The Colorado Wickiup Project

Volume IV: Recordation and Re-evaluation of Twenty-seven Aboriginal Wooden Feature Sites in Garfield, Mesa, Moffat and Rio Blanco Counties, Colorado

Completed for
The Colorado Historical Society
State Historical Fund
and
Bureau of Land Management

DARG Dominquez Archaeological Research Group

A consortium for cultural resources
research, preservation and education
in the northern Colorado Plateau

The Colorado Wickiup Project
Volume IV

Part I: Recordation and Re-evaluation of Twenty-seven Aboriginal Wooden Feature Sites in Garfield, Mesa, Moffat and Rio Blanco Counties, Colorado

Part II: Ute Culture History and an Assessment of NRHP Eligibility for the Yellow Creek Archaeological District

Completed for
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Prepared by
Curtis Martin, Principal Investigator
and
Richard Ott, Project Coordinator
with contributions by
Nicole Darnell, GIS Specialist and James C. Miller, Research Director

Dominquez Archaeological Research Group
P. O. Box 3543
Grand Junction, Colorado 81503
Cultural Resource Use Permit No. C-67009

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The Colorado Historical Society
Office of Archaeology and Historic Preservation
1300 Broadway
Denver, Colorado 80203
and
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Colorado State Office
2850 Youngfield
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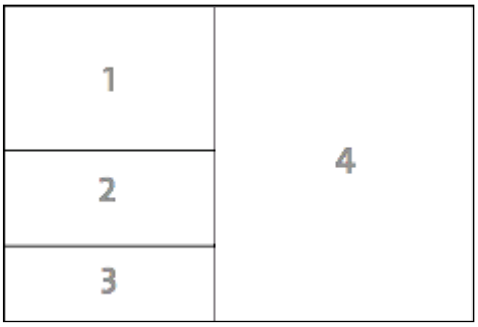

Front Cover:

1. Site 5RB563, Ute Hunters' Camp. View of apparent door-flap anchors for a canvas wall tent (Feature 6). Pin flags mark locations of spent cartridge primers and other metal and glass artifacts. A sandstone netherstone or "cutting board" can be seen left of the feature. Photo 5RB_563-d_8-9.

2. 5RB563, Ute Hunters' Camp. Iron leather working or bullet reloading punches and awls found at Feature 6 (Specimens 22, 13, and 19 – top to bottom). Item on right is a tightly rolled band of decorative brass or bronze with the remnants of a hole cut in one end (Specimen 15).

3. 5RB563, Ute Hunters' Camp. Decorative bands of brass or bronze found at Feature 6 (Specimens 10 and 16 – top row, and 4 and 54 – bottom row).

4. Site 5RB18, Two Tall Pole Wickiup Village. A partially collapsed leaner wickiup (Feature 1) and one of the best preserved aboriginal wooden structures in the state. One of the feature poles on the left produced a dendrochronological cutting date of fall/winter 1915/1916. Photo 5RB_18-d_3-8.

Abstract

The Colorado Wickiup Project (CWP) is a comprehensive effort to document aboriginal wooden structures and features known to exist in significant numbers in Colorado. In 2007, as Phase IV of the project, Dominquez Archaeological Research Group (DARG) research associates recorded and compiled data from 27 sites and one isolated find in Garfield, Mesa, Moffat and Rio Blanco Counties. Two additional previously recorded sites in Rio Blanco County were searched for but could not be located. The scope of the recorded sites ranged from single structures to villages containing up to 14 wooden features. A total of 92 wooden structures and other wooden features were recorded. The primary goal of Phase IV was to evaluate selected aboriginal wooden feature sites in the Yellow Creek drainage in Rio Blanco County to aid in the assessment of the area's potential eligibility for nomination to the National Register of Historic Places as an archaeological district, multiple property, or other designation. Fourteen sites in the CWP's Yellow Creek Study Area were re-visited and 70 aboriginal wooden features were recorded. The discussion of findings in this report includes an overview of the Colorado Wickiup Project results to date, descriptions and evaluations of all aboriginal wooden feature sites recorded in 2007, a discussion of National Register potential for the Yellow Creek study area, and recommendations for future research and management of aboriginal wooden feature sites.

Wooden feature types new to the CWP were identified among these sites, as were newly recognized patterns regarding feature interrelationships: canvas wall tent locations, apparent leaner-style and freestanding tipis, and firewood piles paired with hearths. New categories of trade goods were also encountered including bullet reloading materials, apparent leather working tools, mirror fragments, a variety of items of personal clothing and adornment, and expedient tools fashioned from scraps of metal. In response to these findings, recording protocols were once again refined and the Aboriginal Wooden Feature Component Form has been adapted to facilitate the recording of these new data types in the future.

Partial funding for this project (for recording sites in the Yellow Creek study area) was provided by the Colorado Historical Society State Historical Fund (Project # 2008-M1-25). Additional funding was provided by the Bureau of Land Management (Assistance Agreement No. 1422CA300007).

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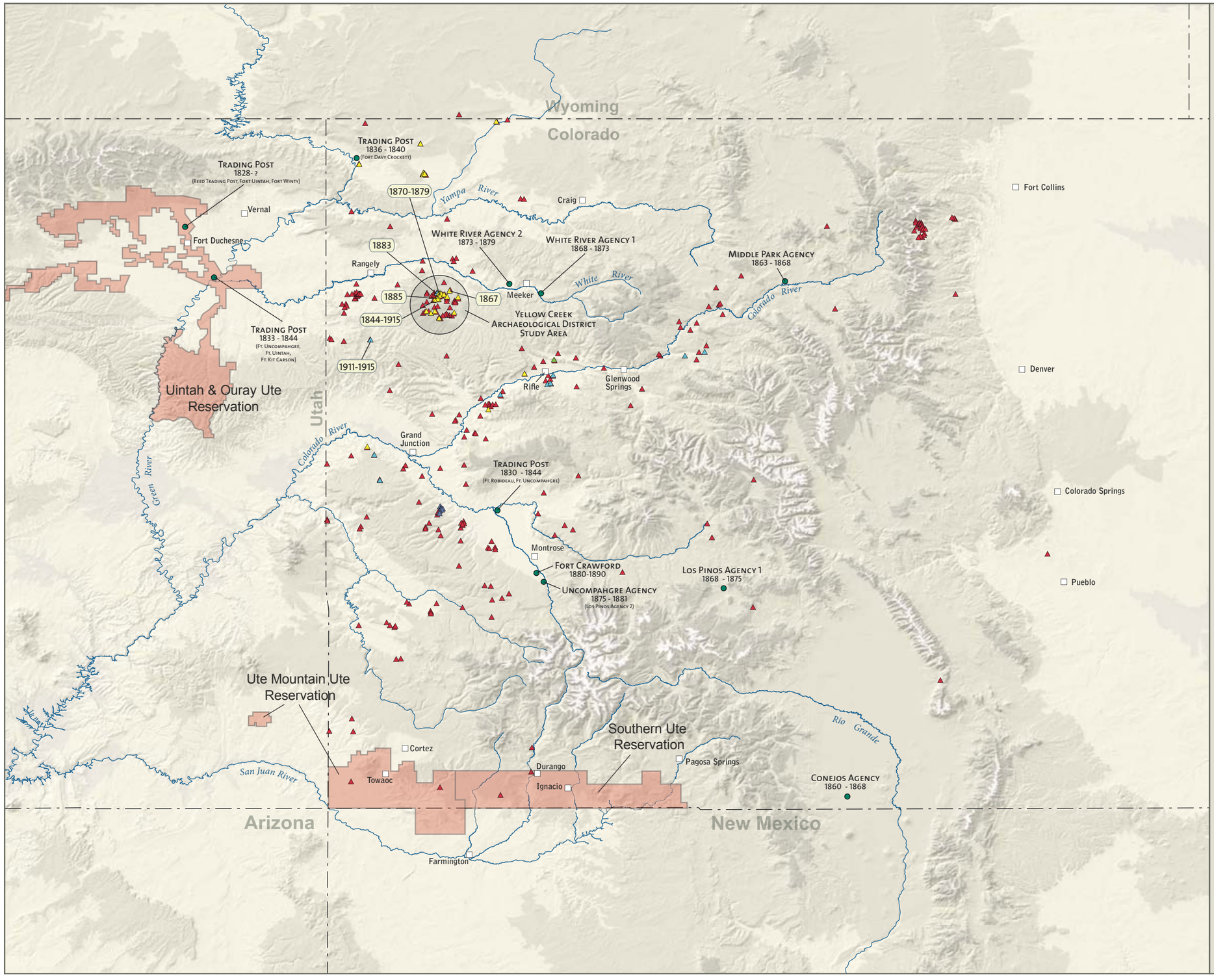
PART I

Recordation and Re-evaluation of Twenty-seven Aboriginal Wooden Feature Sites in Garfield, Mesa, Moffat and Rio Blanco Counties, Colorado

by

Curtis Martin, Principal Investigator

with contributions by
James C. Miller, Research Director
and
Nicole Darnell, GIS Specialist



Colorado Wickiup Project

Known Aboriginal Wooden Feature Sites In Colorado

Last Updated
February 2008

323 Total Known Sites
784 Total Estimated Features
46 Documented Sites
281 Documented Features

- Known aboriginal sites
- Documented sites 2007
- Documented sites 2006
- Documented sites 2005
- Documented sites 2004
- Historic sites
- Ute reservations today
- Cities today
- Tree-ring dates from axe-cut features

North

1:2,500,000

0 20 40 80 Miles

Dominquez Archaeological Research Group

Acknowledgments

The field work for Phase IV was conducted between May 30th and November 7th, 2007 by crews of archaeologists consisting of Dominquez Archaeological Research Group (DARG) research associates. Curtis Martin served as Principal Investigator and he was assisted in the field by John Lindstrom, Richard Ott, and Nicole Darnell. Richard Ott, Project Coordinator, and Carl Conner, President of DARG, were instrumental in the formulation of the project orientation and site selection aspects of the project and have provided invaluable service and direction throughout.

A number of wooden feature sites that were independently recorded in 2007 are also discussed in this report. DARG research associates Brian O'Neil and Kevin O'Hanlon recorded two wickiup sites with the assistance of John Brogan from the Glenwood Springs Bureau of Land Management (BLM). A Class II survey in McInnis Canyons National Conservation Area by DARG personnel Curtis Martin and John Lindstrom also resulted in a newly recorded site, and the results of a series of site revisits and a Class III survey by DARG for the White River Field Office of the BLM are also reported here as are two wooden feature sites recorded during Class III surveys by Grand River Institute personnel Kevin O'Hanlon, Jim Conner, and Travis Archuleta.

In the lab Nicole Darnell, DARG's GIS specialist produced and fine-tuned the project maps and site plans and Richard Ott prepared Part II, the section pertaining to Ute culture history and the National Register of Historic Places assessment of the Yellow Creek Archaeological District. Additional assistance with report preparation and editing was provided by Barbara Davenport, Jim Conner, and Natalie Conner. The faunal analysis, presented in Appendix C, was conducted by James C. Miller who also contributed the discussion of Paleoclimate and Depositional Sequences. Both Steve Baker of Centuries Research and Phil Born of The Museum of the West, provided valuable insights into the interpretation, description, and dating of the numerous historic trade items recovered. The dendrochronological analysis was performed by the Laboratory of Tree-Ring Research at the University of Arizona in Tucson.

Assessment of the Yellow Creek Archaeological District for NRHP eligibility was aided immeasurably in regard to ethnohistory and landscape archaeology considerations by Betsy Chapoose, Director of Cultural Rights and Protection Department, and Clifford Duncan, Ute Elder and NAGPRA Consultant, both for the Ute Indian Tribe of the Uintah & Ouray Reservation, and Terry G. Knight, Sr., Animas-LaPlata Project Cultural Resources and NAGPRA Liaison for the Ute Mountain Ute Tribe.

BLM District Archaeologists Robyn Morris, Cheryl Harrison, Michael Selle, and Aliene LaForge have been extremely helpful and accommodating throughout the field work and report preparation.

Colorado Wickiup Project Background

More than three hundred archaeological sites containing nearly eight hundred aboriginal wooden structures and features are known to exist in Colorado. These ephemeral cultural resources are "regarded as among Colorado's rarest and most fragile Native American sites" (Baker et al 2007:104). Generally attributed to the Utes, they represent the cultural heritage of the only indigenous people to reside within Colorado from prehistory to the present (Baker et al 2007:29). Unfortunately, a preponderance of such sites and features have yet to be fully documented and they are increasingly threatened by decay and disintegration from natural processes, and destruction by human actions, particularly in areas of rapid energy development and population growth.

Dominquez Archaeological Research Group, Inc. (DARG), with partial funding from the Colorado State Historical Fund and the Bureau of Land Management (BLM), initiated the Colorado Wickiup Project (CWP) in 2003. The primary objective of the on-going project is to mitigate the threat to Colorado's aboriginal wooden structures to the extent possible by thoroughly recording all known wooden feature sites, collecting materials for chronometric analysis, and conducting extensive data recovery – including excavation – of significant sites. Long-range goals of the project include the development of a dedicated aboriginal wooden structure knowledge base and facilitation of collaborative research and education through information sharing and professional and public outreach.

Phase I of the CWP, conducted during 2004 and 2005, consisted of a review and assessment of existing knowledge regarding aboriginal wooden structures located in Colorado, and the development of an archaeological context and a strategic plan for future investigations. Results were published in 2005 as The Colorado Wickiup Project Volume I: Context, Data Assessment and Strategic Planning (Martin, Ott, and Darnell 2005).

Phase II of the project, also conducted during 2004 and 2005, comprised the first in a series of planned field investigations. The Phase II survey recorded a dense occurrence of varied and well-preserved wooden structures in the Gunnison Gulch area of Mesa County. A total of 29 wooden features were recorded, including 21 wickiups, a brush corral, an apparent windbreak, a culturally scarred juniper, a limbed tree (apparent wickiup pole production site), a juniper pole cache, and several leaner-pole utility features. The project also served as a pilot test for proposed recording protocols, including an extensively re-designed wooden structure component form, GPS mapping, plan and elevation view drawings of significant structures, comprehensive photography, metal detection, collection of significant surface artifacts, and sampling of materials for chronometric analysis. Results were published in 2005 as The Colorado Wickiup Project Volume II: Cultural Resources Class II Reconnaissance Inventory for the Gunnison Gulch Area of Mesa County, Colorado (Martin, Conner, and Darnell 2005).

