported by Mauldin and colleagues (2003:7). In addition, active seeps and a spring were also observed during the current project.

Fauna and Flora of North Central Texas

This section is based on published work by Schmidly's *The Mammals of Texas* (2004), the TPWD (2019b), and cultural resources report by Mauldin and colleagues (2003), Weston and Mauldin (2003), and Galindo (2014).

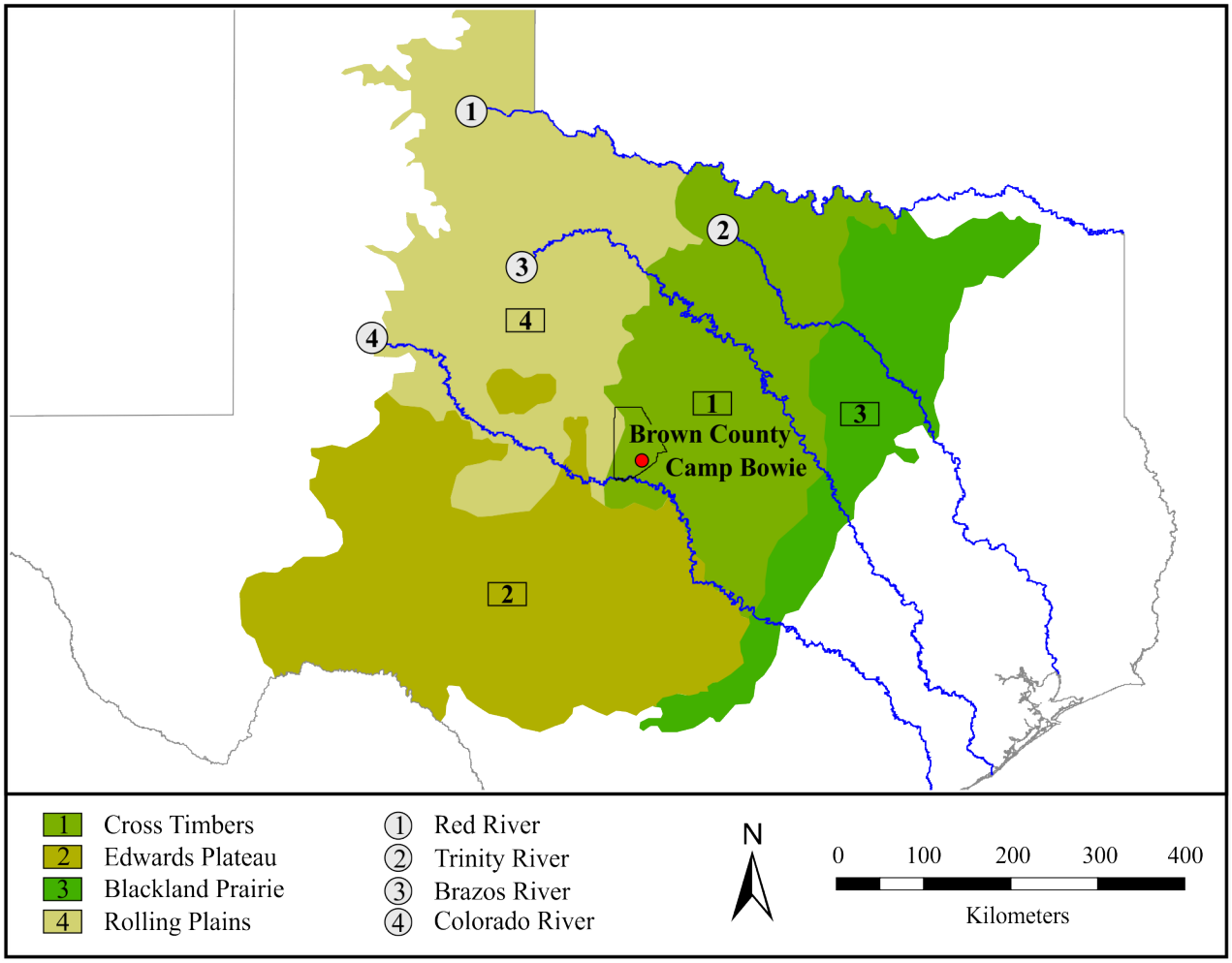

Figure 2-4. Physiographic regions of North Central Texas. Brown County and Camp Bowies lies within the Cross Timbers (Gould et al. 1961; TPWD 2019a).

Figure 2-5. Soil types found in the project area (Clower 1980). Inset shows the major drainages in Brown County.

Fauna

During the project, white-tailed deer (*Odocoileus virginianus*) were sighted daily. In addition, a bobcat (*Lynx rufus*) was observed on one occasion. Previous CAR investigations identified faunal remains that included bison (*Bison bison*), eastern cottontail (*Sylvilagus* sp.), black-tailed jackrabbit (*Lepus californicus*), and white-tailed deer (Meissner 2003: Appendix B). In addition to these identified species, remains of a large bird, the carapace of a turtle, and numerous species of freshwater mussels were found (Goodfriend 2003: Appendix D; Meissner 2003: Appendix B). Galindo (2014:74) reported finding a mussel concentration with two pieces of banded chert flakes during a site visit with the Comanche. Mussel exploitation can serve dual purposes: the first as food, and the second, as a source for ornamentation.

Currently, the black-tailed prairie dog (*Cynomys ludovicianus*), the eastern fox squirrel (*Sciurus niger*), the beaver (*Castor canadensis*), the Virginia opossum (*Didelphis virginiand*), the nine-banded armadillo (*Dasypus novemcinctus*), and multiple species of gophers, mice and rats are found in North Central Texas (Schmidly 2004). Carnivore species (Schmidly 2004) found within the region include coyote (*Canis latrans*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), ringtail (*Bassariscus astutus*), raccoon (*Procyon lotor*), long-tailed weasel (*Mustela frenata*), badger (*Taxidea taxus*), striped skunk (*Mephitis mephitis*), and hog-nosed skunk (*Conepatus leuconotus*; Schmidly 2004).

Bison, black bear (*Ursus americanus americanus*), collared peccary (*Pecari tajacu*), pronghorn (*Antilocapra Americana*), Northern River otter (*Lontra Canadensis*), mountain lion (*Puma concolor*), and gray wolf (*Canis lupus*) are species once found in the region (Schmidly 2004).

North Central Texas provides suitable habitat for Rio Grande turkeys (*Meleagris gallapavo*), bobwhites (*Colinus virginianus*), and various species of dove and quail (TPWD 2019b). Migratory birds found in the region include teal and duck (*Anas* sp.) and geese, such as Canada geese (*Branta canadenis*; TPWD 2019b).

Flora

Site vegetation within the project area varies with mottes of ashe juniper (*Junipeus ashei*), mesquite (*Prosopis* sp.), post oak (*Quercus stellata*), and blackjack oak (*Quercus marilandica*) to the southwest and mixed grass to the northeast and southwest.

The previously mentioned 2003 CAR investigation excavated 16 sites with burned rock middens (BRMs), and a subsequent investigation excavated four sites with two containing BRMs (Mauldin et al. 2003; Weston and Mauldin 2003). Of the 18 BRMs, 10 contained charred remains of Eastern camas (*Camassia scilloides*) and/or wild onion (*Allium* sp.) with one midden containing a mesquite (*Prosopis glandulosa*) seed (Dering 2003a, 2003b). In addition, other bulb remains were found including dog's tooth violet (*Erythronium* sp.) and false garlic (*Nothoscordum bivalve*), and one midden contained a tuber tentatively identified as prairie turnip (*Pediomelum* sp.; Dering 2003a, 2003b). The seed and bulbs are considered food resources based on the archaeological and ethnohistoric records (Dering 2003a, 2003b).

During the TCP study, plants used for food, medicine, and other purposes were identified and described by both Comanche and Mescalero Apache Elders (for a full account of this part of the study, see Galindo 2014; also see Jordan 2008). Table 2-1 lists those plants and their uses.

Summary

The project area is an area that would have provided sustenance for prehistoric people at least on a seasonal and perhaps yearly basis if the population did not exceed its carrying capacity. However, that population threshold is unknown. Historically, the region is the traditional range of the Apache and Comanche bands. During the TCP survey, Elders from both the Comanche and Mescalero commented on land use by their respective people. The region was not intensively occupied until the arrival of Anglo farmers and ranchers in the mid to late nineteenth century. Ranchers noted the variability of forage and water for cattle with some good to very good years of rain followed by periods of drought.

Table 2-1. Plants Identified by Comanche and Mescalero Apache Elders, TCP Survey (Galindo 2014)

Family	Genus Species	Common Name	Use
Agavaceae	*Agave americana L.*	Agave	Food/food preparation, Material Culture
	Yucca sp.	Yucca	Food/food preparation, Material Culture
Asclepiadaceae	*Ascleias* sp.	Common Milkweed	Food/food preparation, Medicinal
Asteraceae	*Hymenopappus scabiosaeus*	Ghostweed/ Old Plainsmen	Medicinal
	Thelesperma simplilicifolium	Slender Greenthread	Medicinal
	Artemisia ludoviciana	Lightning Weed/ Sagewort	Food/food preparation
	Ratibida columnifera	Mexican Hat	Medicinal
Berberidaceae	*Mahonia trifoliolata*	Agarita	Food/food preparation, Medicinal, Religious
Cactaceae	*Opuntia* spp.	Prickly Pear Cactus	Food/food preparation, Medicinal, Personal
Cupressaceae	*Juniperus ashei*	Ashe Juniper	Food/food preparation, Medicinal, Religious
Ephedraceae	*Ephedra antisyphiliticca*	Indian Tea/Mormon Tea	Medicinal
Fabaceae	*Prosopis glandulosa*	Honey Mesquite	Food/food preparation, Material Culture, Medicinal
Juglandaceae	*Carya Illinoinensis*	Pecan	Food/food preparation
Krameriaceae	*Krameria lanceolata*	Ratany/Prairie Sandbur	Medicinal, Personal
Lamiaceae	*Hedeoma drummondii*	Drummond's False Pennyroyal	Food/food preparation
	Monarda citriodora	Horsemint	Medicinal
Liliaceae	*Nolina texana*	Texas Beargrass	Food/food preparation, Material Culture, Personal
Pedaaliaceae	*Proboscidea lousianica* sp.	Devil's Claw	Food/preparation, Material Culture
Poaceae	*Andropogon glomeratus*	Brushy Bluestem	Food/food preparation, Material Culture, Medicinal
	Leersia monandra	Bunch Cutgrass	Material Culture
	Bouteloua spp.	Gramma Grass	Food/food preparation, Material Culture
Rhamnaceae	*Ziziphus obtusifolia*	Lotebush/Christmas Cactus	Medicinal, Personal
Rubiaceae	*Hedyotis nigricans*	Prairie Bluets	Religious
Sapindaceae	*Sapindus saponaria* var. *drummondii*	Western Soapberry	Material Culture, Personal

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Chapter 3: Cultural History and Previous Investigations

Camp Bowie lies within the northwestern edge of the Central Texas archaeological region (see Collins 1995, 2004). This chapter will use the Central Texas chronology developed by Collins (1995, 2004), which consists of three broad temporal periods. They are the Paleoindian, the Archaic, and the Late Prehistoric periods (Collins 2004). The discussion on prehistory is followed by a section that focuses on the historic period to 1900. The chapter closes with the past cultural resources work conducted at Camp Bowie.

Prehistory of the Region

Paleoindian

The initial peopling of the American continents is associated with the Paleoindian period. The period is thought to begin around 13,300 years ago (ca. 13,300 cal BP; 11,500 Radiocarbon Years before Present [RCYBP]), although recent research suggests an earlier arrival of populations to the New World (Waters et al. 2018; Williams et al. 2018). The period is divided into Early (13,300 to 11,500 cal BP) and Late (11,500-9850 cal BP) subperiods based on point styles (see Bousman et al. 2004; Collins 1995, 2004).

The Early Paleoindian subperiod is defined by Clovis and Folsom points, which are lanceolate shaped projectiles with a thin distinctive central notch. The Clovis point is found throughout North America, while the Folsom point is limited to the western United States (Collins et al. 2011). Both Folsom and Clovis points are found in Texas. While neither have been recovered on Camp Bowie, they have been recorded in Brown County (Bever and Meltzer 2007:67; Largent 1995; Largent et al.1991:324). The Late Paleoindian subperiod is characterized by an increased diversity of projectile points with lanceolate-shaped and stemmed forms. In Texas, points, such as St. Mary's Hall, Golondrina-Barber, Wilson, and San Patrice are frequent during this time (Bousman et al. 2004), and an untyped Late Paleoindian point has been recorded on Camp Bowie (Wormser and Sullo-Prewitt 2001: Table B-1).

Traditionally, Paleoindian period subsistence has been characterized as small, highly mobile groups focused on big game (see Sellards 1952; Wilmsen 1965; Wormington 1957), though aspects of this characterization, such as the focus on big game, has recently been challenged (see Surovell and Waguespack 2008). In Texas, that challenge is strongly supported by findings at the Wilson-Leonard site, located in Williamson County, and the Friedkin and Gault sites, located in Bell County. Excavations at these sites recovered a variety of small and medium mammal remains as part of the subsistence record (Collins 1998; Waters et al. 2018).

Archaic

The Archaic period in Central Texas, which covers roughly 8,600 years (9850 to 1250 cal BP), is traditionally divided into three subperiods termed Early, Middle, and Late. These temporal distinctions are primarily based on shifts in point styles, and a brief summary of the various subperiods is provided below. Detailed information on the period and subperiods in Texas can be found in Black and McGraw (1985), Carlson and colleagues (2008), Collins (1995, 2004), Collins and colleagues (2011), Houk and colleagues (2009), Johnson and Goode (1994), Lohse and colleagues (2014), and Thoms and Claybaugh (2011).

Early Archaic

Collins, in a widely cited synthesis, suggests that the Early Archaic subperiod spans about 3,000 years, from 9850 to 6850 cal BP (Collins 1995, 2004). Most sites are assigned to the Early Archaic based on projectile points, with Angostura, Early Split Stem, Early Triangular, Gower, Martindale, and Uvalde points associated with the subperiod (but see Houk et al. 2009; Lohse et al. 2014). Other items that are frequently found on Early Archaic sites, and may reflect more specialized tools, include Guadalupe adzes and Clear Fork gouges, items that are primarily unifacially worked and appear to be used in woodworking (Collins 2004; Turner et al. 2011:225-226, 232-233).

Most accounts suggest that population density was low during this subperiod, with a more varied subsistence base relative to that seen in in the Paleoindian period (see Collins 2004; Story 1985). Several recent excavations on the Edwards Plateau (Gatlin site, Houk et al. 2009; Vargas site, Quigg et al. 2008; the Berdoll site, Karbula et al. 2011), as well as early work in South Texas (see Thoms and Clabaugh 2011) have provided more detailed subsistence data that document a variety of fauna, including deer, antelope, rabbit, several small mammals, turtle, and fish. Rock features, which likely functioned as ovens (Black 2003), were used throughout this period, with radiocarbon dates on carbonized camas (Stafford 1998) and onion bulbs (Karbula et al. 2011) documenting early use of these plants (see also Acuña 2006: Table 5).

On Camp Bowie, there are no radiocarbon dates for this period. However, a number of Early Archaic points have been recorded including Angostura, Early Triangular, Gower, and a Pandale (Mauldin et al. 2003; Wormser and Sullo-Prewitt 2001).

Middle Archaic

Collins (2004) suggests that the Middle Archaic dates from 6850 to 4450 cal BP and is associated with a variety of projectile point types, including Bell, Andice, Taylor, Nolan, and Travis forms (Collins 1995; 2004). Recent summaries of radiocarbon dates that are associated with several of these point styles suggest that they may actually begin later in time, placing the transition from the Early to the Middle Archaic at around 5700 cal BP (see Houk et al. 2009; Lohse et al. 2014). Regardless of the timing of the transition, the Middle Archaic appears to be associated with several changes beyond shifts in point styles. These include an increased focus on bison hunting and perhaps an increase in the use of burned rock in features to process plant foods (Collins 1995, 2004; Lohse et al. 2014). There are suggestions that populations increased during this period (see Story 1985; Weir 1976) as the number of Middle Archaic components appears to increase, but Collins (2004) suggests that this may simply be a result of increased mobility.

Several Middle Archaic projectile points including Nolan, Tortugas and Andice have been found on Camp Bowie (see Mauldin et al. 2003; Wormser and Sullo-Prewitt 2001). However, there are no radiocarbon dates that fall in this subperiod.

Late Archaic

Collins (1995; 2004) suggest that the Late Archaic begins at 4450 cal BP and contains a wide variety of projectile points types, including Bulverde, Pedernales, Lange, Marshall, Williams, Montell, Castroville, Ensor, Frio, and Darl, among others (see Turner et al. 2011). Corner-tanged knives, cylindrical stone pipes, and marine shell ornaments, while not exclusive to Late Archaic sites, are commonly found (Hall 1981; Hester 2005). Collins (1995, 2004) argues that the subperiod terminates at around 1150 cal BP with the introduction of the bow and arrow (see also Johnson and Goode 1994). Recently Lohse and colleagues (2014), relying on selected radiocarbon dates, have argued that the termination date for this subperiod should be extended to include Scallorn points, an arrow point that is traditionally associated with the Austin subperiod, the initial subperiod of the Late Prehistoric. Lohse and colleagues (2014:272) cite others, including Black and Creel (1998), Collins (1994), and Prewitt (1981), who describe the Austin phase as a continuation of Late Archaic culture in all aspects, with the introduction of the bow and arrow.

Regardless of when the subperiod terminates, the Late Archaic is generally characterized as a time of increasing population (Black and McGraw 1985; Prewitt 1985; but see Black 1989 for another perspective). Large cemeteries are found in this time period, including Loma Sandia in the Choke Canyon area of south Texas (Taylor and Highley 1995), and Olmos Dam in Central Texas (Lukowski 1988). Some researchers suggest that this may be an indication of the development of territories (Black and McGraw 1985). Burned rock middens appear to increase in frequency, at least in some areas of Central Texas (Acuna 2006; Black and McGraw 1985; Black et al. 1997, Munoz 2012).

Late Archaic diagnostics found on Camp Bowie include Pedernales, Bulverde, Castroville, Langtry, Marcos, Frio, and Ensor points (Mauldin et al. 2003; Wormser and Sullo-Prewitt 2001). Mauldin and Nickels (2003) reported three dates associated with the Late Archaic period.

Late Prehistoric Period

Collins (1995; 2004) divides the Late Prehistoric into two subperiods, Austin (1150 to 650 cal BP) and Toyah (650 to 350 Cal BP). He suggests that Scallorn and Edwards arrow points are characteristic of the Austin subperiod, while Perdiz points, along with bone-tempered pottery known as Leon Plain, are artifacts commonly recovered at sites associated with the subsequent Toyah subperiod (see Kenmostu and Boyd 2012; Turner and Hester 1999; Turner et al. 2011).

The Austin lithic technology does appear to be an extension of that seen at the end of the Late Archaic (see Johnson and Goode 1994, Lohse et al. 2014; Prewitt 1981). Cemeteries are also present (see Greer and Benfer 1975; Prewitt 1974). It now appears that the use of burned rock middens peaked during this interval (Acuna 2006; Black and Creel 1997; Mauldin et al. 2003). Faunal remains reflect a focus on deer, with bison mostly absent or in low frequency in most archaeological middens (Collins 2004; Dillehay 1974; Mauldin et al. 2012).

Toyah lithic assemblages reflect a clear departure from the previous Austin subperiod, as well as the earlier Archaic traditions. They are increasingly characterized by the use of flake/blade technology rather than the bifacial core reduction strategies of earlier periods (see Black 1986; 1989). Assemblages often include not only Perdiz points, but also beveled knives and formal end scrapers and appear to be designed, in part, to exploit bison (Dillehay 1974; Huebner 1991; Kenmotsu and Boyd 2012; Prewitt 1981). However, several researchers (Black 1986; Dering 2008; Mauldin et al. 2012) suggest diet was more variable with a range of large to small mammals and supplemented with plant resources.

Burned rock middens continue to be used during this period (Karbula 2003), though their frequency may decline relative to the preceding Austin subperiod (Black and Creel 1997; Mauldin 2003).

The Late Prehistoric Period is well represented at Camp Bowie with both radiocarbon dates and diagnostics. Late Prehistoric diagnostics found on the facility included Scallorn, Perdiz, Fresno, Alba, Cuny points and Leon Plain ceramics. Mauldin and Nickels (2003:168) report that approximately 90 percent of radiocarbon dates (n=28) from the investigation of eighteen prehistoric sites fell between AD 750 and 1400. Mauldin and Nickels (2003) suggest that the Late Prehistoric period was when burned rock middens were mainly used in this region.

The Contact Period

An interesting conundrum in Texas archaeology is the stark contrast between what is commonly termed the Late Prehistoric and the subsequent Historic periods. While archaeologists are comfortable discussing Toyah phase diagnostics and settlement, there is a lack of discussion on how those sites occur in the same timeframe of early Spanish sites. There is even less analysis of how Toyah or similar timeframe cultural remains connect with the indigenous communities encountered and documented in the written records from the early European colonizers. As Maria Wade (2003) noted in her ethnohistory of Native populations in the Edwards Plateau, the timeframes of what the academic archaeological paradigm distinguishes as "prehistoric" versus "historic" are different in each region because it is based on when written records from Europeans become available.

The Eighteenth Century (c. 1700 to 1800)

Prior to the late seventeenth century, the region that will become Texas was peripheral to Spanish colonial interests. Because of the established territorial ranges of Apache and Comanche bands, the Spanish avoided the northcentral region of Texas that includes Brown County. Based on archaeological interpretations, it is proposed that the Apache occupied the Southern High Plains of eastern New Mexico, western Texas and Oklahoma by at least AD 1300 (Britten 2009; Foster 2008). By the 1740s, Comanche bands moved into the region, displacing Apache groups (Figure 3-1). The figure shows Apache groups in the Panhandle region and the Comanche to the north. As Native groups began to migrate towards the south, the Spanish began a colonization effort to the south and west of the region, while the French established trade with Native groups including the Caddo and the

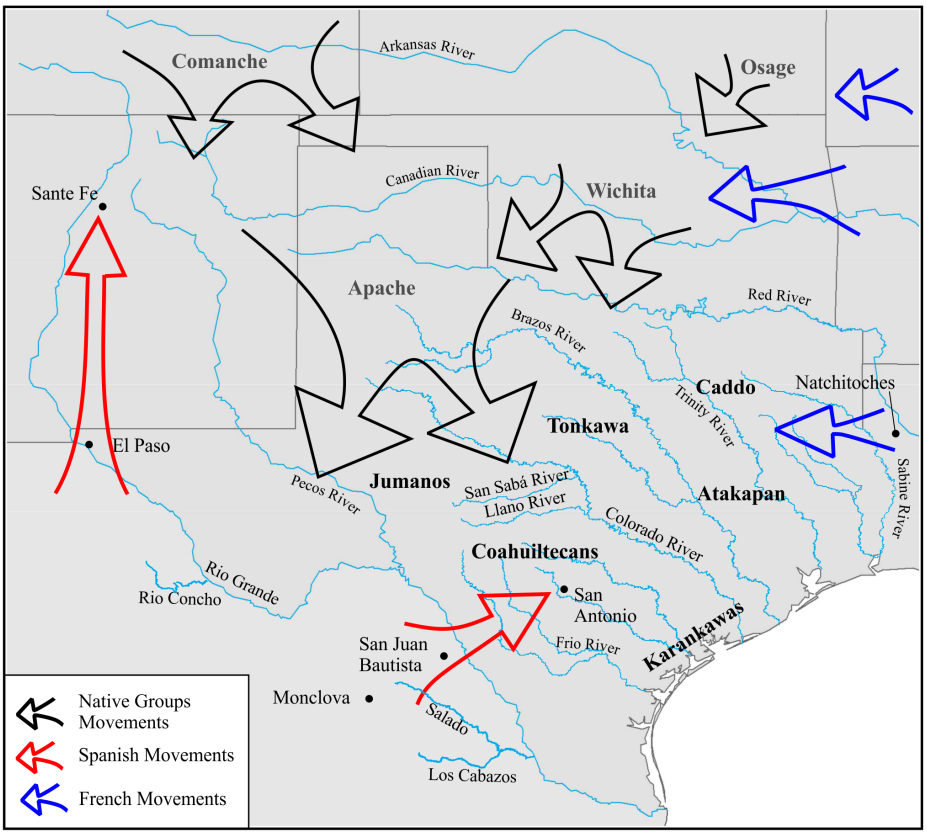

Figure 3-1. The migration dynamics of the early eighteenth century with movements of identified Native groups, as well as the Spanish and French colonists (after Tunnel and Newcomb 1969: Figure 75).

Osage to the east (Figure 3-1). The dynamics of migration, colonization, and trade would foster conflict and alliances between the Spanish, Apache and Comanche throughout the eighteenth and nineteenth centuries.

The Apache people are first referred to in records of the Coronado expedition of 1541 as "Querechos" when they were encountered in the Texas Panhandle (Britten 2009:51). They are described as nomadic bison hunters employing trained dogs to carry bison meat, hides, and their tents (Britten 2009). The Francisco de Ibarra 1564 expedition uses both the term Querechos and Indios Vaquero interchangeably to identify the Apache (Foster 2008:192). The term Apache is first used following the Bonilla-Human expedition of 1593 (Foster 2008:180).

Opler (1943) traced the root of the word "Comanche" to the Ute word *komántcia* meaning "anyone who want to fight me all the time;" and another interpretation of the word is "newcomer" (Hämäläinen 2008:24). The Comanche call themselves the Nʉmʉnʉʉ or The People. According to Comanche narratives, they migrated to the Southern Plains from eastern Colorado and western Kansas by the 1700s (Wallace and Hoebel 1988:8). This text will use the common name of Apache and Comanche except in situations to identify individual groups derived from either entity.

A 50-year conflict between the Apache and the Comanche began in the early eighteenth century based on their differing subsistence strategies and control of the river valleys upon which both depended for survival (Hämäläinen 2008:31-32). By the 1700s, the Comanche had adopted equestrian hunting focused exclusively on bison. The river valleys of the Southern Plains provided forage and water for the Comanche horse herds (Hämäläinen 2008:31). The Apache also hunted bison as well as practicing limited maize agriculture (Hämäläinen 2008:31). In addition, both competed for trade with the pueblos along the Rio Grande and Pecos Rivers, as well as other Native groups (Spielmann 1983). The Comanche also developed trade with the French and their Native allies, and they began to acquire guns, giving them advantage over the Apache, who did not begin to trade for guns until the mid-eighteenth century (Hämäläinen 2008:33).

In addition to the Comanche, the Apache were engaged in a cyclical conflict with the Spanish throughout the eighteenth century. In 1723, Captain Nicolás Flores, captain of the presidio of San Antonio de Béxar led the first expedition against an Apache *ranchería* (a small Native settlement) believed to be near Brownwood or the San Sabá area (Wade 2003:171). After a 5-year lull, reciprocal raids between Apache and Spanish began again in 1730 (Wade 2003:172). In December of 1732, the governor of Texas, Juan Antonio de Bustillos y Ceballos led a retaliatory campaign against the Apache. He found and attacked a *ranchería* composed of the Ypandi (Lipan were composed of two branches, the Ypandi or Pelones [the Forest Lipan], the Yxandi [the Plains Lipan]), the Natagés (a Mescalero affiliated branch of the Apaches), Jumanes, and Chenti (believed to be the Tejas, a Caddo group) on the San Saba River (Minor 2009; Wade 2004). According to Ceballos, "three hundred warriors were killed, 30 women and children captured, and 100 mule loads of supplies seized" (Minor 2009:21-22). A short peace between the Apache and the Spanish followed the campaign.

Ironically, various Apache *rancherías* sought Spanish protection from the Comanche and their allies in the form of presidio-protected missions and escorts during hunts for bison (Wade 2003). The Comanche saw these efforts as an alignment with their enemies, resulting in conflict between the two with significant defeats suffered by the Spanish. The first was the total destruction of the mission at San Sabá in 1758 by the Comanche and their allies. The following year in a retaliatory strike the Spanish and Apache forces were defeated in a battle with the Wichita, a Comanche ally. The San Sabá presidio was abandoned in 1769 after a series of attacks by the Comanche and their allies (Wade 2003).

Hämäläinen (2008) describes the Comanche success as the result of military prowess, commerce, and diplomatic alliances. The Comanche overall population in the 1780s was estimated at 40,000, which outnumbered the Spanish in both Texas and New Mexico (Hämäläinen 2008:102). In Texas, the Comanche numbered 8,000 with at least 2,000 thought to be warriors (Hämäläinen 2008:102). The Comanche had created trade networks with the Spanish and English from whom they acquired guns (Hämäläinen 2008:141). They also formed alliances with the Kiowa, the Pawnee, the Cheyenne, and the Arapahoes (Hämäläinen 2008:141).

Comanchería and the Republic of Texas Period (c. 1800 -1845)

The Southern Plains at the beginning of the nineteenth century witnessed incredible geopolitical change with the emergence of the United States, the collapse of the Spanish empire (1812-1821), the creation of the Republic of Mexico (1824), and the Texas Revolution (1836). During the same time as these historic events, the Comanchería (Comanche Empire) evolved and began to dominate the Southern High Plains region (Hämäläinen 2008; Kavanagh 1996). However, with the annexation of Texas (1845) and later the acquisition of New Mexico (1854) by the United States, Comanchería began to decline and eventually lost. Figure 3-2 shows the territorial extent of the Comanchería around 1830 with their major trading posts.

Just prior to and following the Louisiana Purchase in 1803, American traders traveled into the Comanchería known to them as the "Texas Trading Frontier" (Hämäläinen 2008:146). The Comanche *rancherías* that became the major trade centers in Texas were situated along the Brazos and Red Rivers, trading fur, horses, and captives for guns, ammunition, clothing, and cooking implements (Hämäläinen 2008:150). This new source of trade reduced Spanish and then Mexican influences on the Comanche, such that they began to raid south Texas for livestock to trade with the Americans. Raids had the effect of depopulating the region and causing the collapse of the colonial economy.

Following independence from Mexico, Sam Houston, the president of the Republic of Texas attempted to make peace with the Comanche. However, the Texas Congress effectively nullified this overture by opening land to settlement. This would lead to retaliatory raids between the Comanche and the Texans. Lipscomb (2019) lists the various bands of Comanche now living in Texas during this time including the Penateka (the Honey-eaters) of the Edwards Plateau, the Nokoni (Those Who Turn Their Back) of the Texas Cross Timbers, the Tanima (Liver-eaters), and the Tenewa (Those Who Stay Downstream) also of the Cross Timbers, the Kotsotekas, found on the Canadian River, and the Quahadis (Antelope-eaters) of the Texas Panhandle.