Phase III of the CWP recorded and compiled data from a total of twelve sites in west central and northwest Colorado during 2005 and 2006. A total of 81 wooden structures and

other wooden features were documented, ranging in scope from single wickiups and tree platforms to a village containing 43 wooden features. Several new types of wooden features were identified during this study, as were some newly recognized patterns within known structure types, including: low tree platforms, axe-split/shaped "boards", a storage "shelf", and a number of wickiups with integrated "utility" poles. As a result of these findings, recording protocols were refined during the course of field work and the Aboriginal Wooden Feature Component Form was adapted to facilitate recording of these new data types. Selected collections were made of dendrochronological, radiometric, and macrobotanical samples and five tree ring samples, one carbon sample, and two flotation samples were submitted to outside laboratories for analysis. Results of Phase III activities were published in 2006 as The Colorado Wickiup Project Volume III: Recordation and Re-evaluation of Twelve Aboriginal Wooden Structure Sites in Eagle, Garfield, Mesa, and Rio Blanco Counties, Colorado (Martin, Ott, and Darnell 2006).

Phase IV Project Overview and Summary of Findings

Phase IV activities of the Colorado Wickiup Project focused primarily on BLM administered lands in Rio Blanco County, Colorado in a region of the northern Piceance Basin within the Yellow Creek drainage. The area, referred to herein as the Yellow Creek Study Area, incorporates 44 previously recorded wickiup sites containing at least 114 aboriginal wooden features. Of these sites, 15 were documented as a part of this project.

During DARG's Phase IV fieldwork in the Yellow Creek Study Area a total of 15 sites were revisited or newly discovered and 70 aboriginal wooden features were recorded on 14 of these sites (site 5RB539 was relocated however contained no wooden features). Two previously recorded aboriginal wooden structure sites reported to be in the study area were searched for however could not be relocated (5RB57 and 5RB566). Additionally, two sites in the area, with a total of four aboriginal wooden features, were newly discovered and recorded during independent Class III inventories conducted by Grand River Institute in 2007 (5RB5609 and 5RB5611). These last two site have been incorporated into our Study Area totals.

The Yellow Creek Study Area, and the greater Piceance Basin generally, are being impacted by increasing energy development activities including construction of well pads, access roads, pipelines, and processing facilities for both natural gas and oil shale (Figure A-42). Major oil shale research and development projects are underway in southern portions of the study area, with plans to construct man-camp housing for several hundred workers. The unfortunate mix of cultural resources and energy development in the area presents a significant challenge to land managers, cultural resources stakeholders and energy developers. Phase IV activities included a baseline assessment of the Yellow Creek Study Area's potential eligibility for nomination to the National Register of Historic Places as an archaeological district, multiple property, or other designation. An assessment of NRHP eligibility for the Yellow Creek Study Area is presented in Part II of this report.

Additional Colorado Wickiup Project activities in 2007 included a Class III survey for the Bureau of Land Management Little Snake Field Office (BLM-LSFO) involving 670 acres in the South Sand Wash area of Moffat County (Martin and Ott 2007a). The survey was conducted between April 18 and 27 on four selected parcels of land. This project area is located in a region proposed for designation as an OHV use-area. Survey blocks within the proposed OHV use-area were selected as having high potential for aboriginal wooden structures. Two newly identified sites containing possible aboriginal wooden features (5MF6404.1 and 5MF6408) were recorded during the survey. Previously recorded and partially excavated Sand Wash Wickiup Site (5MF2631) was re-visited during the survey and several new aboriginal wooden features, including a wickiup, were located.

Additional fieldwork was conducted by DARG in Moffat County for BLM-LSFO during September 3-7, 2007 (Martin and Ott 2007b). Four aboriginal wooden feature sites were re-visited and recorded to CWP standards in what is referred to in this report as the Little Snake District Wickiup Revisits project.

Several other aboriginal wooden feature sites were recorded in 2007 and have been included in the Phase IV report. One is a newly recorded wickiup (5ME15794) discovered by DARG personnel during a CWP survey in the Black Ridge Area in Mesa County for the Bureau of Land Management Grand Junction Field Office (Martin and Conner 2007). Two additional aboriginal wooden feature sites located in the Colorado River drainage in Garfield and Mesa Counties were recorded during independent Cultural Resource Management (CRM) activities in 2007 and data from those sites has also been included in this report. A summary of the site and feature data from the all of the above sites and from all four phases of the CWP is included in this report (Table 9).

Phase IV activities also raised new research questions regarding historic brush fences and corrals widely recorded in western Colorado. Wooden features of these types have typically been interpreted in the course of CRM surveys throughout the region as historic Euro-American animal control features. However, recent studies (Baily 2005a, Keyser 2008 and James D. Keyser by personal communication 2007) hypothesize possible Ute cultural affiliation, at least for such features located in association with wickiup sites and other Ute diagnostics. Sites documented by the Colorado Wickiup Project in South Sand Wash (5MF2631, 5MF6404.1 and 5MF6408), the Yellow Creek Study Area (5RB129 and 5RB5624), and Gunnison Gulch (5ME14260) include wickiup camps located in proximity to brush fences and corrals. Future CWP studies will re-examine these wooden animal control features with respect to possible Ute origins.

Location of the Project Areas

A total of 27 sites were investigated during Phase IV (not including the isolated find and the two sites shown in Table 1 that could not be located). These resources are widely dispersed on BLM lands in west central and northwest Colorado (Figure 1). The sole isolated

find (5RB5625.IF) and 17 of the sites are located within the Yellow Creek Study Area of Rio Blanco County (Figure A-42) in the northern portion of the Piceance Basin and within the White River drainage (5RB18, 5RB53, 5RB58, 5RB144, 5RB539, 5RB563, 5RB568, 5RB2929, 5RB2930, 5RB2932, 5RB4027, 5RB4331, 5RB4338, 5RB5609, 5RB5611, 5RB5620, and 5RB5623). Two of the sites (5GF2333 and 5ME15907) are within the Colorado River drainage in Garfield and Mesa Counties, seven are in Moffat County in the Yampa River Drainage (5MF2164, 5MF2631, 5MF3737, 5MF3993, 5MF4368, 5MF6404.1, and 5MF6408), and the final site (5ME15794) is on the northern edge of the Uncompahgre Plateau in Mesa County. Two additional previously recorded sites in the Yellow Creek Study Area, 5RB57 and 5RB566, were searched for but could not be located based on the information supplied by the original site forms and map placements.

Environment

The Phase IV project area, in west central and northwest Colorado, extends from the northern end of the Uncompahgre Plateau to the western slope of the Rocky Mountain Province, and northward into the Piceance Creek Basin, Sand Wash Basin, and eastern flanks of the Uinta Mountains geologic subdivisions.

The Uncompahgre Plateau consists of a southeast-to-northwest structural uplift on the northeast margin of the Colorado Plateau physiographic province — which is characterized by nearly horizontal geologic formations, deeply incised vertical-walled canyons, high elevations and sedimentary rock formations (Fenneman 1931). The Uncompahgre Plateau is a remnant of a late Paleozoic mountain range, the Uncompahgria, which covered most of Western Colorado. It reached its present elevation after several periods of uplift, the last of which occurred during the Cenozoic Era. Sedimentary formations were deposited on the resistant Precambrian gneiss, schist, granite and pegmatite (Young and Young 1977:61-63). In the study area, erosion has removed the overlying rocks down to the Cretaceous-age Dakota Sandstone and Burro Canyon Formation.

In the northern portion of the Uncompahgre Plateau many streams have cut northeast-flowing valleys and canyons including Escalante Creek, Big and Little Dominguez Canyons, and Unaweep Canyon, which are all tributaries of the Gunnison River. The Gunnison joins the Colorado River in Grand Junction, and it is just to the west of this confluence that one of the Phase IV wickiup sites is situated (5ME15794). Soils formed atop the sandstone bedrock on the Plateau are generally shallow (15 to 30 cm), light-brown, and reddish-brown, loams and sandy loams, and primarily occur as pockets on top of the bedrock, which is often exposed.

The easternmost sites in the study lie within the foothills of the Southern Rocky Mountain physiographic provenance. Geologically, they are within the south portion of Sand Wash Basin, and on the White River Plateau — extensions of the Wyoming Basin Province that was formed in Late Cretaceous or Early Tertiary times and comprises some 4000 square miles in the north-central portion of Colorado. As it subsided, the Basin accumulated nearly

9000 feet of Cenozoic wind and freshwater deposits. Its higher elevations are supported by older rocks of Mesozoic and Paleozoic sediments, or Tertiary intrusions (Young and Young 1977:44-45, 51-52). Sites recorded during the Phase IV project that are located within this province are 5GF2333 and 5ME15907.

The majority of the sites recorded during Phase IV (those in Rio Blanco County) are located within the Piceance Basin, an elongate structural downwarp of the Colorado Plateau province that apparently began its subsidence approximately 70 million years ago during the Laramide Orogeny. Sediments from surrounding highlands were deposited in the basin, accumulating to a thickness of as much as 9000 feet by the lower Eocene epoch, when subsidence ceased. Regional uplift occurred in the Late Tertiary, and erosion of the area has continued since (Young and Young 1977:43-46). The Wasatch formation underlies the study area. It consists of a series of interbedded variegated mudstones, sandstones, and siltstones of varying colors — brick red, tan, white, and purple. Forming after a period of erosion, the Wasatch is the first extensive continental deposit following those of the Cretaceous-age Mesaverde Group. Sediments are stream, floodplain, and swamp deposits. The types of fossils found in the Wasatch suggest that a moist tropical to subtropical environment existed here.

The Moffat County sites are situated within the Sand Wash Basin physiographic division and the eastern edge of the Unita Mountains. Sand Wash is comprised of a deeply dissected basin formed on Cretaceous and Tertiary sediments. Elevations range from 5,000 feet to over 11,000 feet. At the northwest corner of this basin are the Uinta Mountains, a large, east-west trending anticlinal arch with elevations from 6400 feet to 9000 feet (Young and Young 1977 and Rigby 1976).

Phase IV project sites range in elevation from 5700 to just over 6700 feet with two exceptions at around 6900 feet and one situated at 7380 feet. All sites are situated within the Upper Sonoran plant zone. Vegetation is primarily piñon/juniper forest. Mule deer, elk, and coyote are common, as are cottontail rabbits and various rodents. Mountain lion, bobcat, black bear, elk, fox, skunk, badger, and weasel are also likely inhabitants. Bird species observed in the area include the jay, raven, magpie, red-shafted flicker, owls, golden eagle, bald eagle, and various other raptors. Present land use in the project area is primarily in the form of natural gas exploration, cattle grazing, wood and fence post gathering, and recreational activities such as hiking, camping, hunting, and exploring with off-road vehicles.

In the present day, the project area is typified by a cool semiarid climate where temperatures can drop to -10 degrees F or lower during the winters and summer temperatures may reach 100 degrees F or more; there is a maximum of 160 frost-free days and the annual precipitation is about 10 to 16 inches (USDA SCS 1978: 6).

Paleoclimate and Depositional Sequences

The following discussion of typical depositional sequences in northwestern Colorado is based on radiocarbon ages obtained from a broad range of studies compiled in Miller (1992 and in prep.). The region included in Miller comprises the western Plains from western North Dakota and eastern Montana to the vicinity of Pueblo, Colorado, and many of the Rocky Mountain basins from Western Montana, throughout Wyoming (including the Wyoming Basin), and in northern Colorado and Utah (including the Parks and the Uinta Basin). Over this broad region it is now apparent that major shifts in climate occurred more or less at the same time and had correlatable consequences in alluvial and aeolian depositional systems.

There are two major periods of climatic transition since the end of the ice age about 13,000ya. The first occurs at that date and marks the initial stage of climatic warming — the beginning of the so-called Holocene climatic envelope — the Pleistocene extinctions, and the advent of the human species in the New World (all sites with older ages for the presence of humans in North America are controversial). The second occurs at about 6500ya, and marks a fundamental change in both alluvial and aeolian depositional systems, and shifting cultural patterns in the Plains and Rocky Mountains. There are smaller cycles apparent as well. Each of the two main periods are roughly divided in two, and in both cycles cooler, concomitantly wetter conditions in the first half of the broader periods were succeeded by periods of fluctuating conditions including severe drought which had telling affects on the human population in the latter parts.

Aeolian System (after Miller 1992, Miller in prep)

Since the beginning of the Holocene climatic envelope, aeolian deposits accumulated. The type of aeolian deposits vary according to climate, with the warmest, driest periods marked by mobile deposits, i.e., dunes, and the coolest, wettest periods marked by shadows, sheets, drift, and coppice mounds. From about 13,000 to 10,000 years ago, shadows, sheets and associated deposits first started to form. A regional drought became effective after 10,000ya, and from then until about 6500ya, the major dune fields in the mountain west — some approaching ergs in dimension — started to form, including the Killpecker (Ahlbrandt 1973) and Lost Soldier (Gaylord 1983) fields in Wyoming, and the Sand Hills of Nebraska (Ahlbrandt and Freyberger 1980). Around 6500ya, a general stabilization took place, and seasonal deposition became the normal aggradational process.

In the major dune fields, the change is marked by a shift from high-angle fore-set beds relic of dune slip face migration to low angle beds representing laminar aggradation in drift and shadow areas (e.g., Gaylord 1983). In many areas, the sudden accumulation of wind blown deposits starting at 6500ya marks the advent of phytogenic (of plant origin) aeolian deposits, accumulated by virtue of sustained vegetal growth.

The Yarmony Site (Metcalf and Black 1991) in north central Colorado is perhaps the closest documented example of this type of accumulation, but many more sites have similar deposits, including Sage Creek (Latady 1986) and Trapper's Point (Miller et al. 1999) in southwestern Wyoming, the McKean site (Kornfeld et al 1995) in northeastern Wyoming, and the Upper Twin Mountain site (Kornfeld et al. 1999) and other sites in Middle and South Park in north central Colorado (Miller 1996, Metcalf and Miller 1997), and sites in the Uinta Basin (Michael D. Metcalf personal communication 2005). These types of sites also provide the primary pollen evidence to indicate that the climate was coolest and wettest in the middle Holocene, from about 6500 to about 4500ya in opposition to the established dogma of the mid-Holocene drought or Altithermal usually placed at 7000 to 4000ya.

The old deposits are extremely difficult to separate from the lower part of the second series deposits (after 6500ya) in surface exposure, since both have experienced nearly the same duration of in-place weathering. Four distinct deposits occur in sequence: the earliest deposit accumulated and began weathering in place between 6500 and 4500ya; the second deposit, between about 2800 and 1000ya; the third, between 500 and 150ya; and the fourth in the last hundred years. The last is probably related to large scale surface disturbances since the late 19th Century (Miller 1992). The missing years are periods of erosion and serir formation — i.e. lacunas (a missing interval at an unconformity).

The aeolian and alluvial systems react in concert to climatic change. Figure 2 provides a time line from 14,000ya to the present and shows the progression of deposition, erosional events (lacunas), and the one important hiatus in the alluvial sequence (a period of no deposition) referenced to generalized cultural and geologic periods. The figure and the following narrative are drawn from the compilation of related data presented in Miller (1992, and in prep.).