The Council House Fight (also known as the Council House Massacre) of 1840 and its aftermath exemplifies the distrust, misunderstanding, and the conflict between the Comanche and Texans. In March of 1840, Penateka Comanche chiefs, warriors, and their families arrived in San Antonio to establish peace by bringing with them several hostages for return as a goodwill gesture (Schilz 2010; Wallace and Hoebel 1988). The Texans demanded the return of all hostages held by the Comanche, but the Penateka explained

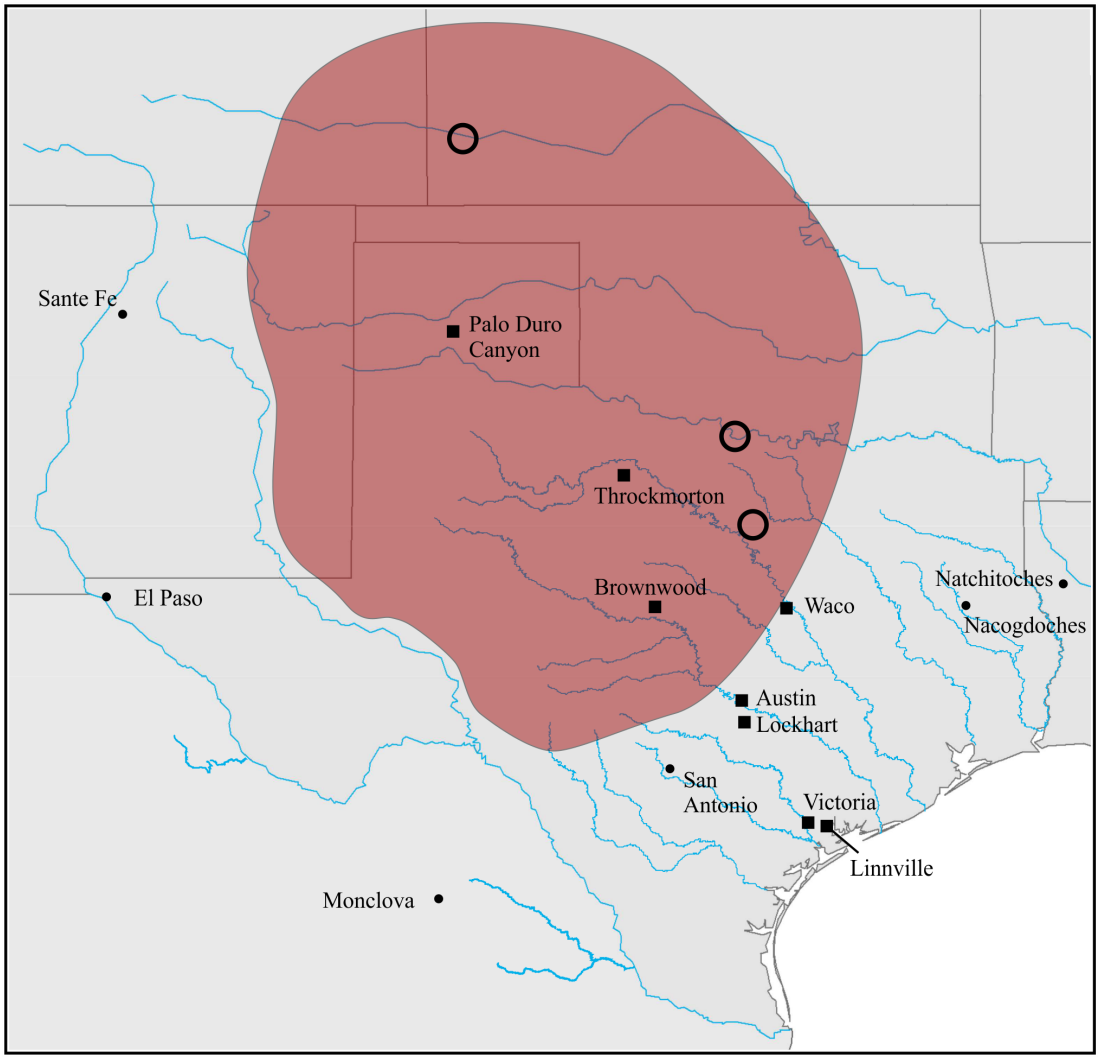

Figure 3-2. The extent of the Comanchería circa 1830. Comanche trading posts are designated by circles (after Hämäläinen 2008: Figure 6). Locations discussed later in time are represented with a square.

they were not responsible for other bands. Armed Texans then surrounded the Penateka, and in an escape attempt, 12 chiefs and warriors were killed in the Council Room with 30 more Penateka killed outside (Schilz 2010; Wallace and Hoebel 1988:294).

A retaliatory raid led by Buffalo Hump of the Penateka Comanche followed the incident. He attacked and sacked the communities of Victoria and Linnville in August of 1840 (Schilz 2010; Wallace and Hoebel 1988). The Texans formed a militia coupled with Texas Rangers to intercept the raiding party resulting in the Battle of Plum Creek near present day Lockhart (Schilz 2010).

From 1843 through 1845 at the site of Tehuacana Creek (near present-day Waco), the Republic sought to establish territorial boundaries with some success among the various Native groups in Texas (Giles 2010; Hämäläinen 2008:218; Wallace and Hoebel 1988:295). In October of 1844, a peace treaty was signed establishing trading posts along the San Saba and Lower Brazos Rivers, which became the de facto boundary between the Comanche and the Texans (Hämäläinen 2008:218; Wallace and Hoebel 1988:295). The treaty required the Comanche to stop raiding in Texas while simultaneously allowing the Comanche to continue their raids into the northern Mexican states.

Statehood Period to 1900

On January 1, 1846, the United States annexed the Republic of Texas. A stipulation of annexation was that Texas remained in control of land rights, which would have the effect of limiting the federal government's ability to negotiate with Native groups. The annexation also led to the Mexican American War (1846-1848) and ultimately, the militarization of the Texas frontier by the U.S. Army. Following the war, the army established garrisons from the Trinity River to the Rio Grande River to protect the growing number of settlers and overland migrations due to the California gold rush (Smith 2000).

In the early 1840s, German immigrants began to settle in the Edwards Plateau, the southern portion of the Comanchería through the Mainzer Adelsverein (Society for the Protection of German Immigrants in Texas). After some initial conflict, the Penateka Comanche and the Germans negotiated a treaty in 1847 (Gelo and Wickham 2018). This treaty allowed for German settlement through mutual use of the land in exchange for compensation and the development of trade with the Comanche. Gelo and Wickham (2018) cite it as one of the few treaties not violated by either the Comanche or the German-Texans.

In 1851, U.S. Army Captain William Hardee estimated that approximately 3,952 Native Americans, of which 2,200 were Comanche, were living in the region between the Llano and Brazos Rivers (Smith 2000:37). In 1853, U.S. Secretary of War Jefferson Davis persuaded Texas to implement a reservation policy for the Caddo, the Wichita, and the Penateka administered by the federal government (Hämäläinen 2008; Wallace and Hoebel 1988). The Penateka, numbering approximately 226 individuals, were allotted 23,000 acres along the Clear Fork of the Brazos River in present-day Throckmorton County (Wallace and Hoebel 1988:300).

During the late 1850s, the conflict between the Comanche and Texans was aggravated by an increase in migrants through the region, as well as encroachment upon their hunting grounds in northcentral Texas. Brown County was created from Comanche and Travis Counties in 1856, but it was not until 1858 that it was organized with Brownwood becoming its county seat (Leffler 2019). Its creation was due more to its use as a buffer zone against Comanche raids than to create a viable community, with only few families settling in the county (Shive 1974). In 1858, a Texas Rangers regiment was formed and headquartered east of Brownwood on the Pecan Bayou to protect residents of the western frontier including Brown County (Leffler 2019; Shive 1974). In May of 1860, the Comanche-Texas border was a militarized frontier secured by approximately 3,500 federal troops and 1,000 state militia/ Texas Rangers (Shive 1974:23).

When Texas seceded from the United States in 1861, Union troops surrendered and left the state resulting in the abandonment of frontier. Although some forts were taken over by Confederate and state militia forces, they did not have the strength to secure the frontier. Settlers abandoned the north central portion of Texas due to Native raids and a general lack of security. In 1865, the Union defeated Confederate forces with the U.S. Army returning to Texas.

In October of 1865, the Treaty of the Little Arkansas was signed by the United States and the Comanche, Kiowa, Plains Apache, Southern Cheyenne, and the Southern Arapaho, in an attempt to establish peaceful relations between the parties (Hämäläinen 2008). The Comanche were promised western Oklahoma, the panhandle of Oklahoma, and a portion of northwestern Texas below the Panhandle (Hämäläinen 2008:313). Federal troops did not return to the western frontier in any great numbers until the late 1860s (Hämäläinen 2008). The lack of authority created a period in which the Comanche continued to raid settlements.

In an attempt to secure the region from one destabilizing force, a new treaty was signed with Plains tribes that included the Comanche at Medicine Lodge Creek in Kansas in October of 1867. Hämäläinen (2008:324) describes it as flawed by "obscure meanings, mutual misconstruction, and uneasy compromises." The treaty had the effect of dividing the

Comanche into two groups: those that lived on the reservation year-round and those that used the reservation as a seasonal base (Hämäläinen 2008:326). The Penatekas tended to live on the reservation, while the Kwahadas, Yamparikas and the Kotsotekas would visit the reservation but lived on the Llano Estacado, although control and management of these bands was fluid with groups coming and leaving.

The re-emergence of the Texas cattle economy in the late 1860s provided the Comanche on the Llano Estacado with a new source of capital and trade through raiding. In Texas, the loss was estimated at 11,395 cattle and 6,255 horses from 1866 to 1873 (Hämäläinen 2008:329). This continuing conflict had the effect of shrinking the frontier, as evidenced by census records from 1870 showing 544 residents in Brown County and 324 in Colman (Shrive 19724:50).

Beginning in 1871, the army under pressure from Texas instituted a policy of total warfare against the Comanche, destroying winter camps, food supplies, and horse herds. The campaign known as the Red River War culminated in the defeat of the Comanche at the Battle of Palo Duro Canyon in 1874. This marked the end of the Native warfare on the Southern Plains although there were still scattered hostile acts into the 1880s.

Pacification of the frontier led to increased settlement in Brown County, primarily by small farmers and ranchers. However, settlement marked the end of the free range as primarily large landowners delineated their property(ies) by fences denying small landowner's cattle access to forage and water (Shive 1974). The Great Western Trail was created in 1874, and Brownwood was a feeder route to it (Leffler 2002, 2010). The town served as a supply depot for the cowboys. By the late 1870s, Brownwood consisted of three churches, one bank, a schoolhouse, and a cotton gin (Odintz 2010).

In 1880, the population of Brown County was 8,414 (Texas State Almanac 2019). The number of farms had increased from 22 in 1870 to 1,206 in 1880. Brownwood was incorporated in 1884 (Odintz 2010). In 1885, the first rail line - the Gulf, Colorado, and Santa Fe - was built through Brownwood, which then had two banks, nine general stores, five saloons, a cotton mill, and a gristmill (Odintz 2010). In the late 1880s, the town developed a waterworks facility, an opera house, and two colleges (Odintz 2010; Shive 1974).

In 1890, the population of Brown County had grown to 11,421, and in 1900 stood at 16,019 (Texas State Almanac 2019). Farming was the dominant industry in 1900 with cotton and corn the main cash crops (Leffler 2002, 2010; Odintz 2010). It was home to sixteen cotton gins, the Brownwood Cotton Oil Mill, and the West Texas Compress Company, which bundled the cotton into bales (Odintz 2010). Brown County had dramatically changed from just 30 years earlier when there were still Comanche and bison on the open range to a farming community with modern infrastructure.

Previous Investigations

Currently, there are 191 archaeological sites recorded on Camp Bowie (TMD 2019). Eighteen of those 191 sites are eligible for NRHP listing, and two sites are listed as potentially eligible. The remaining sites are listed as not eligible for inclusion to the NRHP.

Archaeological surveys and testing began at Camp Bowie in 1975 when Texas A&M University's Anthropology Laboratory recorded four sites (Shaffer et al. 1975). Two of those sites contained burned rock features including a ring midden and hearths. Beginning in 1993 and continuing through 1998, archaeological surveys were conducted on Camp Bowie resulting in the documentation of 186 prehistoric and historic sites (Wormser and Sullo-Prewitt 2001). In 2001, CAR initiated two surveys of 290 acres on the facility resulting in the discovery of five additional sites (Greaves 2002; Mauldin and Broehm 2001).

From 1999 to 2002, CAR began the testing of 22 archaeological sites to determine their NRHP eligibility status (Mauldin et al. 2003; Weston and Mauldin 2003). Mauldin and colleagues (2003) investigated 18 sites, 16 of which contained burned rock middens. CAR recommended 12 sites as eligible for inclusion to the NRHP under Criteria D that states that "the site will yield or may be likely to yield important information in prehistory or history" (NPS 1997:4) as well as recommending they be designated as State Archeological Landmarks (SALs). These sites are 41BR65, 41BR87, 41BR228, 41BR246, 41BR250, 41BR253, 41BR420, 41BR433, 41BR473, 41BR478, 41BR492, and 41BR493. In August 2002, CAR tested four sites, three of which contained burned rock middens (Weston and Mauldin 2003). Two of these sites, 41BR392 and 41BR522, were recommended eligible for inclusion to the NRHP under Criteria D and for designation as SALs (Weston and Mauldin 2003).

Leffler (2002) documented the archival history of Camp Bowie. It provided historical context for seven historic sites found on the facility documented in Wormser and Sullo-Prewitt (2001). Three of these sites (41BR266, 41BR277, and 41BR438) are remnants of sandstone walls. Site 41BR290 contains the remains of a historic homestead. Sites 41BR270 and 41B477 are water-control features constructed by the Civilian Conservation Corps (CCC). The last site, 41BR299, is a World War II training bunker.

In 2006, SWCA Environmental Consultants (SWCA) conducted an investigation of historic sites on Camp Bowie (Bonine and Steely 2006). They tested sites associated with the farming and ranching components (41BR65, 41BR266, 41BR290, and 41BR436), the CCC (41BR270 and 41BR477), and the World War II training bunker (41BR299; Bonine and Steely 2006). In addition, they conducted interviews of individuals focusing on the pre-World War II era creating an oral history of the area prior to its incorporation by the military (Bonine and Steely 2006). They determined that sites 41BR270, 41BR299, and 41BR477 are eligible under Criteria A, a property (site), which is "associated with events that have made a significant contribution to the broad patterns of our history" (NPS 1997), and Criteria D. Site 41BR438 is eligible under Criteria D (Bonine and Steely 2006). The remaining three sites are not eligible (Bonine and Steely 2006).

From 2013 to 2014, SWCA conducted cultural investigations associated with the designations of TCPs on Camp Bowie (Galindo 2014), resulting in the documentation of six TCPs and one Apache Ethnographic Landscape. This work was conducted in consultation with the THPOs and Elders of the Comanche Nation and Mescalero Apache Tribe. Galindo (2014:99) reports 40 previously recorded Camp Bowie sites as having a historic Comanche component described as campsites, rock shelters, sites with springs, sites with geographic landmarks, sites with plants for medicinal and subsistence purposes, and sites that have large viewscapes that defined the six TCPs. Thirty-one previously identified archaeological sites that have a historic Apache component comprise TCP 1 and the Apache Ethnographic Landscape (Galindo 2014:99). The ethnographic landscape consisted of 15 locales with 20 species of heritage resource plants used for medicinal, subsistence, cosmetic, ceremonial, and material culture purposes (Galindo 2014:110-117). The TCPs and the Apache Ethnographic Landscape were recommended as eligible for inclusion to the NRHP under Criteria A and Criteria D (NPS 1997). In addition, 67 sites were listed for future study to determine if they have a historic Comanche and/or Apache component (Galindo 2014:99, 169).

Chapter 4: Field and Laboratory Methods

This chapter provides a description of field survey methods used to complete the seven site reevaluations. It includes the criteria CAR used to define an archaeological site. The chapter concludes with a description of the laboratory methods and curation procedures.