At about 13,000ya, the last of the Pleistocene glaciers had receded to higher elevation and the so-called Holocene climatic envelope set in. At or slightly before the t time, the ephemeral drainages in the survey block were seasonal, roaring torrents, capable of moving boulders. A developed soil, sedimentologically a loess, likely supporting (and stabilized by) grass and sage steppe vegetation, probably covered most surfaces (except the shale terrane) with gradients less than the angle of repose. With warming temperatures, vegetation thinned and the slopes destabilized. Slope erosion increased, and much sediment stored on the slopes moved into the alluvial system and started to gradually fill the Late Pleistocene dissections. Early deposits were relatively coarse and later, finer, deposits, reflected diminishing capacity and competence in what were quickly becoming anastomosing streams choked with sediment.

By the time of Haynes' (1991) "Clovis drought," the first aeolian deposits started to form. These early deposits were shadows and sheets and related forms, and were phytogenic in nature, and were fully stabilized during the Younger Dryas (coeval with Folsom and Goshen times). The most severe drought of the Holocene began shortly after 10,000 years, marked by dune formation and initiation of fine grained braided stream deposits (relative to

previous deposits). Bison recovered from the Casper site in central Wyoming show severe signs of stress due to climatic conditions at 9500ya (Frison 1974). In the following thousand years the early Paleoindian traditions gave way to the late Paleoindian traditions, and the Archaic tradition developed. Paleoindian big game hunters and foragers, and Archaic collectors coexisted for the next 3000 years.

The period between 7500 and 6500 years marks the cessation of braided stream deposition and is followed by the initial deposition and stabilization of the transitional aeolian deposits. This period represents the harshest drought conditions. Non-deposition on the alluvial hiatus suggests there was insufficient surface water to accomplish much work in alluvial systems. This implies that what water was available was transmitted or stored in the aquifers represented by the loose alluvial fill. The last of the now extinct bison species did not survive the interval. Starting at around 6500ya or shortly after, the second series of aeolian deposits began to accumulate. These deposits are phytogenic, meaning the accumulation was significantly aided by more vibrant vegetal growth, which in turn prospered thanks to cooler climates which allowed stored pore (vadose) water to persist in the subsoil. These waters provided the medium for the remarkable syndiagenetic weathering (the process of chemical and physical change in the conversion of rock to sediments) that took place in the interval, and subfreezing temperatures began the low-level frost heaving that seems prevalent. Culturally, small village settlements containing house-pits began to appear in Colorado and Wyoming. Ameliorating conditions persisted for at least the next two thousand years.

After about 4500ya, conditions started to gradually warm again. In the alluvial system, loss of capacity and competence again resulted in channel infilling, again implying slope instability. The effect on aeolian deposits initially was intermittent deflation. As the impending drought intensified, channel fill increased, and deflation in aeolian deposits proceeded to the upper margin of the middle Holocene syndiagenetic zone, forming the first major lacuna (a gap or missing part) and serir (dry zone, gravel terrace) in the post 6500 years-old deposits. Exposure of the syndiagenetic zone and serir formation further limited deflation. The severest part of the drought came between 3500 and about 2800ya. Culturally, the well established middle Archaic traditions deteriorated entering the drought, and Late Archaic traditions emerged on the other side.

From 2800 to about 1000 or 900ya, new phytogenic aeolian deposits accumulated and remained stabilized, although there are several shorter periods of deflation contained within; for example, coeval deposits at site 5ME12825, about five miles east of DeBeque, Colorado, had four periods of minor deflation. Syndiagenesis proceeded again in the interval which also affected older deposits. Sometimes paraconformities (poorly developed serir deposits) are present, but are not usually continuous throughout contiguous deposits, and generally not traceable from one deposit to another even in a restricted area; some of these may even be the result of cultural activity in a confined area.

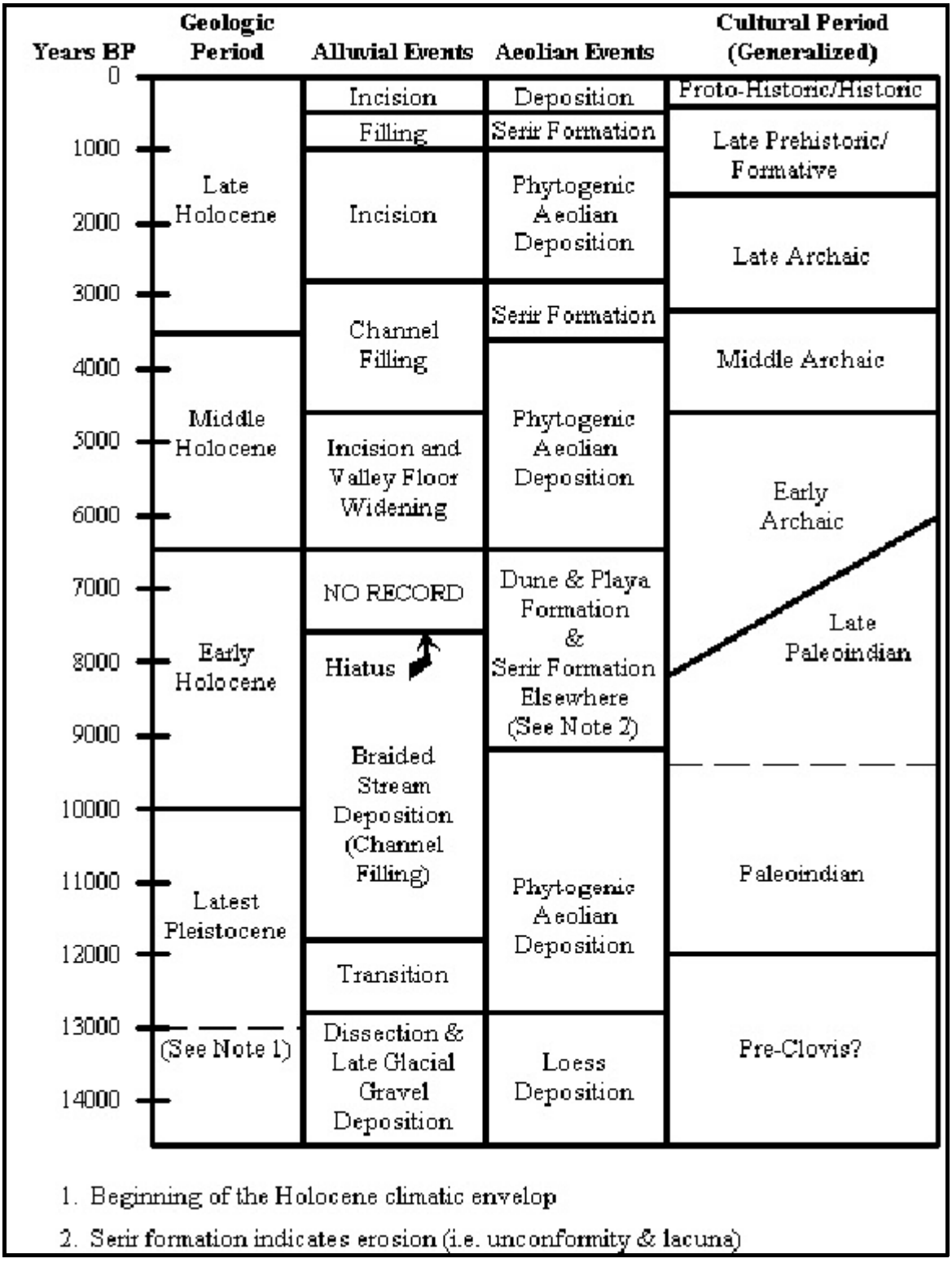


Figure 2. Chronology of events in alluvial and aeolian systems since the Latest Pleistocene (after Miller 1992 and Miller in prep)

In the alluvial system during the interval, incision alternated with intermittent infilling, but the net effect was incision and continued valley widening. In many drainages the middle Holocene fill was removed completely, and in others, fill from the period was preserved. The varied evidence of fill and incision seems more acutely affected by local conditions. From 1000 or 900 years to about 500ya, another severe, regional drought affected the mountain west and bordering areas. Alluvial deposits from this period were named Lightning Formation in eastern Wyoming (Leopold and Miller 1954). These deposits are represented by the lowest terrace above the present day channel bottoms. In aeolian systems the second notable serir (i.e. an unconformity) formed. In Europe, the same period of drought is referred to as the Medieval drought. On the Plains and in the northern and middle Rocky Mountains, this interval coincided with the first evidence of warfare between native groups. Locally, the Fremont fragmented.

The Little Ice Age is well documented and persisted from 500 to about 150ya. Incision renewed in alluvial systems, and stabilization and slow aggradation ensued in phytogenic aeolian deposits. The last serir or unconformity formed in aeolian deposits. Since that time, alluvial systems have generally continued to incise where not affected by human activity, and aeolian deposits have continued to aggrade. Revisiting concerns of present day global warming, it is obvious that the three main periods of drought in the Holocene (from 9500 to 6500, 3500 to 2800, and 900 to 500ya) had a much more drastic effect on the landscape — i.e., the present drought is relatively minor compared to previous ones.

The Holocene deposits are separated by three periods of erosion (lacunas) marked by unconformities indicated by serir deposits. The serirs formed between about 9500 and 6500, and 3500 and 2800ya, capping the latest Pleistocene and middle Holocene units, respectively, are the best developed, marked by granule- and pebble-sized particles (a result of frost heaving), while the two serirs separating the last three Holocene deposits are generally marked by granule-sized particles and very coarse sand (a result of deflation alone).

In general when looking for these deposits, the best exposures are in two-track roads, where deflation and sometimes alluvial erosion is exacerbated by motor traffic; the top of the horizon still forms a credible base for aeolian and sheet flow alluvial erosion today as it did previously, before deposition of the later units. In most areas, “soil” structure is a useful relative indicator, as well. The Little Ice Age deposit exhibits a crumb structure, marking the initial stage of illite (any of a group of clay minerals, hydrous potassium alumino-silicates, characterized by a three-layer mica-like structure and a gray, light green, or yellowish-brown color) to smectite (a hydrous silicate of alumina, of a greenish color, which, in certain states of humidity, appears transparent and almost gelatinous) conversion, and the Late Holocene deposit, a weak blocky structure. The earlier deposits (including latest Pleistocene, and early and middle Holocene phytogenic deposits) exhibit a strong blocky to weak prismatic structure.

Culture History

Previous cultural resource investigations in the region have yielded surface diagnostic artifacts and excavated cultural materials consistent with the regional cultural history and prehistory. Evidence of the Paleoindian, Archaic, Formative, and Protohistoric Eras has been found in the area. Historic records beginning as early as the 1620s (Cassells 1997) describe Spanish contacts with indigenous peoples in central and northwestern Colorado. Later records chronicle the expanding presence of Euro-American trappers, settlers, miners, farmers, and ranchers as well as their interactions with the historic Utes; the "only indigenous people to reside within the state from prehistory into their Late Contact phase" (Baker et al. 2007:31).

Overviews of the prehistory and history of the region are provided by the Colorado Council of Professional Archaeologists publications *Colorado Prehistory: A Context for the Northern Colorado Plateau* (Reed and Metcalf 1999), and *Colorado History: A Context for Historic Archaeology* (Church et al 2007). An archaeological context for Colorado wickiups is provided by The Colorado Wickiup Project Volume I: Context, Data, Assessment, and Strategic Planning (Martin, Ott, and Darnell 2005).

There is a great deal of debate as to whether ethnic groups can be detected in the archaeological record, as well as to the distinction between ethnicity and culture (Sanfilippo 1998:4 and Stiger 1998:1). Nevertheless, early historical records in the American west, and in the state of Colorado in particular, provide us with an insight into the ethnic affiliations and cultural relationships of the native peoples inhabiting the area at the times of earliest contact with non-native intruders. These chronicles, and their descriptions of the material culture of the inhabitants, often offer a valid framework from which to derive the ethnic association of those archaeological sites that can be dated to protohistoric and historic times within specific geographic regions.

In late-prehistoric and historic time frames the "Native American archaeological record of western Colorado is very largely, if not nearly exclusively, Ute derived" (Baker 1995:2) and the ephemeral aboriginal wooden features and structures of interest to the Colorado Wickiup Project are assumed to be predominantly associated with the Utes. A general discussion of Ute culture history, with specific focus on the White River Utes, is presented in Part II of this report.

Project Goals and Objectives

Phase IV of the Colorado Wickiup Project is the third in a series of field reconnaissance and documentation projects directed toward known, but insufficiently documented, wickiup sites and locales. The primary objectives of field activities are to comprehensively document these cultural resources and concurrently to develop and refine recording protocols that will — to the greatest feasible extent — mitigate the inevitable

disappearance of Colorado's wickiups and other ephemeral wooden structures along with the archaeological data they contain.

The CWP's preservation and cultural resource management objectives include evaluation of resources for eligibility for the National Register of Historic Places (NRHP), assessment of the current condition of wooden structures and sites, the potential effects of continuing natural and human impacts on their archaeological integrity, and recommendation of actions for the mitigation of adverse effects. One of the primary long-term objectives of the project is to add significantly to the late prehistoric and historic Ute archaeological database, thereby expanding the body of knowledge available to tribal, management agency, and research community stakeholders concerned with the preservation of Native American heritage values in Colorado landscapes. Near-term project objectives include documentation of additional aboriginal wooden feature sites and testing of significant sites. Specific sites targeted for study in the next phase of the CWP are described below in Future Directions and Proposed Field Activities.

We feel that the CWP's strategy of "preservation through documentation" deserves continued, accelerated and expanded effort and commitment of resources. The knowledge we have gained thus far about Colorado's aboriginal wooden structures has further deepened our appreciation of these fragile archaeological resources, and has more than confirmed our original assessment of their immeasurable value, not only to archaeology, but to the living descendants of the people who created them. We have also come to recognize that we can leverage the results of our efforts by expanding the scope of our studies to include broader research questions and preservation challenges related to aboriginal wooden features sites in Colorado. A discussion of potential research design considerations directed to this end follows in Part II of this report.

Field Methods

The Colorado Wickiup Project uses standard OAHP and BLM forms as the basis for its field recording protocols, including the Colorado Cultural Resource Survey Management Data Form, the Prehistoric Archaeological Component Form, and the Cultural Resource Reevaluation Form. For detailed recording of wooden features, our primary recording form is the Aboriginal Wooden Feature Component Form.