Pedestrian Survey

Prior to fieldwork, CAR archaeologists reviewed the data from the initial surveys, as well as the TCP surveys of the area. This results from this review suggested that artifacts were primarily found on the surface. The shovel tests that were excavated revealed shallow soils not any deeper than 10 cm. In addition, site description referenced surface bedrock and the lack of soils on these sites. This information was submitted in CAR's SOW and as such, it proposed to conduct solely a surface survey of the seven sites.

A three-person crew conducted a 100 percent pedestrian survey of the seven sites using a Trimble GeoXT and three Trimble Juno 3B GPS units. CAR used two different methods to survey the previously recorded sites. The first method was a linear pedestrian survey using transects. This was used on sites 41BR301, 41BR394, 41BR410, 41BR431, and 41BR466 as their known boundaries were thought to be well defined. The second method used a more intensive approach that attempted to generate quantitative data that could then be consistently classified into sites. This approach was used to delineate the proposed boundary changes for 41BR269 and 41BR400. The original plotting of these sites showed that their boundaries overlapped, and this method provided an opportunity to explore other ways of recording and classifying surface material. In all, CAR surveyed approximately 50, 680 m^2 or 12.5 acres.

For the first method, the linear pedestrian survey, the field crew was spaced 10 m apart and walked transects through the site. All surface artifacts, cultural and natural features (such as springs, ridges, drop-offs, etc.), and any site disturbances or impacts were documented. This information was used to assess the site's location and boundaries and to document the artifacts found on the site.

The second method used a grid-based recording system that relied on the Juno GPS units equipped with Esri's ArcPad. This survey method has been employed at Fort Bliss in west Texas and in southern New Mexico (Seaman et al., 1988; see also Miller et al. 2009). A virtual georeferenced grid, covering an area of 180-x-180 m and subdivided into 10-x-10 m cells, was created. The grid encompassed an area of 32,400 m^2 and included the two overlapping sites (Figure 4-1). The crew was spaced 10 m apart and walked in the same direction recording all cultural artifacts and features within each 10-x-10 m cell using a Juno unit. The collected data was used to create new site boundaries for the two sites.

Only diagnostic artifacts were collected, and their locations were recorded with a GPS. Each member of the crew was equipped with a digital camera that permitted other artifacts, such as cores or ground stone fragments, to be photographed. In addition, site views and natural features were noted. Finally, geological, animal, and plant resources seen on the sites, as well as during the project, were identified and photographed when possible. Following comments from the TMD and THC, site revisit forms and revised boundary shapefiles were submitted to the THC.

Feature and Site Definitions

For the purposes of this survey, a feature is defined as 10 or more artifacts within a 5 m radius of each other. CAR defined an archaeological site as containing cultural materials or features that are at least 50 years old. In addition, to be considered a site, the locations must have five or more surface artifacts within a 10-x-10 m area (ca. 100 m^2) or a single cultural feature, such as a hearth or midden, observed on the surface. The site is delineated by the distribution of recorded artifacts and features. While this procedure was followed for sites 41BR301, 41BR394, 41BR431, and 41BR466, it was not followed for site 41BR410. For this site, an additional criterion tied to the landform was used.

The grid method used for 41BR269 and 41BR400 employed the same basic site definition as was used at 41BR301, 41BR394, 41BR431, and 41BR466. However, it differed in the way that the definition was implemented. A grid cell (10-x-10 m) that met the definition of a site was identified, and a 3-cell (30 m) buffer was placed around that cell. Any artifact positive cells within that boundary were added to the site, and a new 3-cell buffer was then drawn around the group of positive cells. This process was repeated until there were no positive cells included in the 30 m (3-cell) boundary of the site. The final boundary was reduced to a 1-cell (10 m) buffer around the positive cells forming the site boundary.

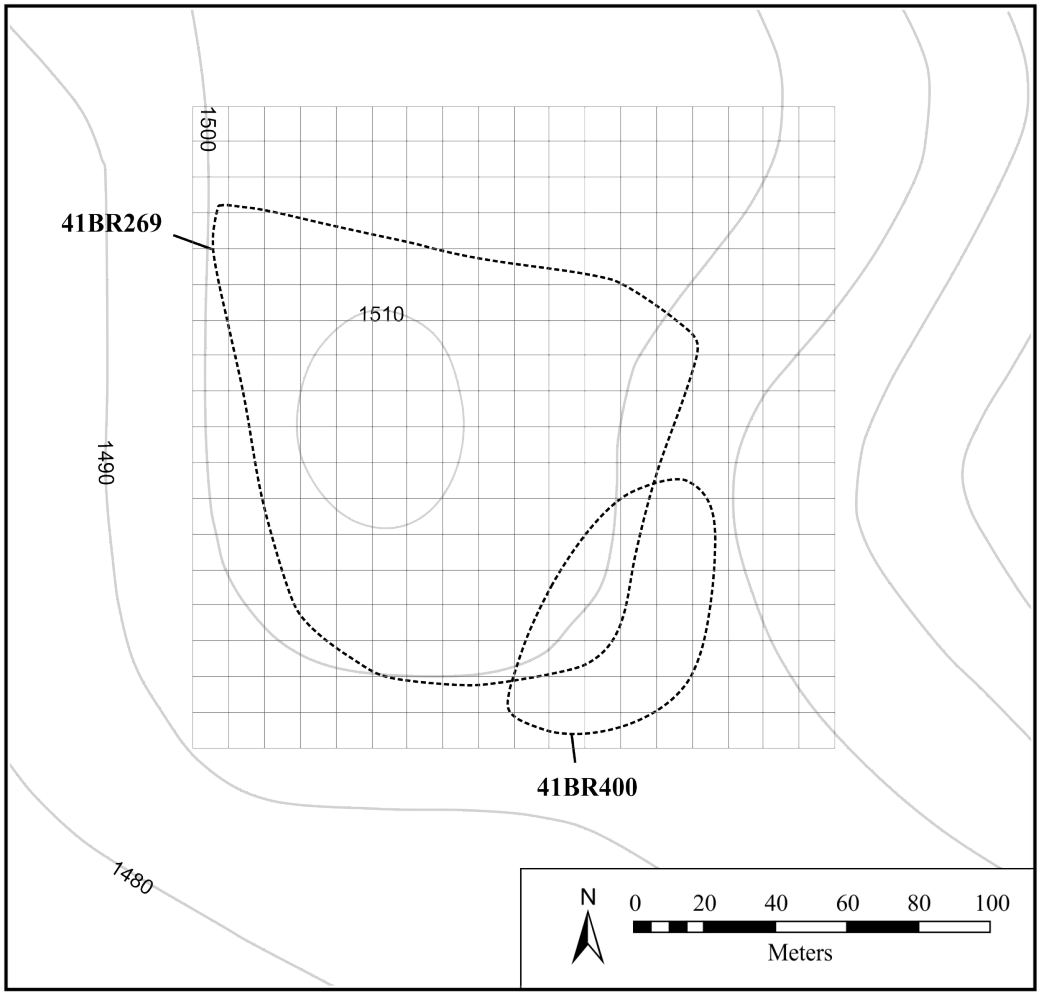

Figure 4-1. An example of a survey grid placed over the original boundaries (dashed lines) of 41BR269 and 41BR400 over an USGS topographic map (10 ft. contour intervals).

Lab Analysis, Curation Preparation, and Final Curation

Throughout the project, the analysis and organization of the records, artifacts, and daily logs was ongoing. All collected artifacts and records generated during this project were prepared in accordance with THC requirements for State Held-in-Trust collections and 36 CFR Part 79.

CAR collected only three artifacts. Each artifact was assigned a unique identifier tied to its description and location. The artifacts were field checked by the Project Archaeologist and turned over to the Laboratory Director for processing in the CAR laboratory. Artifacts were washed, air-dried, and stored in separate bags by provenience. Each recovered artifact was catalogued with its pertinent information (i.e., provenience, artifact type, metrics, etc.) and entered into an Excel database.

The materials were curated in accordance with current CAR guidelines. Artifacts are stored in archival-quality bags with acid-free labels including a provenience and corresponding lot number. Collected artifacts were labelled with laser printed tags containing the site or accession number and the catalog number. Tags were placed on a clear coat of acrylic and covered by another acrylic coat. Artifacts were then placed in individual 4 mil zip-locking, archival-quality bags with a laser printed label containing provenience information and a corresponding lot number. All artifacts were stored in acid-free boxes.

Digital photographs were printed on acid-free paper, labeled with archival-appropriate materials, and placed in archival-quality sleeves. All field forms were completed with pencil. Field notes, forms, photographs, and drawings were printed on acid-free paper, placed in archival folders, and stored in acid-free boxes. A copy of this report and all computer media pertaining to the investigation were stored in an archival box and curated with the field notes and documents at CAR, a THC state certified curatorial repository under accession number 2194.

Chapter 5: Site Descriptions and Results of the Archaeological Survey

This chapter presents the results of the pedestrian survey of the seven sites. The discussion of the results of each site begins with a summary of the previous archaeological work and, in the case of 41BR410, comments from the TCP investigation (Galindo 2014). The order of site discussion is organized by the method used to reevaluate the sites. Sites 41BR301, 41BR394, 41BR410, 41BR431, and 41BR466, surveyed with the linear pedestrian method, are discussed first. Sites 41BR269 and 41BR400, surveyed with the grid method, are then presented. Figure 5-1 shows the locations and size of the reevaluated sites as recorded by Wormser and Sullo-Prewitt (2001). In addition, the figure shows an area east of 41BR410 where cultural material was observed during this project. This area was outside of the APE, and CAR recommends that it be systematically surveyed.

41BR301

Background

Site 41BR301, located on a ridge (see Figure 5-1), is described by Wormser and Sullo-Prewitt (2001) as a lithic workshop with a surface scatter of 17 secondary and tertiary flakes, most of which were in the eastern portion of the site. The sites is characterized as described as having shallow, rocky soils with surface bedrock and broken limestone throughout the site. No shovel tests were excavated during that initial investigation. The site area is approximately 2,975 m^2 and was recorded in 1997 (THC 2019; TMD Geodatabase 2019).

Work Conducted

CAR revisited 41BR301 on November 13, 2018. The location seems to be correct given the site description and the site map. The site is east of a two-track road and fence line.

CAR walked eight transects (Figure 5-2). The site had been impacted in the recent past by tree clearing that limited surface visibility in the site center (Figure 5-3). The surface visibility ranged from 75 to 100 percent in the remaining portions of the site. CAR recorded four artifacts including a biface, a core, an edge modified flake, and a piece of fire-cracked rock (FCR). All but one was found on the eroded downslope of the site. CAR proposes that the boundary of 41BR301 be enlarged to include artifacts outside the current site boundary. CAR documented a similar surface condition as the 1977 survey with areas of exposed bedrock and rock soils and suggest that the site has little potential for subsurface deposits. The proposed site area increases to from 2,975 m^2 to 3,950 m^2. Figure 5-4 shows selected artifacts from 41BR301. No diagnostics were found at 41BR301. The site has a low density of artifacts at 0.001 artifacts per square meter.

CAR documented the site's vegetation recording juniper (*Juniperus ashei*), mountain laurel (*Sophora secundiflora*), agarita (*Mahonia trifolioata*), yucca (*Yucca* sp.), prickly pear (*Opuntia* sp.), beargrass (*Nolin texana*), and other grasses. Figure 5-5 shows a landscape view from 41BR301 to the southeast of the site.

Recommendations

During the reevaluation of 41BR301, CAR found four artifacts on the surface. CAR proposes that the boundary of 41BR301 be enlarged to 3,950 m^2 to capture these artifacts. CAR recommends that the site remain ineligible for inclusion to the NRHP or nomination as a SAL based on the lack of chronological potential, lack of a robust site assemblage, and lack of site integrity.

41BR394

Background

Site 41BR394 is located to the east of 41BR431 on an upland slope 30 m south of an intermittent drainage (see Figure 5-1). The soils consist of a shallow, silty, clay loam over sandstone and limestone bedrock. A flake and piece of lithic shatter were the only items noted (Wormser and Sullo-Prewitt 2001). The site area is approximately 5,085 m^2 and was recorded in 1994 (THC 2019; TMD Geodatabase 2019)

Work Conducted

CAR revisited the site on November 13, 2018. The location appeared to be correct based on the field map and site description. Fieldwork consisted of walking 10 transects spaced 10 m apart (Figure 5-6). Visibility ranged from 75 to 100 percent with bedrock exposed by erosion. CAR that suggest the site has little potential for subsurface deposits based on the exposed bedrock and shallow rocky soils. CAR documented one piece of FCR within the current site boundary. No diagnostics were found at 41BR394.

Redacted Image

Figure 5-1. Map showing the current TMD site locations and the area recommended for future survey over an USGS topographic map (10 ft. contour intervals).

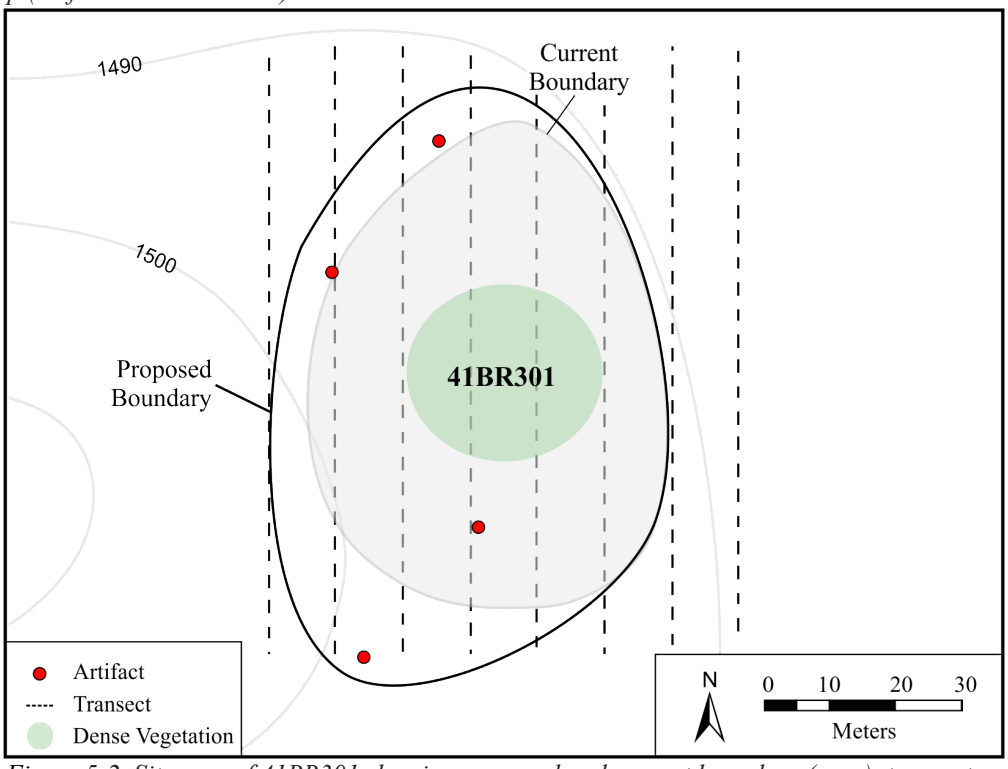

Figure 5-2. Site map of 41BR301 showing proposed and current boundary (gray), transects, and locations of artifacts over an USGS topographic map (10 ft. contour intervals). The center of the site was covered with felled trees and brush.

Figure 5-3. A view of 41BR301 showing felled trees and vegetation in the central portion of the site.