The Aboriginal Wooden Feature Form was developed (and continues to be refined) by DARG research associates based on direct field experience and attribute lists drawn from Sanfilippo (1998), BLM archaeologist Michael Selle, and others. It has evolved from the former Conical Wooden Structure Form (ibid), and continues to be modified for the purpose of providing a single form for the documentation of all types of ephemeral wooden features in archaeological contexts. A sample of the current version of the form is presented as Appendix E in this report.

All Phase IV work was performed according to the guidelines set forth by the Office of Archaeology and Historic Preservation (OAHP) of the Colorado Historical Society. All cultural resources were recorded to standards set by the BLM and the OAHP utilizing methods established primarily during the first two phases of field work and research by the Colorado Wickiup Project (Martin, Ott, and Darnell 2005).

Mapping of site boundaries and the location of individual surface artifacts and features was conducted using a BLM certified Trimble GeoExplorer XT GPS unit and USGS 7.5' series topographic maps. Site boundaries were determined by the extent of surface artifacts and features and/or a protective buffer zone. Crew members mapped, made digital photographs and recorded observations and measurements of each individual wooden feature, including the completion of an Aboriginal Wooden Feature Component Form. Feature plan maps and elevation drawings were conducted whenever warranted for extant standing structures. A Fisher M-Scope 1236-X2 metal detector was used on a majority of the sites to survey areas within, beneath and surrounding wickiups, platforms and other significant wooden structures, as well as within areas of the site surface deemed likely to contain buried or concealed cultural resources.

As warranted, dendrochronological samples were collected from metal axe cut feature poles and associated tree stumps and thermoluminescent samples were collected in the form of ceramic sherds and surrounding sediments.

Two innovative recording techniques developed during the Phase II Gunnison Gulch survey have become adopted as standard practice for the Colorado Wickiup Project. The first is simple in concept and execution, yet has proven to be invaluable in terms of the quality of the results. A six to eight-foot aluminum step-ladder is carried to feature locations and used for photographing collapsed structures from an elevated vantage point, which often reveals patterns that result when a conical structure collapses to one side, or gradually sags and settles to the ground over the years (Plate 1).

A new technique for producing schematic plan view drawings of standing wickiups has also proven to be useful. Sketching just the “footprints” of individual wickiup poles and other standing feature elements (e.g. the support tree when present) often yields a clearer picture of a structure’s configuration than a sketch that attempts to illustrate the standing poles in their entirety. An accurate and relatively expedient method of creating these drawings is to hang a plumb bob from the apex of a standing structure to establish a datum, then, using a metric tape and a Brunton pocket transit, feature elements can be plotted on polar-coordinate grid paper (Figures 3 and 7 are examples of this technique).

Field notes from Phase IV recording activities are on file at Dominquez Archaeological Research Group, Inc., and digital copies of photographs have been submitted to the BLM and OAHP. Collected artifacts, chronometric, soil, and macrobotanical samples will be curated at the Museum of Western Colorado in Grand Junction.

Study Findings

Table 1 provides a summary of the Phase IV findings. Nineteen of the 27 sites described in this report were revisits of previously recorded sites: 5GF2333, 5MF2164, 5MF2631, 5MF3737, 5MF3993, 5MF4368, 5RB18, 5RB53, 5RB58, 5RB144, 5RB539, 5RB563, 5RB568, 5RB2929, 5RB2930, 5RB2932, 5RB4027, 5RB4331, 5RB4338. Eight of the sites, 5ME15794, 5ME15907, 5MF6404.1, 5MF6408, 5RB5609, 5RB5611, 5RB5620, and 5RB5623 were newly recorded as was the isolated find 5RB5625.IF. In total, these sites comprise five wickiup villages of ten or more features, nine clusters of two to eight features, six isolated wickiups, one isolated tree platform, two isolated utility racks, two isolated pole caches, and two animal containment features. A total of 92 wooden features were recorded including 42 wickiups (three of which are interpreted as possible tipis), two tree platforms, two wind-breaks or lean-tos, two wall tents, 16 utility poles and racks, five animal containment features, four pole caches, 16 firewood piles, and three culturally modified trees (Table 9).

Descriptions of each site and evaluations of site significance follow. The UTM data for cultural resources are found in Appendix A. Table A-1 in that appendix provides location information, and also in that appendix are USGS Quad maps showing individual site locations. Appendix B contains a list of collected artifacts including their location data. Detailed information for the Phase IV resources is provided in Appendix G, which includes OAHP Reevaluation or Management forms for each site and Aboriginal Wooden Feature Component Forms for the wooden features. Forms are *not* provided for those resources recorded as a part of projects other than the Colorado Wickiup Project. These records are also available at BLM field offices and OAHP. Data from Phase IV has also been integrated into the comprehensive Colorado Wickiup Project dataset which is summarized in Table 9.

Review of Site Significance

The National Historic Preservation Act of 1966 (NHPA) directs federal agencies to evaluate the significance of recorded cultural properties and their qualifications for inclusion in the National Register of Historic Places (NRHP). The statements of significance included in this report are field assessments to support recommendations to the BLM and State Historic Preservation Officer (SHPO). The final determination of site significance is made by the controlling agencies in consultation with the SHPO and the Keeper of the Register.

The Code of Federal Regulations was used as a guide for the in-field site evaluations. Titles 36 CFR 50, 36 CFR 800, and 36 CFR 64 are concerned with the concepts of significance and historic value of cultural resources. Titles 36 CFR 65 and 36 CFR 66 provide standards for the conduct of scientific data recovery activities. Finally, Title 36 CFR 60.6 establishes the measure of significance that is critical to the determination of a site's NRHP eligibility, which is used to assess a site's research potential:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and a) that are associated with events that have made a significant contribution to the broad patterns of history; or b) that are associated with the lives of persons significant in our past; or c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d) that have yielded, or may be likely to yield, information important to prehistory or history.

Due to the fragile and ephemeral nature of aboriginal wooden structures, the relative lack of detailed documentation and study of such resources, and their significant potential to yield valuable information regarding the prehistory, protohistory, and early history of Colorado's aboriginal cultures, a majority of the sites that contain such features are recommended as eligible for National Register of Historic Places (NRHP) and Colorado's State Register of Historic Places. Protection and preservation of these resources is paramount. "Any potential Ute household site from any phase of cultural change should be eligible for the National or State register unless it has been significantly degraded" (Baker et al 2007:85). In 2003, Colorado Preservation, Inc. listed "Native American Arboreal Wickiup and Teepee Sites" as one of *Colorado's Most Endangered Places* due to the ongoing impacts of vandalism and natural weathering.

Table 1, below, presents summary descriptions and evaluations of the cultural resources recorded during Phase IV of the Colorado Wickiup Project. The two sites that could not be relocated (5RB57 and 5RB566) and the isolated find (5RB5625.IF) are included in this table, bringing the total number of resources to 30. Of the 27 sites described in this report, 22 were field-evaluated as "Eligible" for the NRHP and five as "Not Eligible".

Discussion of potential NRHP eligibility for the Yellow Creek Archaeological District is presented in Part II of this report.

Table 1: Summary of Cultural Resources Recorded By Phase IV of the Colorado Wickiup Project

Site/IF Number	Description	Eligibility
Yellow Creek Study Area Sites		
5RB18	"Two Tall Pole Wickiup Village" 13 wooden features (5 wickiups, 1 windbreak, 2 pole caches, 1 tripod, 1 unstructured pole, 2 firewood piles, 1 culturally modified tree)	Eligible
5RB53	"Duck Creek Wickiup Village" 9 wooden features (4 wickiups, 3 utility racks, 1 livestock pen, 1 unstructured pole) (4 of these are only partially recorded...to be completed in 2008)	Eligible
5RB57	Site could not be located	No Recommendations Made
5RB58	1 wooden feature (1 wickiup)	Eligible
5RB144	2 wooden features (2 wickiups)	Eligible
5RB539	Relocated site; no wooden features found	Not eligible
5RB563	"Ute Hunters' Camp" 8 wooden features (2 wall tent sites, 2 utility racks, 4 firewood piles)	Eligible
5RB566	Site could not be located	No Recommendations Made
5RB568	4 wooden features (2 wickiups, 1 utility rack, 1 firewood pile)	Eligible
5RB2929	1 wooden feature (1 wickiup)	Eligible
5RB2930	7 wooden features (4 wickiups, 2 utility racks, 1 firewood pile)	Eligible
5RB2932	1 wooden feature (1 pole cache)	Not eligible

Site/IF Number	Description	Eligibility
5RB4027	14 wooden features (7 wickiups, 3 utility racks, 1 windbreak, 3 firewood piles)	Eligible
5RB4331	"Black Sulphur Creek Wickiup" 1 wooden feature (1 wickiup)	Eligible
5RB4338	"Bead Village". 10 wooden features (2 wickiups, 7 firewood piles, 1 culturally modified tree)	Eligible
5RB5609	Newly recorded. 3 wooden features (2 utility racks, 1 pole cache)	Eligible
5RB5611	Newly recorded. 1 wooden feature (1 wickiup)	Eligible
5RB5620	Newly recorded. 1 wooden feature (1 pole cache)	Not eligible
5RB5623	Newly recorded. 1 wooden feature (1 utility rack)	Not eligible
5RB5625.IF	Newly recorded. One glass seed bead on anthill (Plate 13e)	Not eligible
Independent CRM-Related Sites in the Colorado River Drainage		
5GF2333	5 wooden features (3 wickiups, 1 animal pen, 1 horizontal tree beam)	Not eligible
5ME15907	1 wooden feature (1 wickiup)	Eligible
South Sand Wash Survey Sites		
5MF2631	"Sand Wash Wickiup Site" 10 wooden features (5 wickiups, 1 utility pole, 1 horizontal beam, 3 firewood piles)	Eligible
5MF6404.1	1 wooden feature (1 linear brush fence)	Eligible
5MF6408	2 wooden features (1 brush fence, 1 corral with wing fences)	Eligible

Site/IF Number	Description	Eligibility
Little Snake District Wickiup Revisit Sites		
5MF2164	Reevaluated site. The wooden features are historic in nature however prehistoric lithics and hearths do exist	Eligible
5MF3737	4 wooden features (4 wickiups)	Eligible
5MF3993	"Gates of Lodore Tree Platform" 1 wooden feature (1 tree platform)	Eligible
5MF4368	5 wooden features (5 wickiups)	Eligible
Black Ridge Site (Uncompahgre Plateau)		
5ME15794	1 wooden feature (1 wickiup)	Eligible

Site Descriptions

Site **5GF2333** is an open architectural site with five aboriginal wooden features including three possible wickiups, an animal containment structure, and a horizontal tree beam. In addition, the site has flakes, manos, and apparent man-u-port river cobbles.

The site is located on an open prominence at an elevation of 5700 feet (Figures A-1 and A-2). The vegetation consists of a piñon/juniper forest with an understory of sagebrush, and sparse bunch grasses. The site measures approximately 55m in diameter. The soil consists of light brown sandy loam. The cultural affiliation of the site is apparently Protohistoric to Early Historic Ute, dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features.

The site was originally recorded by Carl Conner and Barbara Davenport of Grand River Institute in 1996. A reevaluation of the site was conducted by Brian O'Neil and John Brogan of the Glenwood Springs Office of the BLM in 2007 in cooperation with DARG and the Colorado Wickiup Project. The 1996 site form mentions ten possible wickiup structures. The reevaluation by the BLM determined that five of these features were naturally occurring phenomena, and that the "rock cairn" was the remains of a modern fire circle.

The remaining five wooden features were assigned feature numbers and described as follows. Aboriginal Wooden Feature Component Forms were completed for three of these (Features 1, 4, and 5).

Feature 1 appears to be the remains of a partially collapsed animal containment pen consisting of a collapsed three-rail fence segment between two live juniper trees and an associated cluster of six additional poles leaned into a juniper tree.

Feature 2 is a concentration of juniper poles adjacent to a heavily eroded area of fire-cracked rock and faint ash stain. The BLM researchers note that they could not confirm or deny the original interpretation of the feature as a collapsed freestanding wickiup. The description of the feature that was provided leads these authors to speculate that Feature 2 is possibly a firewood pile associated with the apparent hearth, or a cultural pole stash.

Feature 3, similar to Feature 2, is a concentration of juniper poles on the ground. Again, the BLM researchers note that they could not confirm or deny the original interpretation of the feature as a collapsed wickiup. The description of the feature leads these authors to speculate that Feature 3 is either a collapsed freestanding structure of unknown design, a cultural pole cache, or possibly a firewood pile.

Feature 4 is considered by the BLM archaeologists to be the best candidate on the site for an actual wickiup. It consists of two standing poles leaned against the limbs and trunk of a living juniper support tree and four additional collapsed poles. A possible juniper bark mat was noted within the feature.

Feature 5 consists of a single horizontal pole supported in the branches of a live juniper tree. The recorders do not speculate as to the purpose of the feature, however similar poles have been interpreted as storage features ("hangers") and captive eagle roosts.

Evaluation and Management Recommendation

The site has been evaluated as not eligible regarding listing on the National Register of Historic Places (NRHP) due to compromised integrity of the site (it has apparently been surface collected and wooden feature poles reputedly have been scavenged for use as fence poles). It is our recommendation that the site's evaluation remain as not eligible, and no further investigations are recommended.

Site **5ME15794** is a single aboriginal wooden feature (Feature 1) that was recorded by DARG personnel in 2007 as part of a Class II aboriginal wooden feature inventory of two parcels in McInnis Canyons National Conservation Area in Mesa County (Martin and Conner 2007). It is apparently a partially collapsed, leaner-style wickiup. Although additional lithic debitage and tools were noted in the area, which were not fully documented, site number 5ME15794 has been assigned to Feature 1 and the few artifacts that appear to be in direct association with it. The site is situated on an undulating, rock and boulder-strewn terrace at an elevation of 6640 feet (Figures A-3 and A-4). It is in a mature piñon/juniper forest with an understory of sagebrush, serviceberry, mountain mahogany, ephedra, prickly pear cactus, and bunch grasses. Soils are light brown sandy loam of an undetermined depth of probably less than 30cm.

Feature 1 is what appears to be the remains of a partially collapsed leaner-style wickiup. It consists of two collapsed juniper poles flanking a single standing leaner pole that is supported by a live juniper tree. These poles may all be remnants of a leaner wickiup, or possibly a three-element assemblage of a utility rack–poles leaned into trees for use in a variety of ways; hide preparation, meat-drying, or for the suspension of food, saddles, horse tack, blankets, or personal items off the ground. Another possible interpretation is that these poles were leaned into the tree simply as a pole cache; where harvested and prepared poles are simply propped up against the trunk or branches of a tree to preserve them for when they are needed.

The structure's poles have been broken off at their bases (one shows evidence of having been uprooted as a small tree trunk). The poles are rather heavily decomposed and the standing pole is sagging somewhat. The presence of a small concentration of lithic tools and debitage immediately to the southeast of Feature 1 supports its interpretation as a wickiup. These four artifacts consist of a flake, a core-chopper, and two similar unifaces; all within four meters of the feature. The unifaces are both manufactured from thick flakes of quartzite, range in diameter from approximately six to eight centimeters, and have steep unifacial

retouch and use wear along one edge–in the manner of an end-scraper, however these tools are robust, somewhat crude, and appear to be more appropriately categorized as wood-working planes or perhaps fleshing tools.

Evaluation and Management Recommendation

Due to apparent site integrity, the presence of a rare and fragile aboriginal wooden structure, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory or early Native American history, the site is field evaluated as eligible for listing on the National Register of Historic Places. Avoidance and full documentation of the entire site is recommended.

Site **5ME15907** is an open architectural site consisting of a single wickiup, a lithic scatter, and stone tools including two small side-notched projectile points. The site is located on a low ridge top at an elevation of 5700 feet (Figures A-5 and A-6). The vegetation consists of juniper trees, snakeweed, native grasses, and forbes, and the soils are light reddish brown loam of 10 to 50cm in depth. The site measures 55m by 60m. The cultural affiliation of the site is apparently Protohistoric to Early Historic Ute, dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features. The site was newly recorded by Brian O'Neil and Kevin O'Hanlon of DARG in 2007 as an ancillary study for the Colorado Wickiup Project.

Wickiup WF-1 is a partially collapsed, freestanding wickiup constructed between two live juniper trees. Seven of the 12 wickiup poles remain standing and the other five have collapsed (Figure 3). The wickiup is notably large with an oval floor that measures 2.80m by 3.30m. The interior height measures 1.7m. A 1.4m wide space between two of the poles on the west-southwest side of the feature probably served as the entryway. Apparent remnants of a juniper bark mat were noted and a concentration of charcoal and FCR inside of the entryway apparently represents the location of an interior hearth.

Evaluation and Management Recommendation

Due to obvious site integrity (three activity areas were noted on the surface), the presence of a rare and fragile aboriginal wooden structure with an apparent interior hearth and possible bark mat, and apparent subsurface deposits that would be likely to yield important information regarding the area's Protohistory or early Native American history, the site is field evaluated as eligible for listing on the National Register of Historic Places. Excavation of this apparent single component site is recommended.

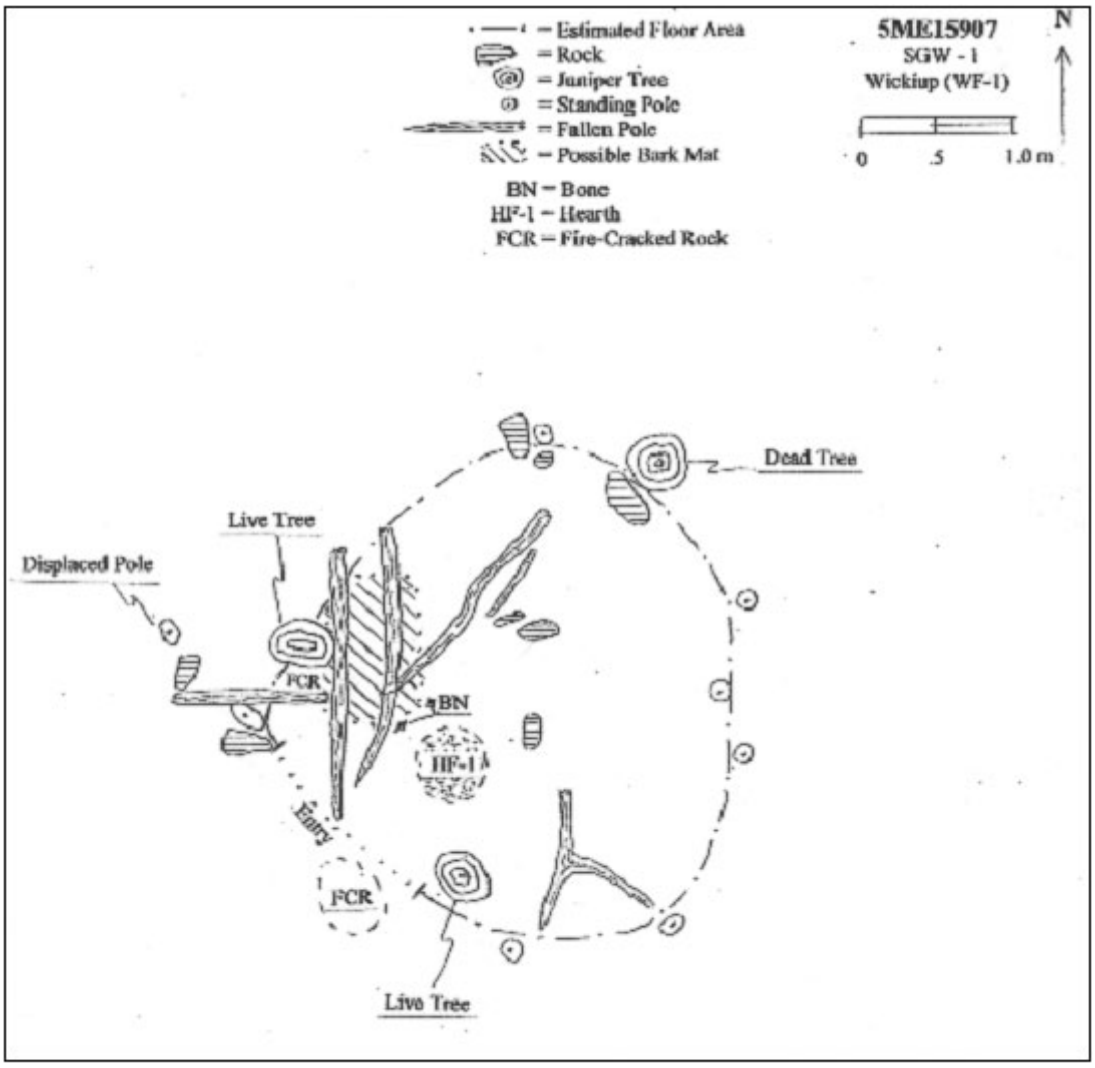


Figure 3. Plan map of Wickiup WF-1 at 5ME15907.

Site **5MF2164** is an open prehistoric camp. It was revisited by DARG personnel in 2007 as part of a series of reevaluations of aboriginal wooden features in the Little Snake BLM district (Martin and Ott 2007b). It was originally recorded by Barry Hibbets of La Plata Archeological Consultants in 1984 and reevaluated by Gary Collins of the Little Snake Field Office of the BLM in 2005. Although there is definitely an open prehistoric camp at this location in the form of lithic debitage and thermal features, no aboriginal wooden features were located. Within the site boundary itself, as well as throughout the area in general, there are hundreds of examples of historic "cedar" fence post cutting events, and it is undoubtedly the remains of this activity that have been mistaken for collapsed wickiups.

The site is situated on a ridge at an elevation of 6320 feet. It is in piñon/juniper forest with an understory of sagebrush, rabbit brush, snakeweed, and bunch grasses. Soils are gravelly, brown to grayish-brown clay loam of an undetermined depth.

In general, and at this site, fence post cutting incidents consist of concentrations of smaller metal ax cut limbs lying on the ground adjacent to, or directly beneath the boughs of, standing juniper trees. These limbs are left behind when the woodsmen chop the smaller branches from juniper trunks and larger branches to create weather-resistant "cedar posts". The resultant posts themselves typically have been removed from the area, although caches of them are occasionally found leaning against standing trees to keep them off of the ground. The remaining ax cut stumps and limb butts are also often in evidence, as they are at this site.

It is often difficult to distinguish between post-cutting remains and collapsed wickiups, however in the area surrounding 5MF2164 the sheer number of instances of these juniper-branch concentrations, and the obvious nature of many of them as historic limbing activities, leaves little or no doubt that those identified as wickiups are, in reality, fence post events.

Similarly, the brush enclosure that is located on the next small ridge to the northeast of 5MF2164 appears to be the remains of a historic feature and quite likely associated with the intensive fence post cutting in the area. The "corral" consists of a U-shaped brush wall with an opening in the uphill, or northwest side. The enclosure is made up of large uprooted juniper and piñon trees that have been pushed or pulled to the edges and southeast end of a low prominence, leaving a treeless clearing measuring approximately 20 to 25 meters in diameter.

The current researchers are not familiar with any aboriginal brush fences or corrals that consist exclusively of uprooted trees, especially ones of this size. It appears likely that either mechanized equipment such as a tractor or bulldozer was used in its construction, or possibly horses, as it would have been highly labor intensive without such an aid. It is hypothesized that the purpose of the enclosure was for the containment of livestock, possibly horses associated with the fence post cutting activity. Another possibility is that the feature was a staging area for collecting and transporting the fence posts out of the area.

Evaluation and Management Recommendation

The site was originally evaluated as eligible in part due to the presence of potentially datable hearths. Despite the current project's interpretation of the wooden features as being the result of recent, non-aboriginal activities, it is recommended that the original evaluation of the site as eligible for listing on the National Register of Historic Places, be maintained due to the apparent presence of buried prehistoric resources. Avoidance and preservation are recommended.

Site **5MF2631, the Sand Wash Wickiup Site**, is an open architectural site made up of aboriginal wooden features including wickiups, a single- or double-pole "leaner" or utility pole, a horizontal beam in a tree, and several apparent piles of firewood. In addition, the site has produced thermal features, chipped and ground stone tools and debitage, four projectile points (McKean lanceolate, Cottonwood Triangular, and two Desert Side-notched), hammerstones, ceramic sherds, a wooden awl or pin, an unfired clay ball, butchered bone, and cultural strips of juniper bark.

The site was initially recorded by G. Collins, B. Mansfield, and A. Ratcliff of the Colorado Archaeological Society in 1986, describing five possible wickiup structures (Structures A through E). In the fall of 1991 the site was partially excavated by staff and students from Western Wyoming College as a field school course under the direction of Steven Creasman. The site was mapped, Structure E was determined to be, in actuality, a cultural wood pile rather than a collapsed brush shelter, and two of the partially collapsed structures (Structures C and D) were excavated (Murcray et al 1993).

At the request of the Little Snake Field Office of the BLM a Class III cultural inventory of several parcels of land in Sand Wash Basin were surveyed by DARG in 2007 as part of the Colorado Wickiup Project. The inventory was specifically interested in determining the presence, or absence, of aboriginal wooden features in the vicinity of the Sand Wash Wickiup Site. Although no additional sites were encountered that definitely contained such features, site 5MF2631 was revisited and reevaluated as part of the project (Martin and Ott 2007a). In addition, sites 5MF6404.1 and 5MF6408 were newly recorded and contain brush animal control features that have been identified as being of possible aboriginal manufacture. These sites are described in this section.

The village is located atop a relatively narrow northwest-southeast trending ridge top at an elevation of 6610 feet–the original excavation report for this site mistakenly lists it at 6810 feet (ibid). The ridge is bounded by an unnamed, mustard and sage-covered valley to the southwest and by South Sand Wash Basin to the northeast (Figures A-7 and A-8). The locally-renowned Two Bar Spring, a permanent water source, is located 1.2km northeast of the site. The vegetation is mature juniper forest with occasional piñon trees and an understory that is limited to sage, prickly pear, and sparse bunch grasses. The soil consists of pale brown sandy loam underlain with a clay layer. The cultural deposits are no more than a few centimeters in depth and are confined to the upper sandy level (ibid). The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features.

All four of the previously recorded wickiups were relocated by the CWP. Descriptions of these features can be found in the original excavation report. In addition, the project located and identified two new wood piles on the site (Structures F, and G), a one-pole "leaner" or utility pole with a possible second utility pole lying on the ground surface nearby

(Structure H), a horizontal juniper beam in the branches of a tree (Structure I), and an additional wickiup structure (Structure J) situated approximately 85 meters to the northeast of the other structures. As a result, the boundary of the Sand Wash Wickiup site has been expanded to the northeast in order to incorporate the new feature and the new site boundary measures 240m north-south by 190m east-west. Each of the features, both those previously recorded and newly discovered, were photographed and mapped with a Trimble GPS unit.

The three wood piles, which quite apparently are directly associated with the aboriginal shelters, as no such collections of parallel-placed branches were found elsewhere in the vicinity, ranged from ten to twenty or more juniper branches that measured from less than 1 to more than 2.5m in length. One of these features is presumably the one designated as "Structure E" by the original recording, however its location was not revealed in the excavation report.

Structure H, located 3 to 4m to the southwest of wickiup Structure D, consists of a single juniper pole leaned into the lower branches of a live juniper support tree. Another similar pole rests on the ground slightly over a meter south of the standing pole. In the photo of Structure D in the excavation report (ibid, p. 20) what appears to be these two juniper poles can be seen still standing, and leaning into the tree side-by-side.

Structure I, 5m to the west of wickiup Structure B, consists of a single horizontal juniper branch that appears to have been intentionally placed into the branches of a still living juniper support tree at a height of approximately 1.2m above the ground surface. Horizontal beams, along with "leaner" poles such as those in Structure H, appear to have been utilized by Protohistoric peoples as general "utility" poles for suspending food, hides, and personal items off of the ground. Two additional juniper poles rest on the ground surface directly beneath the horizontal beam, and possibly represent additional structure poles that have fallen from the branches of the support tree.

Structure J, the newly discovered wickiup, is situated 85m northeast of the above described features. It consists of two standing juniper poles leaned onto the branches of a live juniper support tree. The bases of these two poles are separated by a distance of 3.1m. A large, dead, piñon tree has fallen onto the ground immediately to the south of these poles and apparently caused the collapse of additional structural poles when it came down. A number of juniper branches, presumably wickiup poles that had originally stood between the two remaining poles, can be seen on the ground surface beneath the fallen piñon.

A shallow trowel test in what would have been the central portion of the shelter floor, between the two standing poles and approximately 1m to the south of the trunk of the support tree, produced charcoal and small fragments of fire-cracked rock (FCR). Two chert flakes were found on the surface of the floor area and a concentration of 30 or more similar dark brown and dark gray, secondary and interior, chert flakes and a core are situated to the east, downslope, of the structure in an area measuring 4.0m east-west by 2.5m north-south.

Two unusual aspects of this feature that are uncommon when compared with a majority of Protohistoric brush shelters, are the presence of lithic debitage within and adjacent to the wickiup, and the fact that it is situated on a heavily washed talus that slopes steeply (18°) to the northeast.

One final observation that was made during the re-analysis of 5MF2631 regards an unusual architectural component involving the construction technique at the standing wickiup, Structure A. A small horizontal juniper branch, measuring up to 9cm in diameter and 1.2m in length, had been placed into a crotch of the juniper support tree by the architects at a height of approximately 1.4m above the ground surface. This horizontal beam, in addition to the branches and trunk of the tree, was then utilized as support onto which the upright wickiup poles were leaned. The crotch of the live support tree into which the horizontal beam was placed has grown completely around the butt of the cultural element.