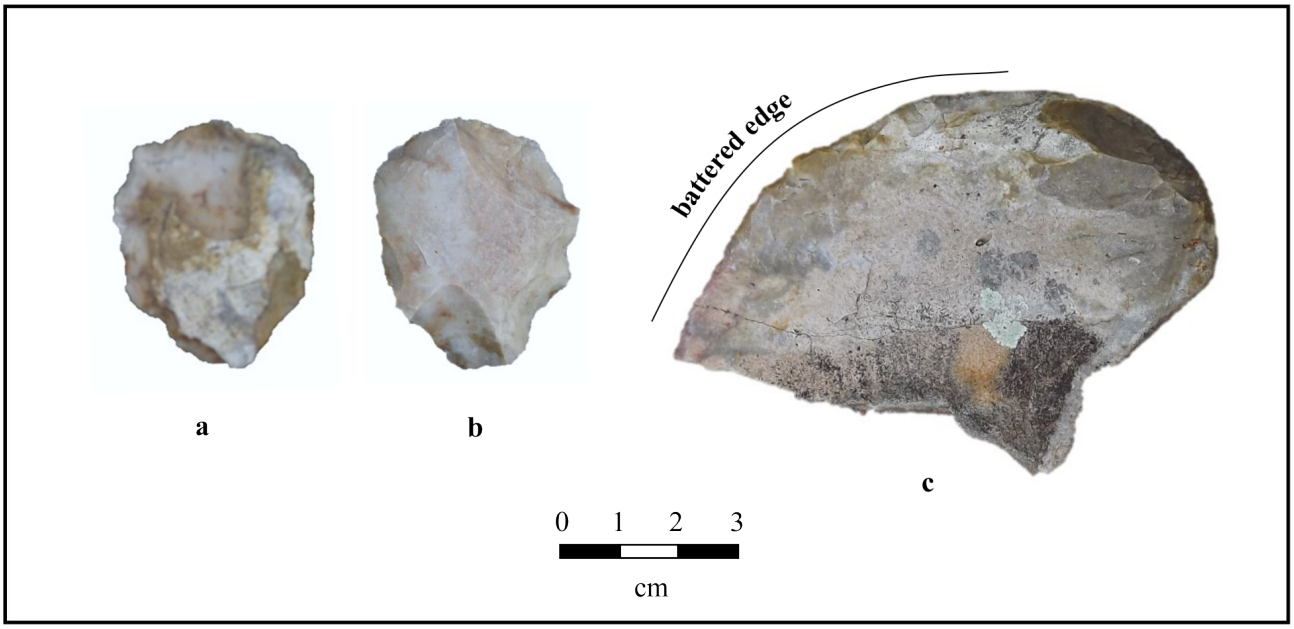

Figure 5-4. Selected artifacts from 41BR301 (not collected): a) biface, b) reverse of biface, and c) edge modified flake with a battered edge.

Figure 5-5. A view from 41BR301 showing the landscape to the southeast. In the foreground are clumps of beargrass that were observed in the southeast portion of the site.

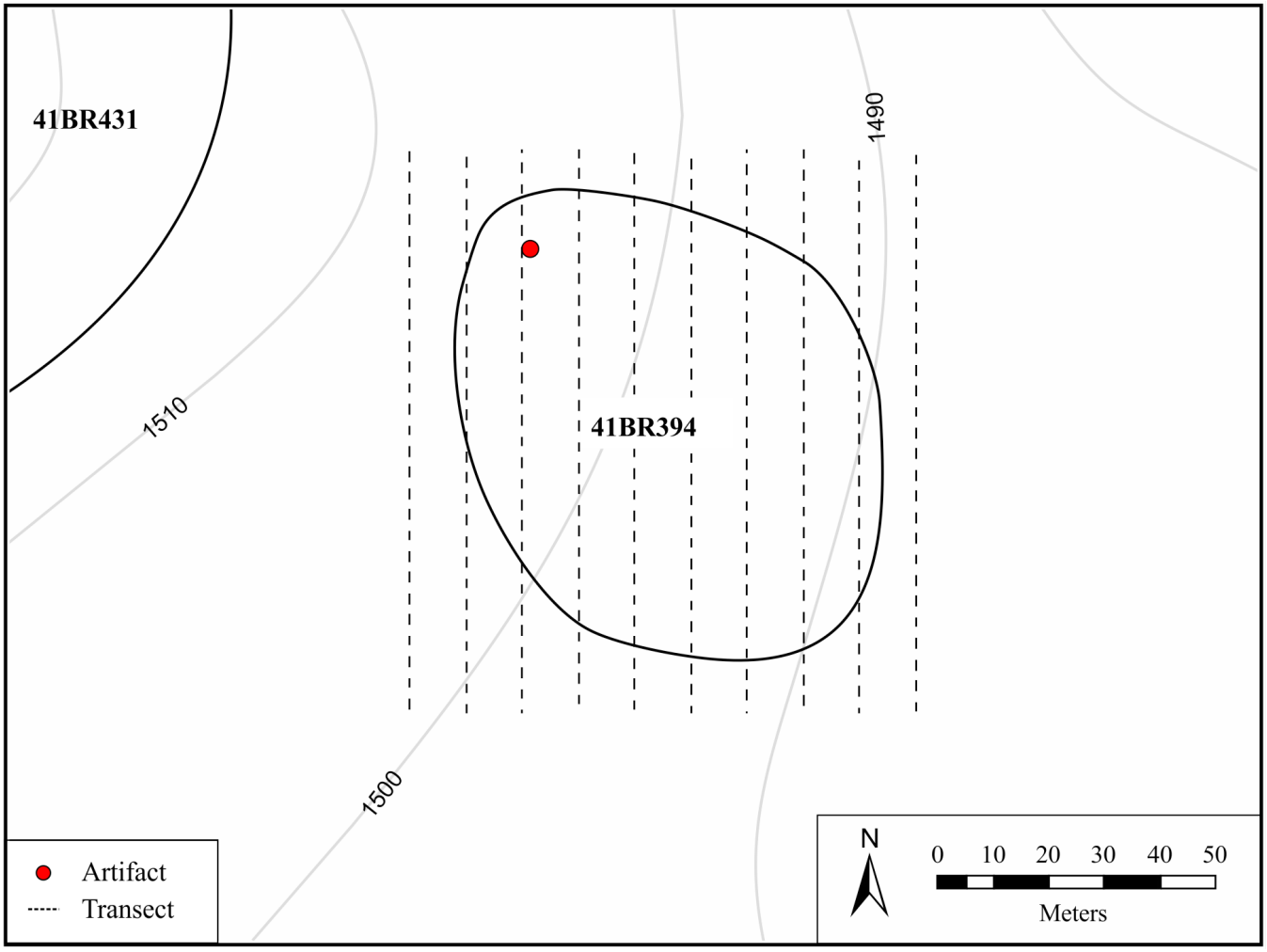

Figure 5-6. Original map of 41BR394 showing transects and the location of the single recorded artifact over an USGS topographic map (10 ft. contour intervals). The site boundary (black outline) remains unchanged.

The site is dominated by juniper, but it also contains live oak (*Quercus virginiana*), mountain laurel, yucca, beargrass, and other grasses (Figure 5-7). In addition, deer tracks were noted throughout the site. An intermittent drainage leading to Devil's River begins just north of site 41BR394.

Recommendations

During the reevaluation, CAR found one artifact on the surface. CAR recommends that current site boundary remains unchanged. CAR recommends that the site remains ineligible for inclusion to the NRHP or nomination as a SAL based on the lack of chronological potential, lack of a robust site assemblage, and lack of site integrity.

41BR410

Background

Site 41BR410 is located on a ridge overlooking the Devil's River (Figure 5-8; see Figure 5-1). An intermittent spring was observed south of the site during the initial survey (Wormser and Sullo-Prewitt 2001). Exposed bedrock and a conglomerate of cobbles were observed throughout the site with vegetation of juniper, agarita, tasajillo or Christmas cactus (*Cylinddropuntia leptocaulis*), other cacti, beargrass, and other grasses. A Middle Archaic point typed as a Nolan (Collins 2004) was found on the surface of the site. In addition to the point, a biface fragment, 27 pieces of debitage, 20 pieces of shatter, 2 cores, and a FCR were observed on the surface. The site as defined in the current TMD Geodatabase (2019) is 26,177 m^2 and was recorded in 1997 (THC 2019).

During the TCP study (Galindo 2014), 41BR410 was visited by SWCA archaeologists, the Mescalero Apache THPO Holly Houghton, and Apache Elders. They found that the location of the site had been incorrectly plotted, with the northern half of the site located in the floodplain below the ridge (Galindo 2014). They walked the ridge finding several lithic and FCR concentrations, as well as a spring and rock overhangs (Galindo 2014:144). Houghton recommended the expansion of 41BR410 to include the spring, and a reassessment of the site for inclusion into TCP 1 or the Apache Ethnographic Landscape after a controlled burn (see Galindo 2014). The

Figure 5-7. A view of site 41BR394 showing vegetation and exposed bedrock.

Figure 5-8. Top is a view to the northwest of site 41BR410. Bottom view is to the west of an intermittent stream that feeds into the Devil's River.

proposed boundary change was not adopted into the current TMD Geodatabase or the Texas Site Atlas (THC 2019).

Work Conducted

CAR revisited 41BR410 on November 15 and 16, 2018. CAR had initially planned to conduct the survey using east-to-west transects using the boundary in the current TMD database. CAR modified the original survey plan by recording the ridgeline that is defined as the eastern boundary of 41BR410 and conducted four transects spaced 10 to 15 m apart following the ridgeline (Figure 5-9).

CAR recorded six features with a Trimble GPS within the proposed site boundary of 41BR410. These are described moving from north to south (see Figure 5-9). Feature 1 consisted of 10 FCR. Feature 2 consisted of 10 pieces of FCR, one piece of debitage, and one core. Feature 3 was defined near the center of the site, and it contained at least 10 FCR and an edge modified flake. Figure 5-10 shows artifacts found near Feature 3.

As shown in Figure 5-9, Features 4 and 5 are located in the southern portion of the site. This location overlooks the Devil's River. Feature 4 consisted of 10 FCR and one piece of debitage. Feature 5 consisted of three pieces of debitage and 6 FCR. Feature 6 is on the southern flank of the site (Figure 5-9). It contained two cores, one edge modified flake, and 10 pieces of debitage.

In addition to the six features, 31 non-feature artifacts were found within the proposed site boundary. These artifacts include six pieces of debitage, six cores, and 19 pieces of FCR. Overall, 96 artifacts were recorded on 41BR410, resulting in a low artifact density of 0.004 artifacts per square meter. Site artifacts appeared to be in place and clustered suggesting a moderate level of site integrity.

CAR documented the site's vegetation noting that the southern portion of 41BR410 is dominated by grasses, while juniper is the dominate vegetation in the central and the northern portions (Figure 5-11). In addition, mountain laurel, yucca, bear grass, and other grasses were observed at the site. A view from the central portion of 41BR410 shows a

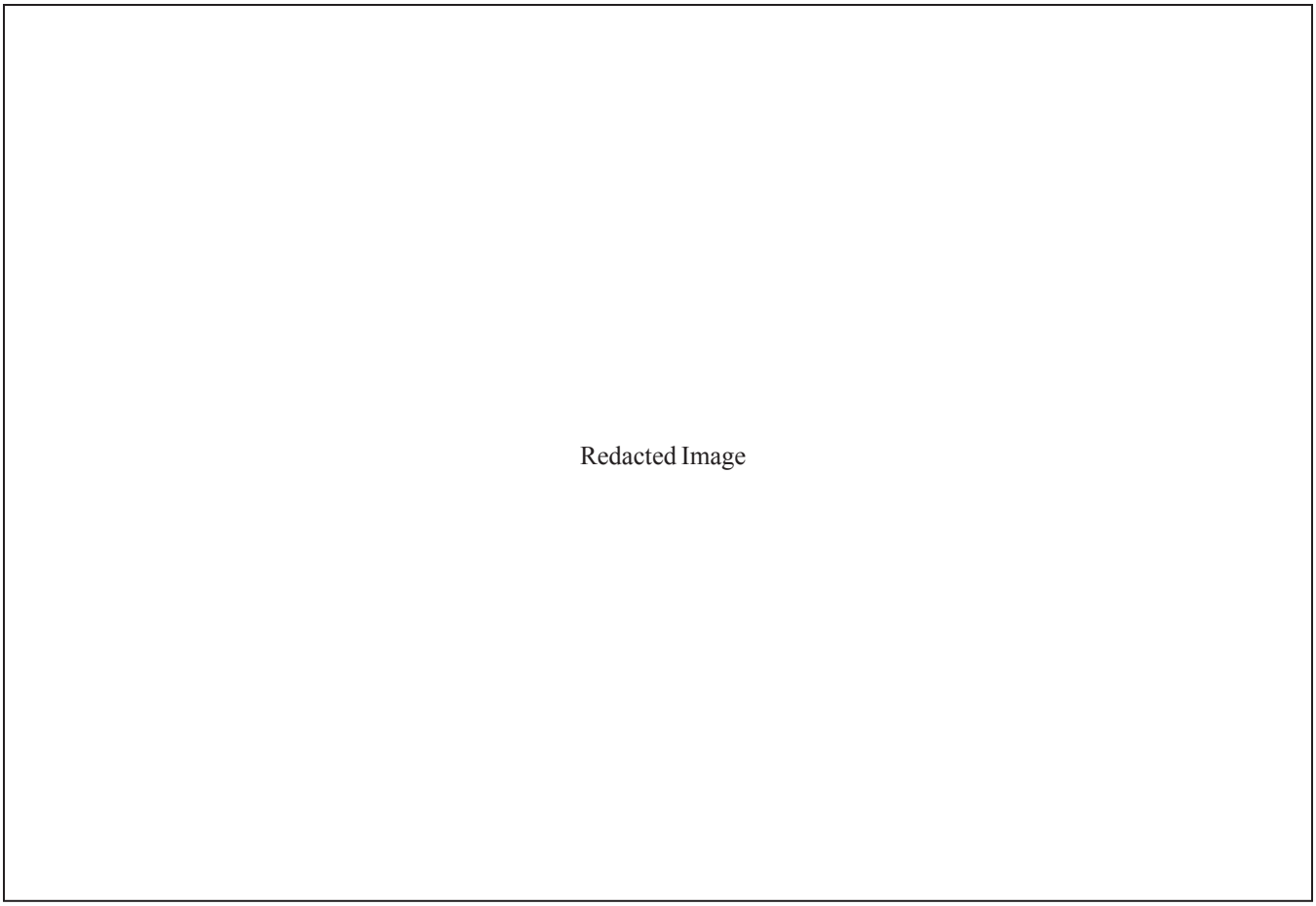

Figure 5-9. Proposed boundary of 41BR410 showing features (F) and the location of artifacts over an USGS topographic map (10 ft. contour intervals). Inset shows the original site map of 41BR410 (Wormser and Sullo-Prewitt 2001) and light gray shows the current boundary of 41BR410.

Figure 5-10. The typical artifact assemblage found at 41BR410. This image shows a core, a piece of debitage and a tested nodule found near Feature 3.

Figure 5-11. Site views of 41BR410 showing grasses that are dominant in the southern portion of the site, which created poor surface visibility (left). The view on the right shows juniper that dominates the central and northern portions of 41BR410. The exposed bedrock and the cobble surface in these portions created good to excellent surface visibility.

narrow valley to the east (Figure 5-12). A seep or spring was observed and recorded 250 m west of the proposed boundary of 41BR410. It flows into the intermittent drainage on the south side of the ridge and feeds into the Devil's River.

Figure 5-13 shows the conglomerate landform. During this survey, CAR collected 10 lithic nodules eroding from the cobble conglomerate. Six of these were quartzite. The remaining samples were identified as chert, although it appears to be of poor quality with multiple inclusions.

The proposed site 41BR410 boundary was defined by the GPS recorded ridgeline, the original site map, topographic map contours, features, and artifacts, reducing the site area to 21,500 m^2. This proposed boundary delineation conforms more to the original site map of Wormser and Sullo-Prewitt (2001) than to the current TMD site boundary. However, the extreme southern portion shown in the original site map was not captured likely due to the dense vegetation. There is little potential for subsurface deposits based on the exposed bedrock of the ridge and shallow, rocky soils. As referenced earlier, Houghton suggested that the site be resurveyed following a controlled burn that would allow for greater surface visibility (Galindo 2014). This procedure may capture that missing southern portion.

Recommendations

A Nolan point was found during the initial survey. However, no diagnostic artifacts were found during this survey. CAR found a similar surface assemblage as first reported in Wormser and Sullo-Prewitt (2001) and observed during the TCP study (Galindo 2014). Site 41BR410 is classified as a low artifact density site. The site artifacts appear not to have been displaced by erosion. This coupled with no occupational overprinting, as evidenced by low artifact density, suggests a moderate level of site integrity. CAR recommends further study at 41BR410 to determine its eligibility status to the NRHP and as a SAL.

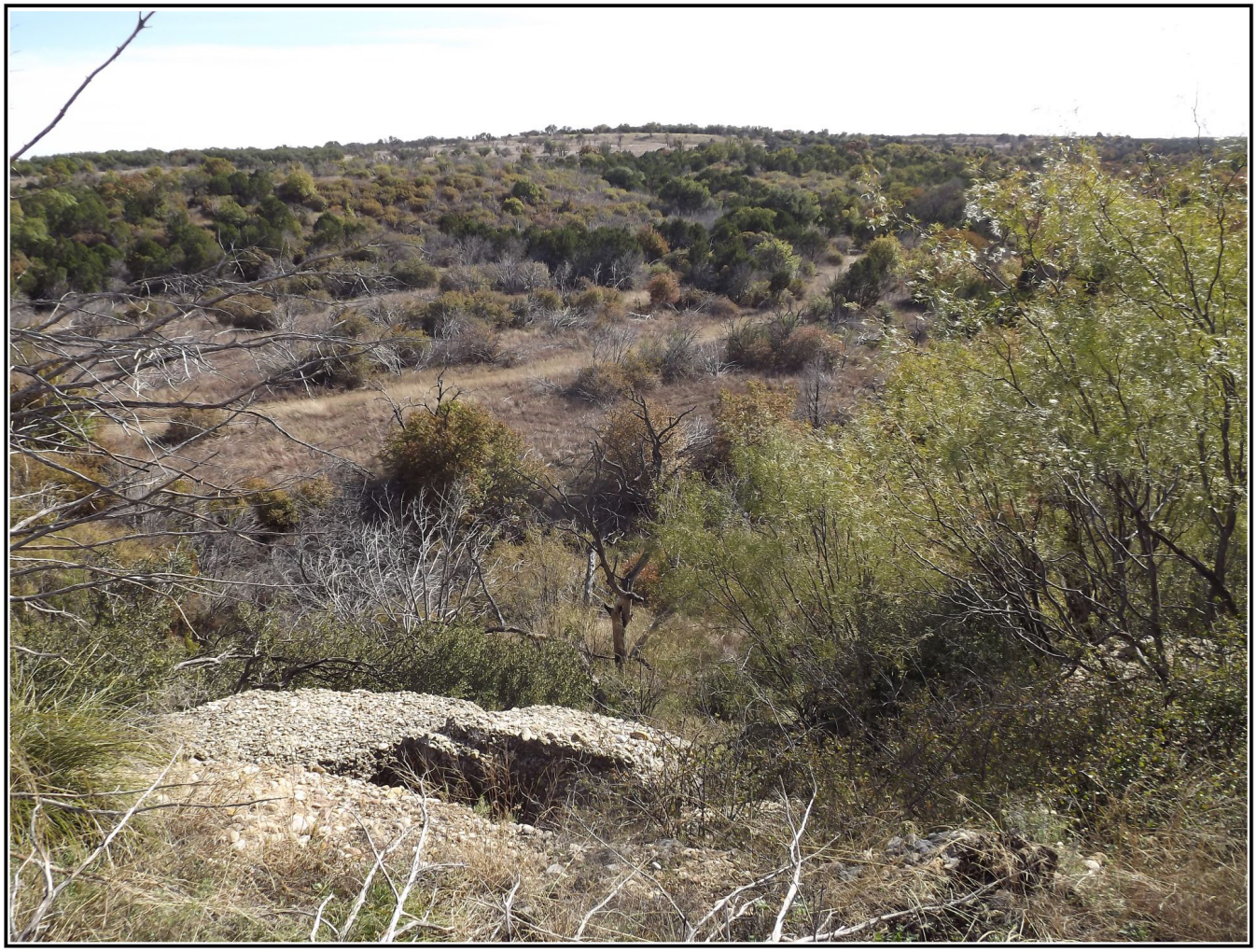

Figure 5-12. A view to the east from 41BR410. Exposed conglomerate of cobbles is in the foreground of the image.

Figure 5-13. Top image is a panoramic view to the northwest of the cobble conglomerate that forms the eastern boundary of the site near Features 1 and 2. The lower image shows embedded chert nodules in the limestone matrix with a dense scatter of eroded raw material on the surface.

41BR431

Background

Site 41BR431 is located 275 m southwest of TCP 1 on a knoll on an upland slope (see Figure 5-1). The soils are shallow loam over sandstone and limestone bedrock. Artifacts included a non-diagnostic point base, three pieces of debitage, and shatter (Wormser and Sullo-Prewitt 2001). The site area is approximately 5,447 m^2 and was recorded in 1995 (THC 2019; TMD Geodatabase 2019).

Work Conducted

CAR revisited the site on November 13, 2018. It appears to be accurately plotted based on the original site map and associated description. CAR walked nine transects and recorded one piece of debitage and one FCR (Figure 5-14). Its shares similar conditions as 41BR394 with exposed bedrock and shallow, rocky soils due to its proximity and topography. CAR suggests that the site has little potential for subsurface deposits. An abandoned stock pond was observed outside of the site immediately to the north. Visibility ranged from 50 to 100 percent with bedrock exposed by erosion noted in portions of the site.

Vegetation is the same as site 41BR394 with juniper, live oak, mountain laurel, yucca, prickly pear, and grasses (Figure 5-15). Both sites are near an intermittent water source, and both have good landscape views. Deer tracks were also observed in this area during the site visit.

Recommendations

During the reevaluation, CAR found two artifacts on the surface. CAR recommends that the site boundary remain unchanged. CAR recommends that site remain ineligible for inclusion to the NRHP based on the lack of chronological potential, poor site content, and lack of site integrity.

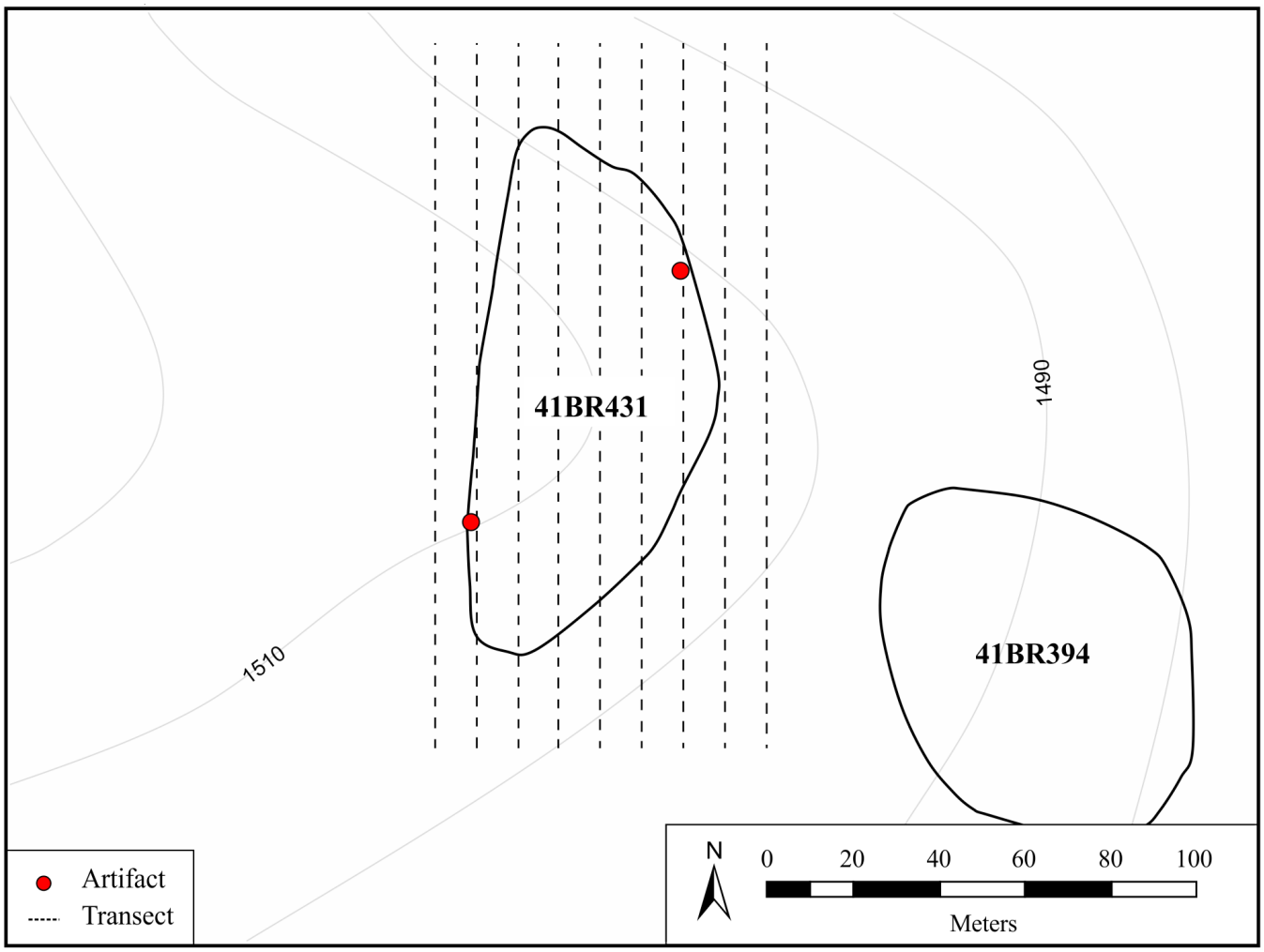

Figure 5-14. Site map of 41BR431 showing transects and the location of the two artifacts over an USGS topographic map (10 ft. contour intervals). The site boundary (black outline) remains unchanged.

Figure 5-15. A view of site 41BR431 showing vegetation.

41BR466

Background

Site 41BR466 is located on a south-facing slope (see Figure 5-1). Soils are described by Wormser and Sullo-Prewitt (2001) as shallow and rocky with vegetation of oak, juniper, and bluestem grasses (*Andropogon gerardii*). The site dates to the early Late Archaic based on a Bulverde point found on the surface (Collins 2004). In addition, the initial survey found a biface fragment, one tested cobble, 12 pieces of debitage, and lithic shatter on the surface (Wormser and Sullo-Prewitt 2001). No field map of 41BR466 can be located at present, and only the original topographic map serves as evidence of the site's location. The site area as defined by the map is 3,835 m^2 and was recorded in 1995 (THC 2019; TMD Geodatabase 2019).

Work Conducted

CAR revisited the site on November 13, 2018. The site and a large part of the survey area are situated on a limestone rise (Figure 5-16). This is where most of the artifacts were found. Surface visibility was excellent ranging from 75 to 100 percent.

CAR walked eight transects and recorded four features. The features were identified post fieldwork based on artifact density with data collected by a GPS (Figure 5-17). The distribution of artifacts coupled with the landform suggest that the location of the site is approximately 25 m to the west of the original site boundary (Figure 5-17). The site is larger than originally recorded with a proposed site area of approximately 6,000 m^2.

Feature 1 consists of one edge modified flake and at least 14 pieces of debitage. Feature 2 consists of two cores, eight pieces of debitage, and two FCR. Feature 3 consists of one core, one edge modified flake, at least 10 pieces of debitage, and 3 FCR. Feature 4 consists of one piece of debitage and four FCR.

Figure 5-18 shows selected artifacts recorded in the field by CAR. The site contained Edwards Plateau brown chert and a

Figure 5-16. A view of the southern portion of site 41BR466.

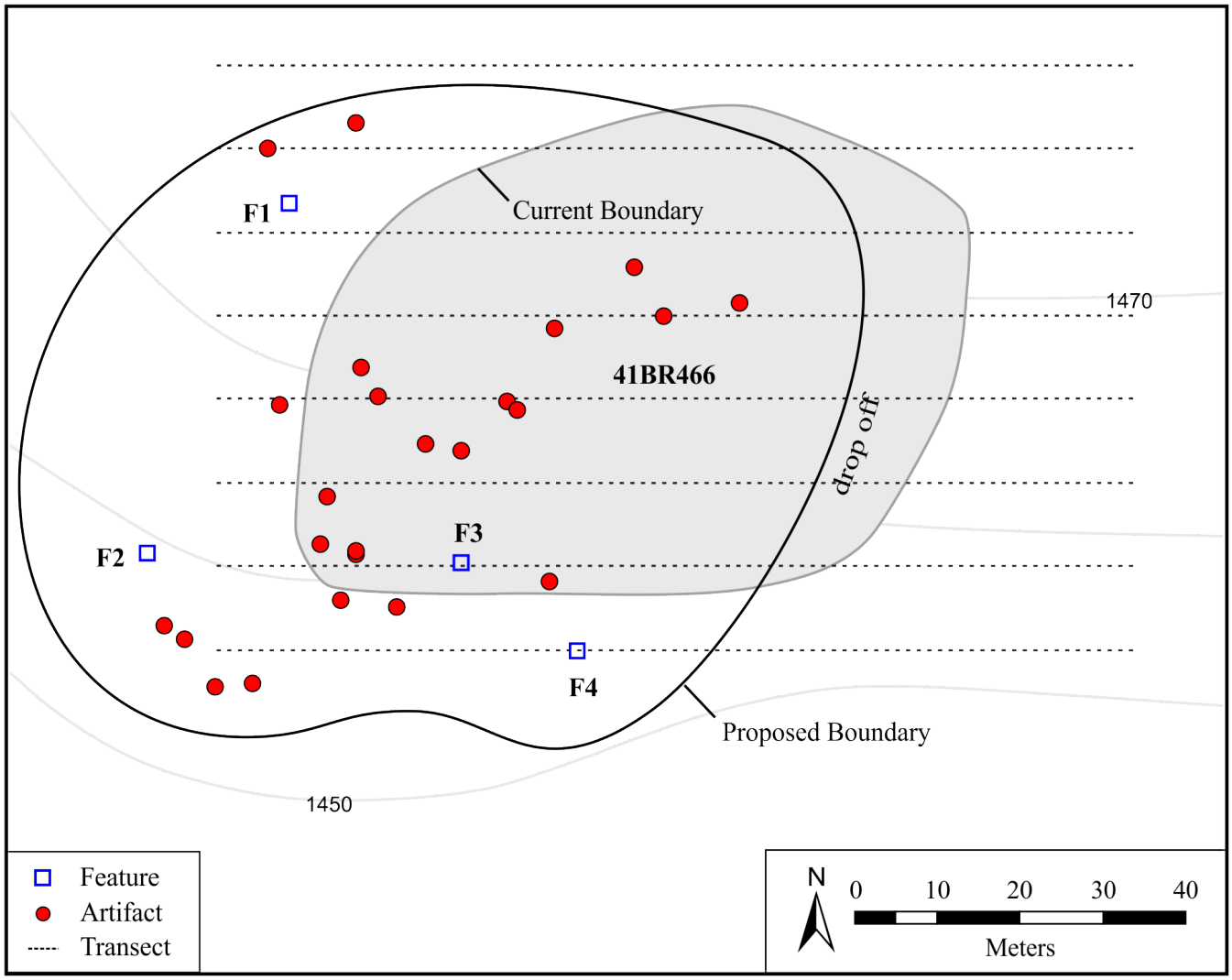

Figure 5-17. Site map of 41BR466 showing transects, features, and the location of artifacts over an USGS topographic map (10 ft. contour intervals).

banded chert identified as Alibates (Drs. Britt Bousman and Chris Lintz, personal communication 2019). The only known source for Alibates lies roughly 482 km to the northwest of the site in the Texas Panhandle. Thirty non-feature artifacts were also recorded, including two bifaces, five edge modified flakes, four cores, 12 pieces of debitage, and seven FCR. Overall, 70 artifacts were recorded on 41BR466, resulting in an artifact density of 0.01 artifacts per square meter. The clustering of artifacts at several locations suggests that the site may have moderate integrity. However, there is little potential for subsurface deposits based on the landform, exposed bedrock and shallow, rock soils.