A sparse lithic scatter was noted throughout the site, however only a few select, portable artifacts were recorded and mapped during this phase of the project (other than those newly discovered in association with Structure J as described above). These artifacts included a hammerstone, several flakes, and two anthills containing micro flakes.

Evaluation and Management Recommendation

Due to obvious site integrity, the presence of several rare and fragile aboriginal wooden structures, culturally and temporally diagnostic artifacts, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory, the site's previous evaluation as eligible for listing on the National Register of Historic Places is substantiated.

Preservation is recommended for the entire site area. The most obvious immediate threats to the site and its cultural features are from wildfire and the ongoing use of the ridge top by OHV recreationists. Closure of the ridge to off-road vehicles is highly recommended as is additional mitigative work such as metal detection, the completion of Aboriginal Wooden Feature forms for each feature, and additional excavations of the features and surrounding site area.

Site **5MF3737** consists of a large open camp site. It was revisited by DARG personnel in 2007 as part of a series of reevaluations of aboriginal wooden features in the Little Snake BLM district (Martin and Ott 2007b). It was originally recorded by Brian Naze, James Kresl, and Phillis Bowers of the Little Snake BLM in 1993, reevaluated by Scott Phillips and Michael Brack of Lone Mountain Archaeological Services in 2000, and again by Gary Collins and Sam Johnson in 2001.

The site is situated on three adjacent northeast-southwest trending ridges at an elevation of 6400 feet (Figures A-11 and A-12). It is in a piñon-juniper forest with an understory of sagebrush, prickly pear cactus, and bunch grasses. Soils are brown to light brown sandy loam of varying depths, possibly up to 75cm or more. The original site interpretations and size remains unchanged.

The four features previously recorded as possible collapsed wickiups were relocated near the south end of the site and reevaluated. Although site 5MF3737 is unquestionably an open camp with at least one Late Prehistoric to Early Historic component, none of the features previously recorded as wickiups are presently discernible as either indisputably non-cultural OR of cultural origin. As a result, these four features (Features 20, 22, 23, and 24) have been re-analyzed by the Colorado Wickiup Project as being "possible aboriginal wooden features."

It should be noted, however, that it is unlikely that any of these scatters of tree branches on the ground surface, or those leaning into trees, would have been recorded by the Colorado Wickiup Project had they not been previously designated as cultural features. The original feature designations have been maintained in the following descriptions. All of the previously recorded features were photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed for each.

Feature 20 consists of one possibly cultural branch suspended horizontally in a live juniper tree and two others scattered on ground nearby. The only readily apparent evidence to suggest a cultural origin for these wooden elements is their proximity to two hearths (Features 19 and 21) and a scatter of brownware sherds several meters to the west and southwest. One of these sherds has been submitted to the Luminescence Dating Laboratory for analysis, however the results have not yet been received.

Similarly, Feature 22 consists of one possibly cultural branch leaned into a live juniper tree and three others scattered on the ground nearby. The only readily apparent evidence to suggest a cultural origin for these wooden elements is their presence on a prehistoric camp site.

Feature 23 consists of four possibly cultural branches scattered on the ground surface. The only readily apparent evidence to suggest a cultural origin for these wooden elements is their presence on a prehistoric camp site.

Feature 24 consists of one possibly cultural branch suspended horizontally between two live juniper trees and four others scattered on the ground nearby. The only readily apparent evidence to suggest a cultural origin for these wooden elements is their presence on a prehistoric camp site.

Evaluation and Management Recommendation

The site was originally evaluated as eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of numerous apparently intact and buried thermal features, prehistoric ceramics, several possible aboriginal wooden structures, and its potential to yield important information regarding the area's Prehistory and Protohistory, this project concurs with the previous evaluation. Preservation and avoidance are recommended for the entire site area.

Site 5MF3993, the Gates of Lodore Tree Platform, is an open aboriginal architectural site that consists of a single wooden tree platform. The site was revisited by DARG personnel in 2007 as part of a series of reevaluations of aboriginal wooden features in the Little Snake BLM District (Martin and Ott 2007b). The site was originally recorded by the Little Snake Field Office of the BLM in 1994 by Brian Naze and Hal Keesling.

The site is located on a southeast-sloping talus below an east-west trending ridge at an elevation of 5780 feet (Figures A-13 and A-14). The vegetation consists of a mature piñon-juniper forest with an understory of sparse grasses, sagebrush, and prickly pear cactus. The soil consists of duff-covered light brown sandy loam of an unknown depth. With the exception of three microflakes on a nearby anthill, two additional nearby flakes, and a single possible bone bead beneath the feature, no portable artifacts of any description were noted in association with the feature. A 25m in diameter buffer zone was established around the feature. The feature was photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed.

Feature 1 consists of an intact, well-constructed tree platform made of 18 or more juniper and piñon beams and branches supported on the limbs of a very large, dead, piñon support tree (Plate 2). The eight to ten "floor" beams of the platform appear to have been ax-split lengthwise, and one of these exhibits a metal ax cut at mid-beam. The platform is situated 2.4m above the ground surface, is sub-triangular in outline, measures 2.1m by 1.5m, and encompasses an area of 2.0 square meters. One of the platform beams has a length of metal "baling" wire wrapped around it twice with a piece of wire connecting these two wraps. The purpose of this wire is undetermined, however it possibly could have been used as an anchor or "handle" during construction activities.

A possible bone bead was found on the surface of the duff directly below the platform. The uncollected specimen consists of a mid-section of a hollow bone (possibly a long bone from a large bird such as an eagle). Although it is squared off at each end (perpendicular to the length of the "tube"), it is impossible to determine if it was cut by human intervention, as

both ends have been gnawed by rodents. The specimen measures 2.1cm in length and 1.7cm in diameter and the interior diameter of the hole is 0.9cm.

Although there are apparently no human remains on the platform (when the feature was investigated by BLM archaeologists in 1994 the "pack rat nest" atop the platform was lifted in search of a burial and none was found), the CWP has interpreted the structure as a probable burial platform. This interpretation is based on the complex and labor-intensive nature of its construction, the spectacular view afforded by its location on the landscape, its similarity to Ute burial 5GF2914 in Garfield County, and the finding of a possible bone bead on the ground beneath the platform.

For obvious ethical reasons the platform and large nest of twigs and branches still resting atop it was not disturbed. A single dendrochronological sample was secured, however, from the metal ax cut butt of a sub-trunk near the base of the support tree; assuming that this trunk was cut at the same time as the platform construction, and, presumably utilized in its construction. Unfortunately no date resulted from the analysis of this sample. It could not be dated due to extremely tight and erratic growth rings, with numerous "locally absent rings". It nonetheless proved to be a notable sample in that the 5-inch radius of the tree trunk contained 617 rings (125 per inch). This secondary trunk, therefore, was 617 years old when it was cut. The main trunk of the tree would have germinated many (perhaps hundreds) of years before this sub-trunk!

The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features, the metal ax cuts on the support tree, and the wire on the platform itself.

Evaluation and Management Recommendation

Intact aboriginal platforms, especially ones interpreted as burial platforms, are extremely rare in the archaeological record, not only in Colorado, but throughout North America. In addition to its cultural and scientific value, the site potentially possesses profound spiritual significance for Native Americans, in particular the White River Utes. Due to the rare, fragile, and ephemeral nature of the structure and the site's potential to yield exceptionally valuable information regarding the area's prehistory, protohistory, and early history, the site's initial evaluation as eligible for placement on the National Register of Historic Places (NRHP) is strongly supported. Protection and preservation are highly recommended.

Although stabilization of the platform is conceivable, such a measure could only be viewed as a temporary solution as the support tree is dead and the collapse of the supporting branch, and the tree as a whole, is imminent. It is suggested that the site be monitored regularly and that the Ute tribe be immediately notified on the occasion of the collapse of the platform. At that time additional investigations into the exact nature of the platform, its

construction, and its contents are a possibility. Additional tree-ring samples could be secured that would hopefully aid in determining the date of the feature's construction. The decision as to whether to conduct such activities should be left to members of the Ute tribes and their assigned agents.

Site **5MF4368** was revisited by DARG personnel in 2007 as part of a series of reevaluations of aboriginal wooden features in the Little Snake BLM area (Martin and Ott 2007b). It was originally recorded by Hal Keesling of the Little Snake Field Office of the BLM in 1997. The site consists of a very large open architectural site with the remains of five apparent wickiups, situated along the top of a narrow northwest-southeast trending ridge line at an elevation of 7380 feet (Figures A-15 and A-16). Vegetation consists of piñon/juniper forest with an understory of sagebrush, saltbush, snakeweed, prickly pear cactus, and sparse bunch grasses. Soils are shallow, light brown to reddish-brown, shaley sandy loams.

The aboriginal wooden features are all clustered, in two separate loci, near the southeast end of the site. The original site dimensions of 640m north-south by 80m east-west remain unchanged. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features. All of the previously recorded features were relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed for each.

Features 1, 2, and 4 make up the northern-most locus. These three features are very close together and undoubtedly associated; all three collapsed structures are within an area measuring approximately 5m north-south by 2m east-west (Figure 4).

Feature 1 consists of ten juniper poles on the ground to the northeast of a cluster of three live juniper trees. This feature was recorded as a collapsed wickiup in the original report and, as there is no evidence to suggest otherwise, this project has maintained that classification. It appears to have been a leaner-style shelter, using the largest of the nearby junipers as a support tree.

Feature 2, located immediately north of Feature 1, also consists of a collection of collapsed juniper poles, and a single juniper pole leaning onto the branches of a live juniper support tree. In addition to the "leaner" pole, ten juniper poles rest on the ground to the east of a live juniper tree. Again, the feature was recorded as a collapsed wickiup in the original report and, as there is no evidence to suggest otherwise, this project has maintained that classification. It appears to have been a leaner-style shelter, using the juniper which still sustains the upright pole as a support tree. One of the poles is notably longer than the others and was possibly used as a rack or utility pole on the exterior of the shelter. A fragment of

highly deteriorated, unburnt mammal bone was collected from the ground surface between Features 2 and 4 for potential bone collagen dating (specimen 5MF4368.s5). This specimen remains unprocessed.

Feature 4 is located immediately north of Feature 2 and, again, consists of a partially collapsed leaner-style wickiup. In addition to two juniper poles still leaning onto the limbs and trunks of two live juniper support trees, it is made up of 18 or more juniper poles on the ground to the east of the support trees. There is also a small concentration of ashy soil among the northern-most collapsed feature poles that possibly indicates the location of an associated interior or exterior hearth.

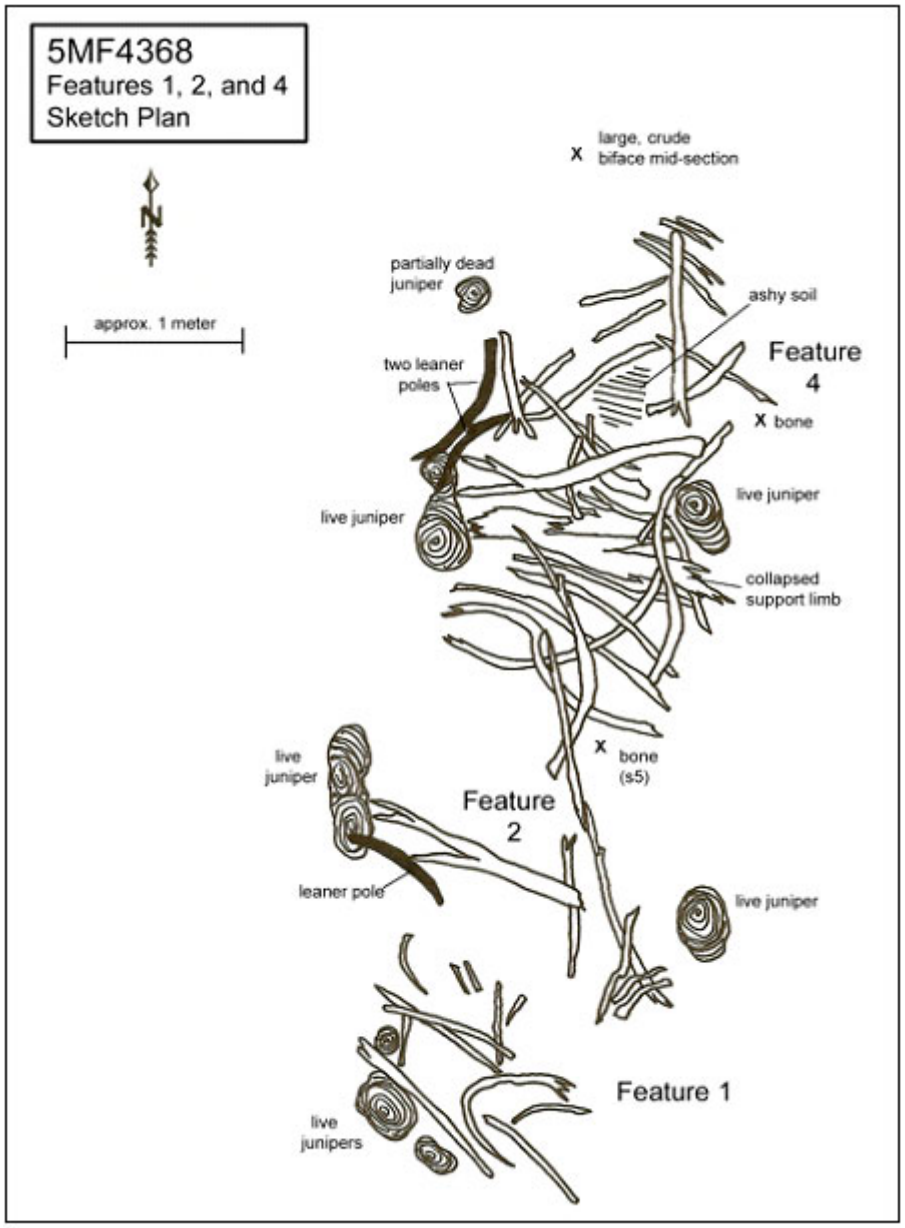


Figure 4. Sketch plan of Features 1, 2, and 4 at 5MF4368.

Feature 3, located approximately 18m south of Features 1, 2, and 4, consists of two additional collections of collapsed juniper poles and a single standing "leaner"pole that appear to represent the remains of two collapsed freestanding wickiups (Figure 5). These features were recorded as a single collapsed wickiup in the original site description, however the evidence suggests that there were two shelters with a hearth feature between the two.