The crew observed juniper, live oak, yucca, bear grass, and other grasses in and around the site. A view from the eastern portion of the site shows the landscape to the southeast (Figure 5-19).

Recommendations

Site 41BR466 is on a limestone rise overlooking a drainage running to the northeast. As a result of CAR's survey, the boundary of 41BR466 was enlarged and moved to incorporate the four lithic features. No diagnostics were found during this survey although a Late Archaic point was found during the initial survey (Wormser and Sullo-Prewitt 2001). The site has a low artifact density with all artifacts found on exposed bedrock and gravels found throughout the site. A portion of the artifacts are likely Alibates from the Texas Panhandle, a non-local lithic material, which may suggest interactions through trade or the presence of groups from that region. Site 41BR466 may have a moderate level of integrity due in part to the low density of artifacts, suggesting overprinting by multiple occupations has not occurred, though the exposed bedrock and gravels suggest the possibility of erosion. While the site integrity may be

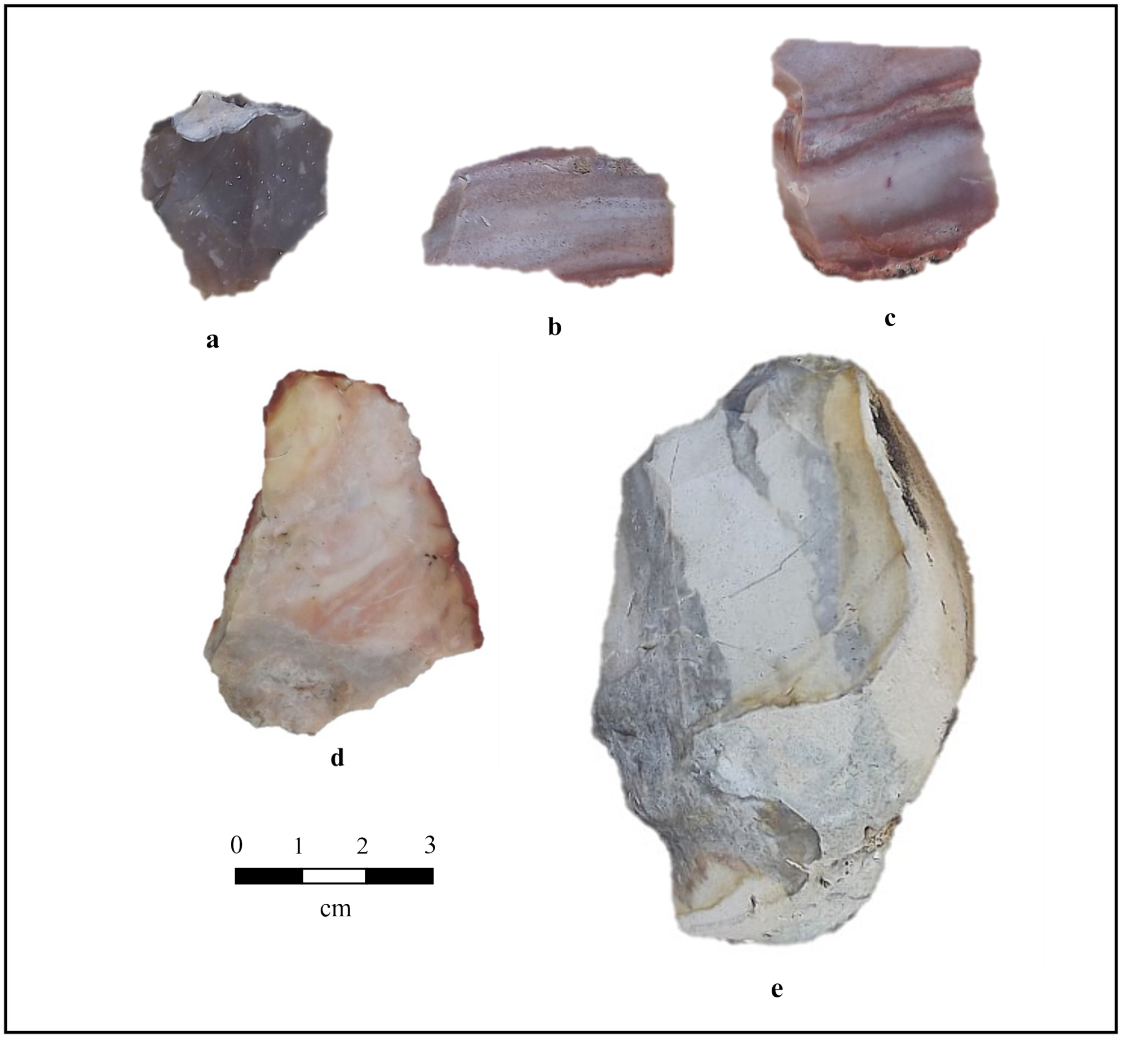

Figure 5-18. Selected artifacts from 41BR466 (not collected). The top left item, artifact a, appears to be Edwards Plateau chert, while artifacts b, c, and d are identified as Alibates from the Texas Panhandle. Artifact e resembles silicified caliche that is also found in the Texas Panhandle (Dr. Chris Lintz, personal communication 2019).

Figure 5-19. A panoramic view from the east side of 41BR466 showing the landscape to the east.

compromised, given the presence of a Late Archaic point and what appears to be non-local tool stone, CAR recommends further study of 41BR466 to determine its eligibility status to the NRHP and nomination as a SAL.

Grid Survey of 41BR269 and 41BR400

Background

Site 41BR269 is located on a flat ridge just to the east of TCP 1 (see Figure 5-1). The site was recorded in 1995 and is approximately 12,985 m^2 (THC 2019). Vegetation includes grasses, mesquite, juniper, and prickly pear. The site was described as a lithic scatter (Wormser and Sullo-Prewitt 2001:70). Temporal diagnostics included a drill from a reworked Bulverde point, a Pedernales point, and a Fresno point, types that date both to the Late Archaic and the Late Prehistoric periods (Wormser and Sullo-Prewitt 2001:70). In addition to the points, 141 artifacts were recorded including a non-diagnostic dart point fragment, biface fragments, a bifacial core, edge modified flakes, debitage, a mano fragment, and burned rock and cobbles were observed on the surface (Wormser and Sullo-Prewitt 2001:Table 18). Three shovel tests were excavated with two pieces of debitage found in two of the shovel tests. However, all the shovel tests were terminated before attaining a depth of 10 cm due to the presence of gravels and/or bedrock (Wormser and Sullo-Prewitt 2001:71).

Site 41BR400 is described as located on a bench on the east side of a hill (see Figure 5-1). The plotting of this site overlaps with 41BR269 (Wormser and Sullo-Prewitt 2001:89). It was recorded in 1994 and is approximately 2,879 m^2 (THC 2019). The soils are a shallow, sandy loam over sandstone bedrock. Wormser and Sullo-Prewitt (2001:Table 29) describe the highly eroded site as a lithic workshop with a uniface, five chert cores, and flakes observed on the surface. Historic artifacts were also observed and included a clear glass fragment, a porcelain ceramic fragment, and a fragment from a porcelain figurine (Wormser and Sullo-Prewitt 2001:89).

Work Conducted

CAR conducted the survey of the area containing sites 41BR269 and 41BR400 on November 14 and 15, 2018. The survey area is located on a flat rise with sharp drop-offs to the east, west, and south. In general, surface visibility was excellent to poor with the central portion of the survey grid covered in prickly pear, mesquite, and grasses, which affected surface visibility and, thus, site boundaries. As discussed in the previous chapter, CAR archaeologists walked a line of 10-x-10 m cells and recorded all cultural artifacts and features within an individual cell on a Juno GPS. In addition, any natural feature or vegetation of interest was recorded. Individual crew members were given paper maps of the grid to make notes. Based on field observation of artifacts and features, CAR redefined the two sites boundaries within the survey grid (Figure 5-20). Fourteen non-site artifacts were found in the northern portion of the survey grid, including a biface, an edge modified flake, a core, 10 pieces of debitage, and a single piece of FCR.

41BR269

The current survey found two lithic scatters, Features 1 and 2, in the east central portion of the site. Both features

contained at least five artifacts within the 10-x-10 m cell. Other artifacts associated with the site are four pieces of debitage and two pieces of FCR. No diagnostics were found during the current survey.

The proposed site definition reduces the boundary area of 41BR269 to 2,500 m^2. This reduction may be due in part to the heavy ground cover of prickly pear, mesquite, and grasses that obscured the ground surface in roughly 40 percent of the survey grid (Figure 5-21). In total, 16 artifacts were recorded on 41BR269 or a density of 0.007 artifacts per square meter. Site artifacts appeared to be in place (not eroded) and suggest a moderate level of site integrity.

41BR400

The current survey defined two features as lithic scatters in the western portion of the grid. Feature 1 contained five pieces of debitage and four pieces of FCR. Feature 2 contained 20 pieces of debitage. In addition to these features, CAR recorded 18 non-feature artifacts including a biface, two cores, one edge modified tool, four pieces of debitage, and five pieces of FCR. The edge modified flake (Figure 5-22, b) is a banded-chert similar to the Alibates material referenced in the discussion of 41BR466. No historic artifacts were observed during this survey. The proposed site definition enlarges 41BR400 to 6,200 m^2. Artifact density is classified as low with 0.007 artifacts per

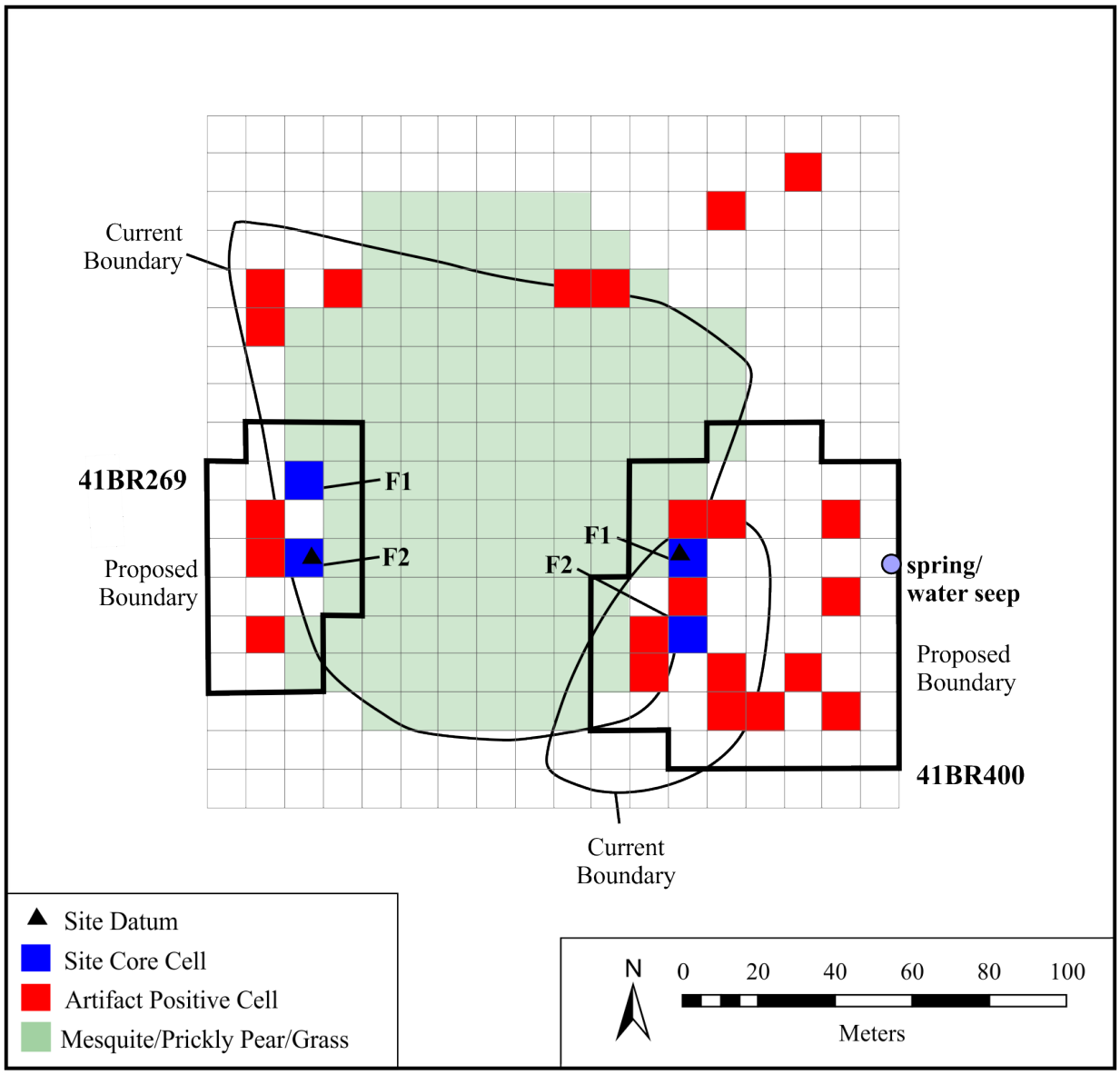

Figure 5-20. Current and proposed site boundaries of 41BR269 and 41BR400. The light green area in the central portion of the grid is heavily overgrown with prickly pear, mesquite, and tall grasses. A spring or water seep was observed on the eastern portion of the survey area.

Figure 5-21. A view of the dense vegetation found in the survey area.

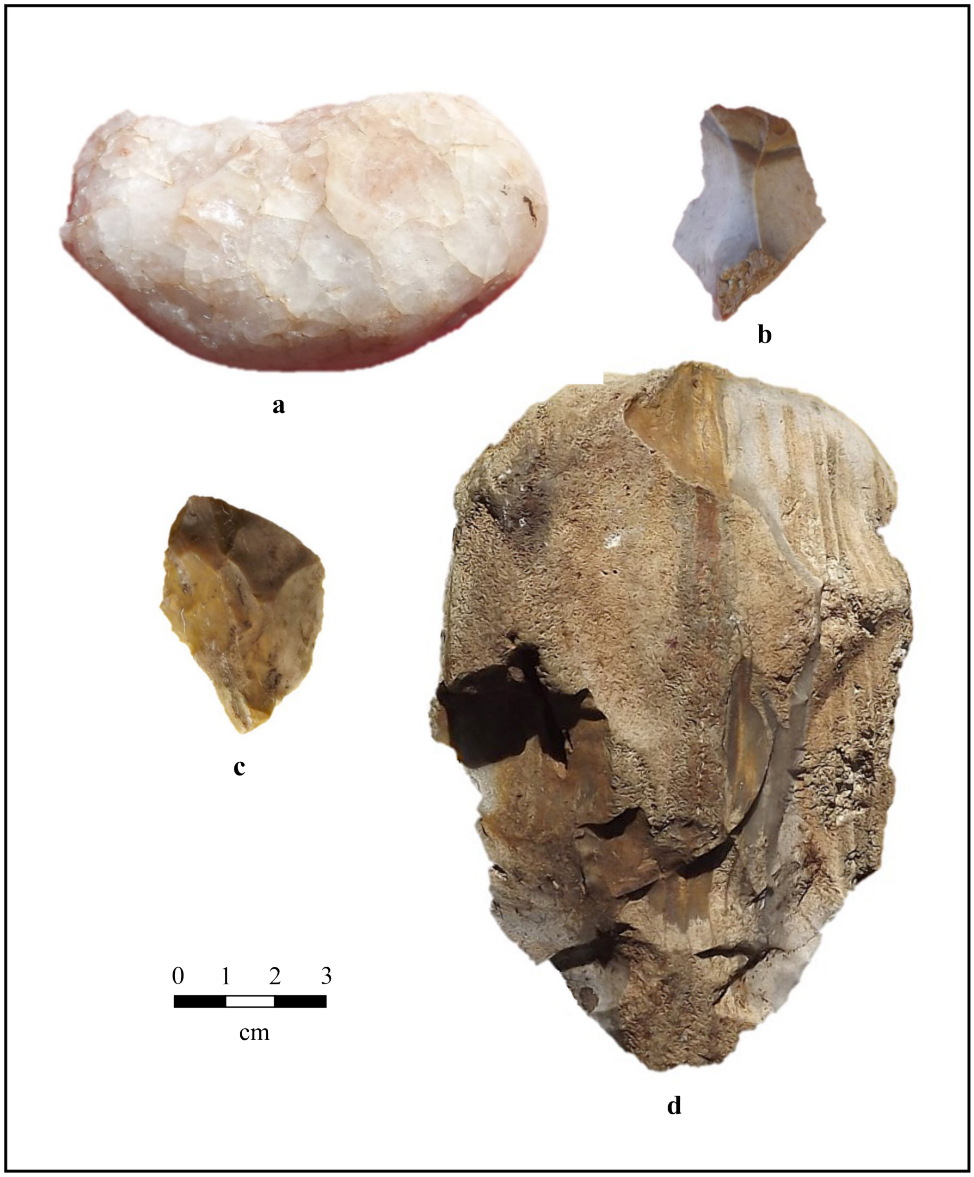

Figure 5-22. Selected artifacts from 41BR400 (not collected): a) worked quartzite nodule, b) a banded-chert edge modified flake, c) biface, and d) core tool (chopper).

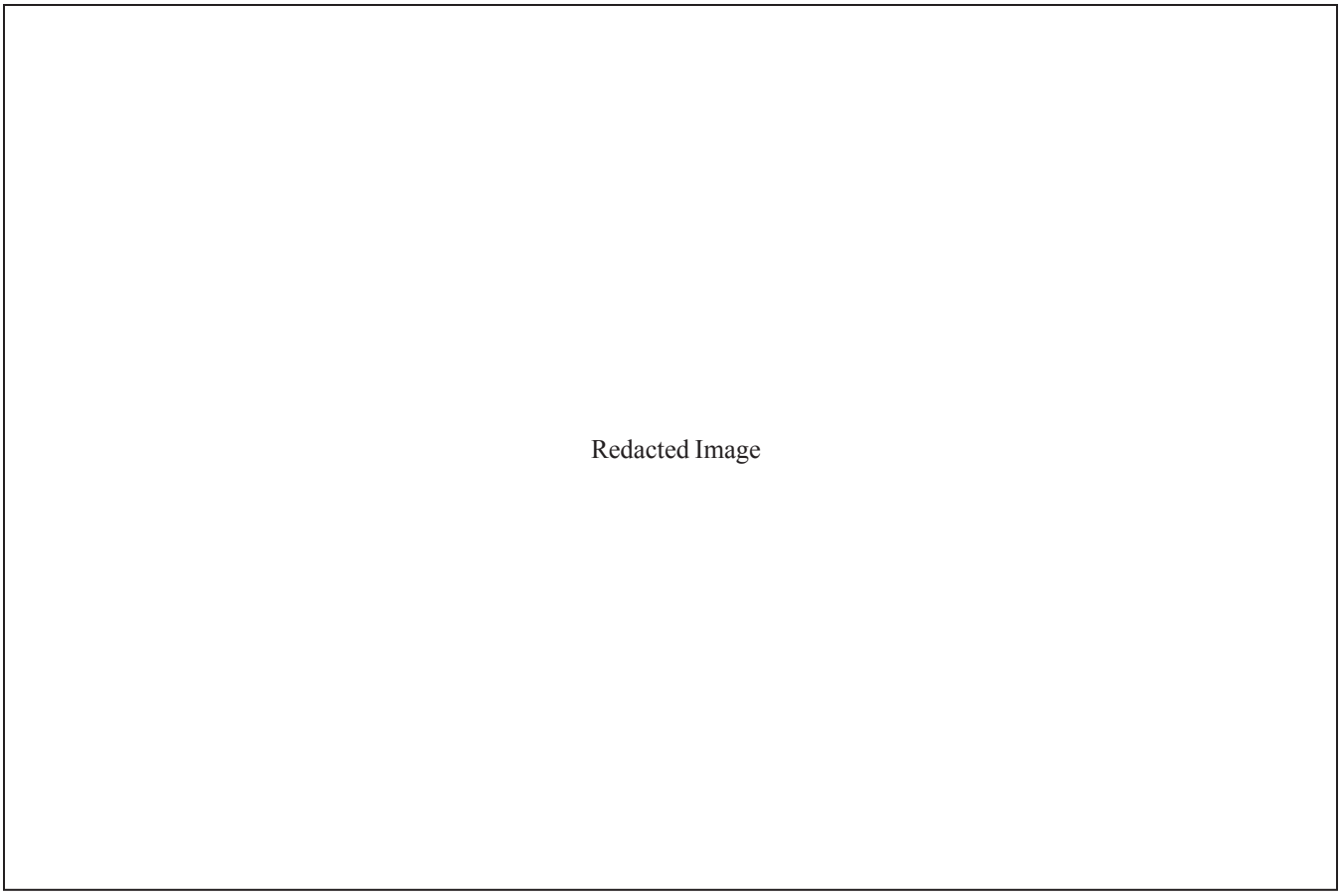

Figure 5-23. The area of interest based on the findings of two lithic scatters and a point found east of 41BR410 over an USGS topographic map (10 ft. contour intervals).

Figure 5-24. A Pedernales-like point found near the area of interest shown in Figure 5-23.

square meter. Site artifacts are present in several clusters. This suggests a moderate level of site integrity.

Recommendations

During the current survey, the boundaries of 41BR269 and 41BR400 were redefined with the proposed boundaries shown in Figure 5-20. The boundary of 41BR269 was reduced from 12,985 m^2 to 2,500 m^2, while that of 41BR400 was increased from 2,879 m^2 to 6,200 m^2. In part, the decrease in size of 41BR269 may be due to heavy vegetation that reduced surface visibility.

No diagnostic artifacts were found during this survey on either site, although the initial survey recorded three diagnostic points on 41BR269. Both 41BR269 and 41BR400 contained a low density of artifacts. The sites shared the same landform and appear to have a moderate level of site integrity, as artifacts did not appear to be displaced by erosion. Both sites has large areas of exposed bedrock with soils described as shallow and rocky. Due to these characteristics coupled with the upland landform there is little potential for subsurface deposits. CAR recommends that 41BR269 and 41BR400 are not eligible for inclusion to the NRHP or nomination as a SAL due to the lack of robust site assemblages.

Additional Observations

Two lithic scatters were found on the surface approximately 140 and 230 m east of the proposed boundary of 41BR410 (Figure 5-23). The west scatter consists of five pieces of debitage and a core within a 10 m radius. The east scatter consists of two pieces of debitage and three FCR. These features fit CAR's definition of an archaeological site. In addition, a Pedernales-like point (Figure 5-24) was found and collected 30 m west of the western lithic scatter. Pedernales points date to the early portion of the Late Archaic period (Collins 2004). The scatters and point are located outside of any currently defined sites. The area was heavily overgrown with juniper and brush. It also contained an active drainage.

Summary

CAR revisited seven previously recorded archaeological sites on Camp Bowie. Table 5-1 summarizes the results of this investigation including any boundary changes, chronological potential, site content, and site integrity. CAR surveyed approximately 50, 680 m^2 or 12.5 acres. The last three attributes were used by CAR to formulate its recommendation as to whether the site is eligible to the NRHP or nomination as a SAL. In addition, CAR identified an area of interest containing two lithic scatters and a Pedernales-like point just to the east of site 41BR410. CAR was unable to survey the area and suggests that the area should be surveyed in the future.

Table 5-1. Summary of Archaeological Sites and NRHP/SAL Eligibility Recommendations

Site Number	Site Size (m^2)		Chronological Potential		Site Content		Site Integrity	Recommendations
	Current Size	Revised Size	Temporal Diagnostics	^{14}C Potential	Feature Count	Surface Artifact Density	Estimate	SAL and NRHP Eligible
41BR269	12,985	2,500	Yes*	None	2	Low	Moderate	Not eligible
41BR301	2,975	3,950	None	None	0	Low	Low	Not eligible
41BR394	5,085	No change	None	None	0	Low	Low	Not eligible
41BR400	2,879	6,200	None	None	2	Low	Moderate	Not eligible
41BR410	26,177	21,500	Yes*	None	6	Low	Moderate	Further study
41BR431	5,447	No change	None	None	0	Low	Moderate	Not eligible
41BR466	3,835	6,000	Yes*	None	4	Low	Moderate	Further study

*diagnostic artifacts recorded in Wormser and Sullo-Prewitt 2001

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Chapter 6: TCP Considerations

In 2014, the TMD, in consultation with the Comanche THPO, the Mescalero Apache THPO, and Elders of the Comanche Nation and the Mescalero Apache Tribe, created six TCPs and one Apache Ethnographic Landscape. One attribute used in 2014 to define a TCP was the availability of natural resources (vegetation, access to water, lithic resources, etc.) potentially used by Native groups (Galindo 2014). During this investigation, CAR crew members recorded observations of natural resources, availability of water, the presence of materials for tool manufacture, and landscape views that may be of some utility in any future TCP investigation.

The CAR survey was conducted in late fall, a period of the year when few plants were in bloom. CAR observed that all of the seven sites shared similar vegetation due to their proximity to each other and their elevation. The current survey found juniper, mesquite, yucca, prickly pear and other cacti, bear grass, and other grasses. All these plants were commented on by both the Comanche and the Mescalero as part of a suite of plants exploited for sustenance, medicinal, and utilitarian needs (Galindo 2014). Flowering plants noted in the TCP report were not observed during this survey because it was conducted during the late fall. CAR suggests that subsequent TCP studies or visits should occur at different times of the year to record the seasonal availability of other plants.

A similar consideration relates to the availability of water. At the time of this survey, all seven sites were found adjacent to or near active water sources. Water is a critical resource, and the seasonal or yearly availability will have implications for occupation patterns within Camp Bowie. Similar to the plant suggestion, CAR suggests that subsequent TCP studies or visits should occur at different times of the year to record the seasonal availability of water.

All the sites were characterized by the presence of lithics and/or FCR, with 41BR394 and 41BR431 containing a low frequency of artifacts. Interestingly, 41BR466 contained artifacts that are probably from the Texas Panhandle roughly 482 km to the northwest. The presence of this material may represent trade with other groups or reflect mobility from the Panhandle to this portion of Texas. Only one site, 41BR410, contained local stone material. Chert and quartzite nodules, found in a conglomerate layer, formed the ridgeline and the eastern boundary of 41BR410. This local source of lithic material certainly would have been used by Native Americans. CAR suggests that subsequent TCP studies or visits first examine geologic maps to determine if potential lithic sources are present followed by ground testing in those areas to determine if this material is present.

The landform and viewscape of the sites would have also been of interest to Native Americans. The majority of the sites (n=6) are on rises. Site 41BR466 sits on a distinctive limestone rise with voids that formed crevices. Sites 41BR269 and 41BR400 are on a large rise at 460 m (1,509 ft) above mean sea level. The largest of the seven sites, 41BR410, is on a ridge with a commanding view of the Devil's River Valley. CAR suggests that for subsequent TCP studies or visits TMD prepare GIS spatial analysis of the base topography to assist in locating landforms, features, and viewscapes of interest to Native Americans.

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Chapter 7: Project Summary and Recommendations

In 2014, TMD, in consultation with the Comanche and the Mescalero Apache THPOs and Elders, created six TCPs and one Apache Ethnographic Landscape on Camp Bowie. In addition, further work was recommended in an area containing 18 archaeological sites to determine if these sites have a Comanche and/or an Apache component. The TMD follows federal regulations as mandated by the NHPA (as amended), which, under Sections 110 and 106, requires identification of cultural resources and consultation with interested parties, prior to any federal undertaking (NHPA 1966). In response to a request from the TMD Cultural Resource Manager, CAR reevaluated seven of those 18 sites from November 13-16, 2018. These sites are 41BR269, 41BR301, 41BR394, 41BR400, 41BR410, 41BR431, and 41BR466. The goals of the CAR project were to relocate the seven sites, assess their location using GPS, and update site documentation, including assemblage level data and site boundary changes. Site revisit forms and revised boundary shapefiles were submitted to the TMD and THC, and CAR subsequently used this updated information to reconsider National Register of Historic Places (NRHP) and State Archeological Landmark (SAL) recommendations.

CAR recommends that the boundaries of two sites (41BR394, 41BR431) remain unchanged. CAR proposes new site boundaries for five sites (41BR269, 41BR301, 41BR400, 41BR410, and 41BR466) based on the distribution of artifacts and features. CAR recommends that five sites remain ineligible for inclusion to the NRHP or nomination as SALs based on the lack of temporal diagnostics, low artifact density, and low site integrity. These sites are 41BR269, 41BR301, 41BR394, 41BR400, and 41BR431. Two sites, 41BR410 and 41BR466, may warrant additional investigation in part due to lithic resources found during the current survey. Site 41BR410 appears to be a source for local lithic material and 41BR466 contained Alibate chert, a non-local lithic material. The two sites may have the potential to address questions concerning the use of local versus non-local lithic material, as well as questions of mobility and trade. CAR recommends that additional investigations, perhaps including intensive surface observations, be initiated to assess NRHP and SAL eligibility for sites 41BR410 and 41BR466. Finally, two lithic scatters and an isolated projectile point were found east of 41BR410. These features fit CAR's definition of an archaeological site. CAR suggests the area encompassing these finds should be systematically surveyed at some point in the future. The THC agreed with these recommendations.

Note that in standard archaeological projects, the work is scoped out, contracted, and completed with draft reports sent out to the relevant tribal historic preservation offices for their comment and review. The original intention of this project was to go well beyond that level of tribal participation. TMD's intent was to have representatives from both the Mescalero and Comanche join the CAR-UTSA field crews in these investigations. The exchange of ideas and methodology is an important step in not only building a better understanding of the past, but also allowing tribal cultural specialists and archaeologists to work and communicate together on an investigation. However, as often happens in the scheduling and project management world, administrative and time constraints intervened. This project went forward with a "standard" archaeological methodology and framework. While incorporating the TCP study was a part of the fieldwork strategy, the project unfortunately lacked tribal expertise in the field. While these results will go to the Tribal Historic Preservation Offices for their comment, the original hope was to be more inclusive. TMD will make sure the recommendations to conduct further work on sites and the area of interest are conducted with tribal and archaeology teams to explore and develop a Best Management Practices approach to investigating archaeological sites within or part of Traditional Cultural Properties (TCPs). Based on the recommendations for further work, TMD will develop a project to include tribal and archaeological professionals to explore how fieldwork can be conducted collaboratively with innovative methods and inclusive investigations. For the time being, TMD will continue to follow the recommendations for management of the sites identified in the 2013 TCP report and will incorporate the boundary adjustments and recommendations for further work from this project.

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