What we have designated as Feature 3-A consists of a single upright juniper pole leaning onto a narrow, spindly, branch of a live juniper tree and seven juniper poles on the ground to the northeast of the support tree. It appears that the leaner pole has fallen into its current position in the not too distant past, however the twig on which it rests has partially grown around the feature pole, and the feature has therefore been recorded as the remains of a freestanding, as opposed to leaner-style, wickiup. An ash stain exists between this feature and Feature 3-B. Within the ash stain were noted a number of charcoal fragments, several chert flakes, and burnt and unburnt mammal bone. Three specimens of the bone were collected, one burnt and two unburnt, for potential bone collagen dating (5MF4368.s1 through .s3). These specimens remain unprocessed.

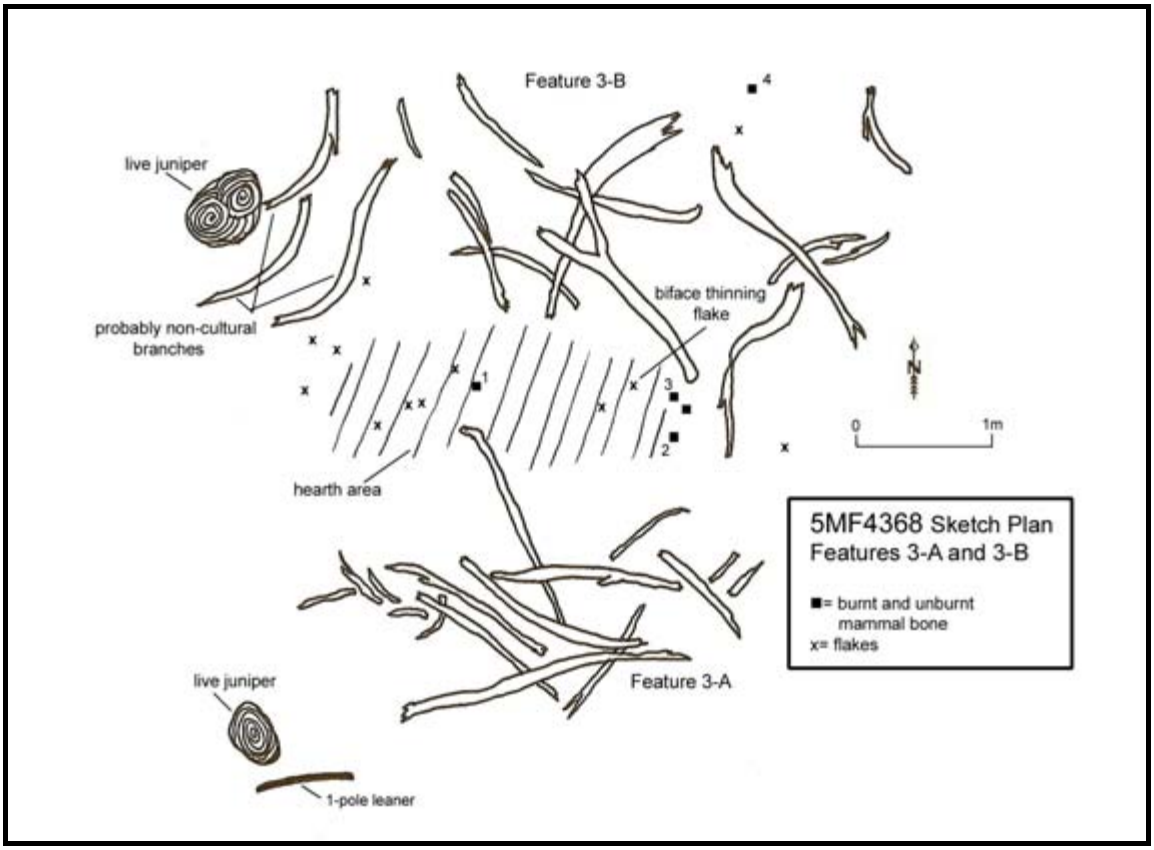


Figure 5. Sketch plan of 5MF4368, Features 3-A and 3-B, collapsed freestanding wickiups.

Feature 3-B, 1.5m north of Feature 3-A, consists of eight or more juniper poles on the ground. There are no adjacent standing trees and the feature has been recorded as the remains of a freestanding wickiup. A fourth fragment of, as yet unprocessed burnt bone was collected from immediately east of Feature 3-B (specimen 5MF4368.s4).

Evaluation and Management Recommendation

The site has been officially determined to be eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, thermal features, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, it is recommended that the current project's research be used to substantiate the site's eligibility. Preservation is recommended for the entire site area. The wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of the features, are recommended.

Site **5MF6404.1** is a linear feature composed of a brush fence and a post-and-barbed wire fence line. The site runs northwest-southeast along the northeast rim of a large plateau overlooking an unnamed, mustard and sage-covered valley to the northeast, and then turns to the northeast, runs down the talus slope and into the valley itself (Figures A-7 and A-9). The site measures approximately 0.85 mile long northeast-southwest, however it extends for an undetermined distance out of the project area at each end. Its northeastern portion has been destroyed by fire where it crosses the valley floor. It is possible that it originally connected to a short section of brush fence that has been recorded as an historic element on prehistoric site 5MF6408 on the ridge top across the valley to the northeast. This section of the site ranges in elevation from 6480 feet on the valley floor to 6800 feet on the rim of the plateau.

The vegetation is mature juniper forest with occasional piñon pines. The understory is sage, prickly pear cactus, ephedra, occasional mountain mahogany, and sparse grasses. The soils are brown and pale brown sandy loam. The depth of these fairly shallow soils is unknown but is at least 35cm.

This site was newly recorded as part of a Class III cultural inventory of several parcels of land in Sand Wash Basin by DARG in 2007 as part of the Colorado Wickiup Project for the Little Snake Field Office of the BLM. The inventory was specifically interested in determining the presence, or absence, of aboriginal wooden features in the vicinity of the Sand Wash Wickiup Site.

The site consists of a nearly unbroken drift fence constructed of piled juniper and piñon trunks and branches. The brush has been gathered from the immediate vicinity of the fence

itself and there are many instances where dead trees were uprooted or in situ tree branches have simply been bent or broken from adjacent trees to incorporate them into the barrier fence. There are numerous live trees that were integrated into the construction of the fence and there is evidence of steel axes used in brush collection. The fence averages from three to six feet in height and width throughout its length, although in places it has naturally collapsed, and has been crushed and breeched by OHVs. As originally constructed, with foliage and smaller twigs intact on trunks and limbs, it undoubtedly provided a formidable and effective barrier, presumably for use in large animal control.

At the point where the fence passes from the forest to the open grassy meadow of the valley floor it changes in character from brush to cedar (juniper) fence posts and barbed wire. This portion of the feature has been burned, apparently during activities to clear the sagebrush from the valley, and all that remains of this eastern portion of the fence line are the charred stumps of the posts and rusted lengths of barbed wire. It is assumed that the fence originally crossed the valley and extended onto the next ridge to the northeast, however, direct evidence of this has been obliterated by fire.

No artifacts were found in obvious association with the fence other than the feature itself, however Isolated Find 5MF6414.IF, a chert chopper, was found 1.2m to the southeast of the fence just before it leaves the forested area and heads out across the open valley. Based upon the barbed wire section of the feature, the drift fence is apparently associated with the historic sheep herding, cattle ranching, or wild horse wrangling activities in the area. However, recent investigations have been conducted in northwest Colorado, southwest Wyoming, and northeast Utah that suggest that at least some of the linear brush fences and corrals in the region are of Protohistoric to Early Historic Ute construction, and associated with wild horse control and capture (Keyser 2007 and Bailey 2005). This possibility should not be ruled out for 5MF6404.1 and the other brush fences in the Sand Wash and Piceance Basin areas (including the fence and corral that constitute the "historic" component of site 5MF6408 discussed below).

Evaluation and Management Recommendation

Due to the potential of this feature being associated with a regional animal control system, the possibility that it could be of aboriginal construction, and the potential for this site to yield additional information regarding the area's protohistory or history, it is field evaluated as eligible for listing on the National Register of Historic Places. Preservation of this feature, at least until further evidence has been procured regarding its cultural affiliation and construction date, is recommended, as is the collection and analysis of a series of dendrochronological samples from the wooden elements of the fence.

Site **5MF6408** consists of a large prehistoric open camp site, with a historic component, that is located along the same narrow, northwest-southeast trending ridge line as the Sand Wash Wickiup site, and to the northwest (Figures A-7 and A-10). The ridge is bounded by an unnamed, mustard and sage-covered valley to the southwest and by the South Sand Wash Basin to the northeast. The locally-renowned Two Bar Spring, a permanent water source, is located 300m to the northeast of the northern portion of the site. The site measures approximately 1.5 km northwest-southeast by 500 m northeast-southwest and ranges in elevation from 6580 to 6640 feet. The southern half of the site appears to extend to the northeast, on a series of wooded benches, for an undetermined distance out of the surveyed area.

The vegetation is mature juniper forest with occasional piñon pines. The understory is limited to sage, prickly pear cactus, and sparse grasses. The soils are stabilized dunes of brown and pale brown very sandy loam with very little rock or gravel and no bedrock exposures. The depth of these soils is unknown but is at least 75cm. The dunes are characterized by numerous blow-outs and erosional rills where the topsoil is completely missing, interspersed with stabilized areas of juniper growth and circular hummocks of grass.

This site was newly recorded as part of a Class III cultural inventory of several parcels of land in Sand Wash Basin by DARG in 2007 as part of the Colorado Wickiup Project for the Little Snake Field Office of the BLM. The inventory was specifically interested in determining the presence, or absence, of aboriginal wooden features in the vicinity of the Sand Wash Wickiup Site.

The site is characterized by a sparse-to-dense scatter of an estimated one hundred thousand flakes with over 50 high density concentrations of from ten to 1500 or more flakes and cores (Figure A-10). Although it is implicit that the integrity of this mostly buried site is intact, for the most part these concentrations, rather than reflecting actual finite activity areas, are defined by the blow-outs and other areas where the top soil has been stripped away. These include the churned traces of the numerous OHV trails that crisscross the site. Often, as illustrated on the site map , these lithic concentrations were also characterized by thermal features in the form of deflated areas of ash-stained soil, FCR, and oxidized sandstone however no formal hearth features could be delineated from the surface inspection. It is estimated that at least 50% of the cultural materials on the site remain buried.

It is quite possible that heat-treatment of the tool stone materials was occurring on the site; pot-lidding was noted particularly on a significant percentage of the black chert. It is even a possibility that the black chert's color is a result of heating in a fire hearth (either intentionally or inadvertently).

The sole projectile point fragment located during the project, was recovered at site 5MF6408, and is comparable to ones associated with the Archaic Era. Although somewhat small for the type, the specimen is well within the parameters, and most similar to, the Elko Side-notched points that have been dated to archaeological contexts dating throughout the

Archaic, and dating from ca.6400-400BC, and into the later Formative period (from 400BC-AD1300) as defined by Reed and Metcalf (1999).

The lithic materials consist of approximately 95% chert and the remaining 5% are light yellowish-brown and brown porcellanite (siltstone) and gray, light gray, and red orthoquartzite. With the exception of a semi-translucent "root beer" brown chert from Miocene deposits, the remainder of the opalitic cherts appear to all be from localized sources of the Green River formation and, although a wide variety of colors and patterns exist, they often blend from one to another in the same specimens and may well have originated from the same nearby source area or areas. The colors of the chert include black, dark to pale brown, opaque "gun metal" gray, mottled gray, yellow/pale brown tiger striped, red-and-yellow, mottled yellow/pale brown, and a very few striking black/white tiger striped flakes.

In addition to the flakes and cores there existed a large number of unmodified naturally-occurring small nodules and angular chunks of chert and tested cobbles of the same. However, considering the proximity of known sources for the lithic materials it is somewhat surprising that only approximately 10% of the debitage retained cortical surface; very little of which could be categorized as primary. The flakes ranged in size from large (greater than 5cm in diameter) to micro (minute pressure flakes of no more than 5mm in length). Although a certain amount of the tool stone appears to be naturally-occurring on the site, the site is not properly classified as a "quarry" or procurement area. For one, a majority of the unmodified nodules of chert are too small to be of use as tool stone, secondly the amount of cortex within the assemblage is not inordinately high, and third the site obviously served as a tool production area (as noted by the scores of micro flakes present on the numerous anthills), and campsite.

However, although a the percentage of the flakes that exhibited retouch and/or utilization appeared typical for such lithic sites, surprisingly few chipped and ground stone tools were noted on the site surface. It is speculated that this paucity is the result of the intensive "arrowhead hunting" that is known to have occurred in Sand Wash Basin as a whole, and in the Two Bar Spring area specifically. This theory is substantiated by the presence of numerous "collector's piles" of flakes that number up to 100 or more artifacts in each. Even the specimens of ground stone that were noted consist primarily of small fragments of heavily weathered, often oxidized, quartzitic sandstone.

In addition to several bifaces and unifaces noted on the site surface (one of which appears to be a non-diagnostic projectile point tip), four similar and unusual tools were recorded from disparate locations. They consist of very large flakes that have had several large, expedient, primarily unifacial flakes removed from their distal edges to create a crude, rather dull cutting or chopping edge. It is hypothesized that the thick, bulky tools (some of which would require two hands to utilize efficiently), were used either in woodworking, such as for the stripping of bark and twigs from juniper trees or poles, or for heavy-duty butchering activities such as the crushing and splitting of large animal bones. All of these specimens are

of an identical material: gray metamorphosed quartzitic sandstone with veins of dark grayish-blue. They range in size from 14 x 6 x 3cm in thickness up to a massive specimen measuring 24 x 15 x 5cm. They have been categorized in this study as “large flake choppers”.

The apparent historic component of the site consists of two sections of brush drift fence and a small corral with associated wing fences. The drift fence, similar in style and execution to the one across the valley to the southwest, site 5MF6404.1, consists of a linear feature of piled juniper and piñon trunks and branches. The brush has been gathered from the immediate vicinity of the fence itself and there are instances where dead trees were uprooted or *in situ* tree branches have simply been bent or broken from adjacent trees to incorporate them into the barrier fence. Several live trees were integrated into the construction and there is evidence of steel axes having been used in the brush collection. The fence averages from three to five feet high and wide in most places although it has collapsed, been crushed, and breeched with OHV trails in places. It undoubtedly provided a more formidable barrier when originally constructed, when the foliage and smaller twigs remained on the brush. The northernmost section of fence measures approximately 460 yards in length and extends east-west across the top of the ridge, eventually paralleling the two-track road that passes through the site and leads northwards to Two Bar Spring. The other fence consists of a 260 foot long section near the south end of the site that creates an arch that trends roughly north-south.

The brush corral, situated immediately to the southeast of a saddle in the ridge top, consists of an enclosure with a gate and a pair of wing fences on the exterior. These features are constructed of cut and gathered juniper and piñon limbs and trunks, hog wire fencing, and barbed wire. Several live trees are incorporated into the construction. The crudely-constructed, roughly oval corral measures 32 x 18 feet. Its walls average four feet in height depending on the nature of the brush pile. In the southeast corner of the corral an opening has been left in the fence between two juniper trees for access. A gate, constructed of a section of four-foot high hog wire with a juniper pole at each end, remains connected to the eastern side of the opening in the "open" position.

Two wing, or drift, fences extend from either side of the gate opening, one leading 105 feet to the southwest, and the other extending 50 feet to the west. These fences were obviously constructed to aid in the movement of livestock, presumably domestic sheep, but possibly horses or cattle, into the corral.

Based upon the barbed wire and hog wire elements of the drift fence, corral, and wing fences, these features are presumed to be associated with the historic sheep herding, cattle ranching, or wild horse wrangling activities in the area. However, recent investigations have been conducted in northwest Colorado, southwest Wyoming, and northeast Utah that suggest that at least some of the linear brush fences and corrals in the region are of Protohistoric to Early Historic Ute construction, and associated with wild horse control and capture (Keyser 2007 and Bailey 2005). This possibility should not be ruled out at 5MF6408 and the other

brush fences in the Sand Wash and Piceance Basin areas (including the fence that makes up site 5MF6404.1 discussed above, which is possibly associated with the fence at 5MF6408).

Evaluation and Management Recommendation

Due to apparent site integrity, the presence of thermal features, and the indisputable presence of substantial subsurface artifacts and features that would be likely to yield important information regarding the area's prehistory and history, the site is field evaluated as eligible for listing on the National Register of Historic Places. Preservation is recommended for the entire site area. The most obvious immediate threat to the site is the ongoing use of the ridge top by OHV recreationists. Closure of the ridge to off-road vehicles is highly recommended as is test excavations to ascertain the nature and extent of the subsurface cultural deposits.

Site **5RB18, the Two Tall Pole Wickiup Village**, is a large, open village of aboriginal wooden features including wickiups, a possible tipi, a lean-to, a tripod, utility poles and racks, pole caches, firewood piles, and a culturally modified tree (Figure 6). In addition, the site has produced thermal features, a sparse lithic debitage scatter, glass seed beads, and Desert Side-notched and Cottonwood Triangular projectile points.

The village is located on a very broad, gently southeast-sloping mesa top at an elevation ranging from 6530 to 6560 feet (Figures A-17 and A-18). The vegetation consists of mature piñon/juniper forest with an understory of sagebrush, snakeweed, Indian ricegrass, and other bunch grasses. The soil varies from brown to reddish-brown and from loose sandy silt and sandy loam to pebbly clay loam of varying depths of up to 40 or more centimeters.

The site was originally recorded by Matthew Freedman of the Laboratory of Public Archaeology (Colorado State University) in 1973. Reevaluations of the site have been conducted by Alan Olson of Denver University in 1975 and Carl Conner and Barbara Davenport of Grand River Institute in 1999 (GRI report #9926: CRI of the Rock School Project Sodium Bicarbonate Facility for AmerAlia, Inc.)

All of the previously recorded features were relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed for each. A metal detector was utilized to scan a majority of the site area with special emphasis beneath and surrounding each of the wooden features. No metal artifacts were located, despite the fact that other evidence of European trade goods existed on the site in the form of metal ax cut poles and glass seed beads. A very sparse lithic scatter on the site was noted and additional collections were made in the form of beads (Plate 13c), a Desert Side-notched projectile point (Plate 14a), an obsidian flake, dendrochronological samples from metal ax cut cultural poles, cultural bone–including burnt and unburnt fragments of rabbit and deer with butchering

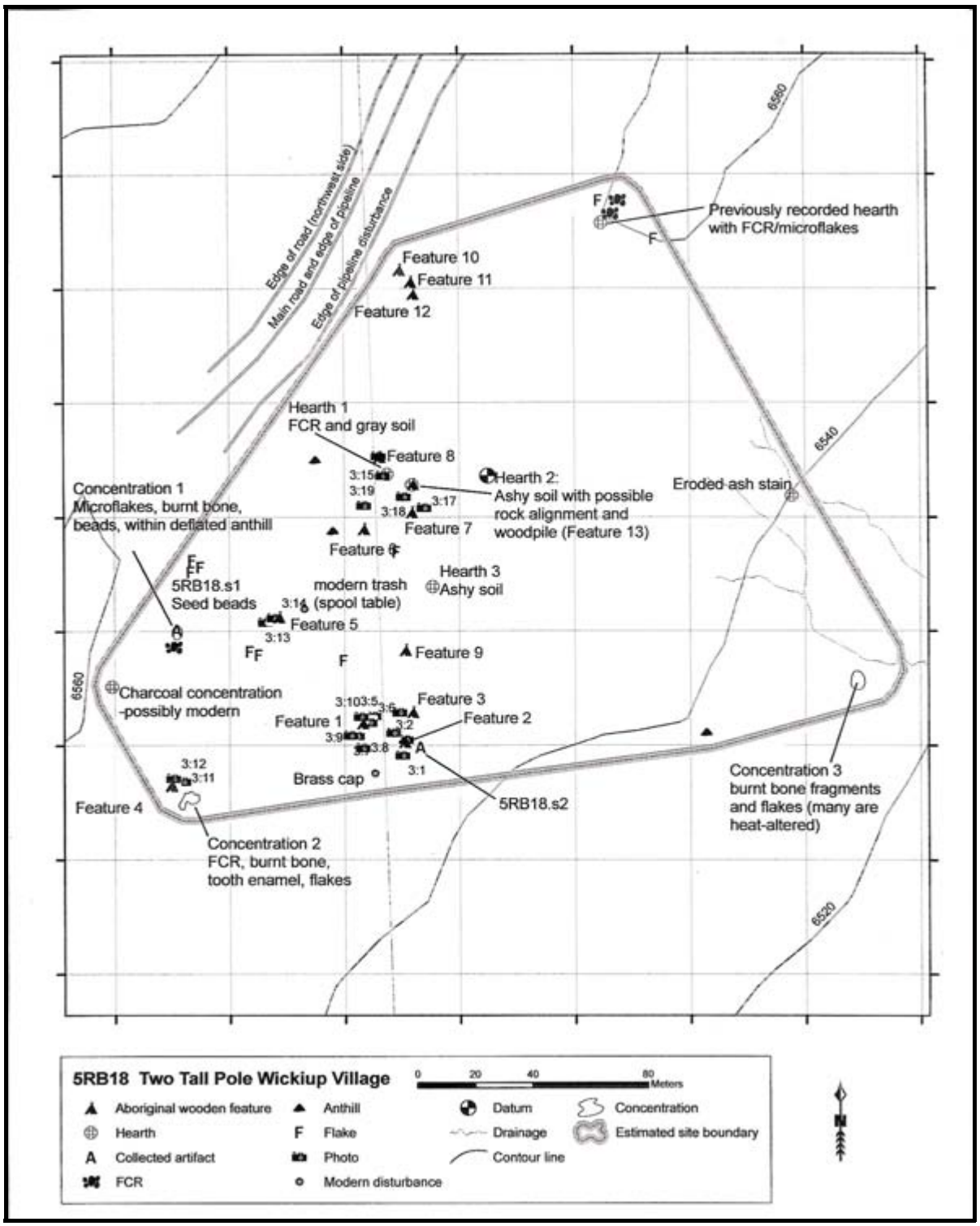


Figure 6. Site plan of 5RB18, Two Tall Pole Wickiup Village.

marks and green fractures (Plate14c), juniper bark mat fragments, and soil samples from wickiup floors.

Five tree-ring samples were collected from metal ax cut cultural wood on the site and the results appear to indicate that there were, at minimum, two Protohistoric to Early Historic occupations at the site. Unfortunately three of the dendrochronological samples proved to be undatable due to tight or erratic ring series. However, two widely spaced dates were secured: an early date of ca. AD1844 from Feature 6 and a very late date of AD1915/1916 from Feature 1.

The original site recordations identified eight wickiups within a site measuring 140m by 260m. The Colorado Wickiup Project has increased the site size to 230m north-south by 280m east-west and the total number of wooden features on the site to 13. The numerical portion of the previous system of inventorying the various wooden features as “Wickiups 1" through “8" was maintained by DARG (however they have been renamed as “Features”) and additional features were numbered beginning with Feature 9. Table 2 presents a list of the feature designations and short descriptions.

Table 2: List of Features at The Two Tall Pole Wickiup Village

TWO TALL POLE WICKIUP VILLAGE (5RB18)	
Designation	**Description**
Feature 1	Partially Collapsed Leaner Wickiup
Feature 2	Partially Collapsed Leaner Wickiup (Possibly Tipi)
Feature 3	Utility Rack or Pole Cache
Feature 4	Partially Collapsed Leaner Wickiup
Feature 5	Standing Pole Cache
Feature 6	Collapsed Freestanding Tripod or Utility Rack
Feature 7	Collapsed Freestanding Wickiup
Feature 8	Partially Collapsed Freestanding Wickiup
Feature 9	Partially Collapsed Pole or Firewood Cache
Feature 10	Partially Collapsed Windbreak or Lean-To Shelter
Feature 11	Firewood Pile

Designation	Description
Feature 12	Culturally Modified Juniper Tree
Feature 13	Firewood Pile

Feature 1 is a partially collapsed leaner wickiup. It is one of the best preserved standing wickiups known in western Colorado, with 15 of the 29 poles still standing and leaning onto the limbs and trunk of a live juniper support tree (Plate 3). An apparent entryway between two of the standing poles, and beneath a small supplemental "roof" of three twigs, is on the northeast side of the shelter. It is also interesting that only one of the feature's poles (Pole #13) is metal ax cut, and it is cut at both ends. A dendrochronological core from near the butt

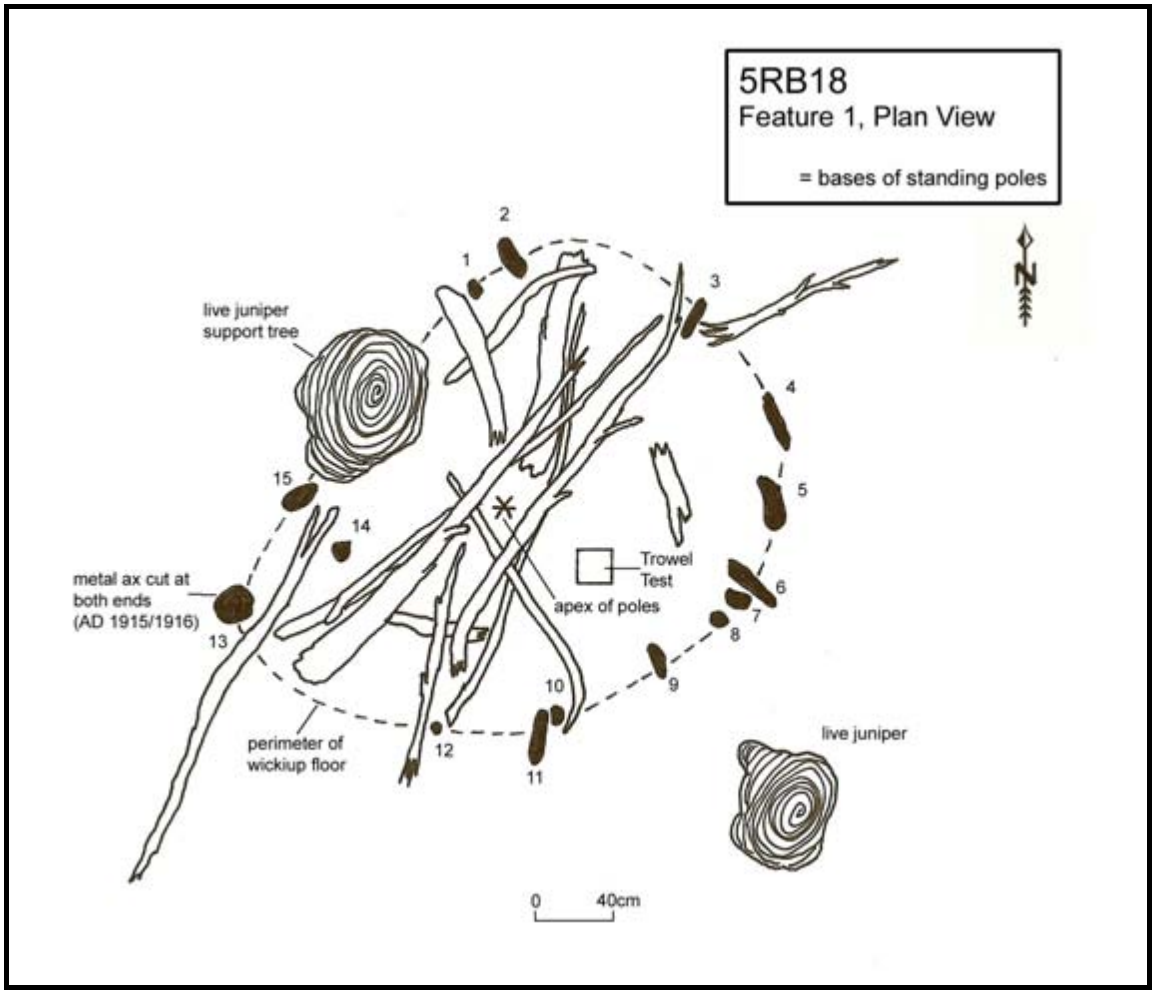


Figure 7. Plan map of Feature 1 at 5RB18, Two Tall Pole Wickiup Village.

of this pole produced a cutting date from the fall/winter/spring of AD1915/1916; the latest absolute date in the CWP's database for an aboriginal wooden feature in western Colorado. Feature 1 has an oval floor with a diameter of 1.8m to 2.3m and an interior headroom of 1.3m (Figure 7).

A non-productive trowel test was conducted into the floor of the wickiup. No hearth or directly associated portable artifacts were noted at or near the feature.

Feature 2 is another partially collapsed leaner wickiup consisting of only two standing poles and two additional collapsed poles. The structure has unusually long poles (serving as the namesake for the "Two Tall Pole Wickiup Village"), high headroom, and large floor size suggesting that it was most likely covered by hides or canvas (as opposed to merely brush) and could possibly represent the remains of a tipi rather than a wickiup *per* se (Plate 4). This could explain why only four poles remain, as tipis often utilized fewer poles and/or the poles were typically taken away by the occupants when a site was abandoned. Examples of large "leaner" tipis supported by trees are known from historic photographs (Plate 5).

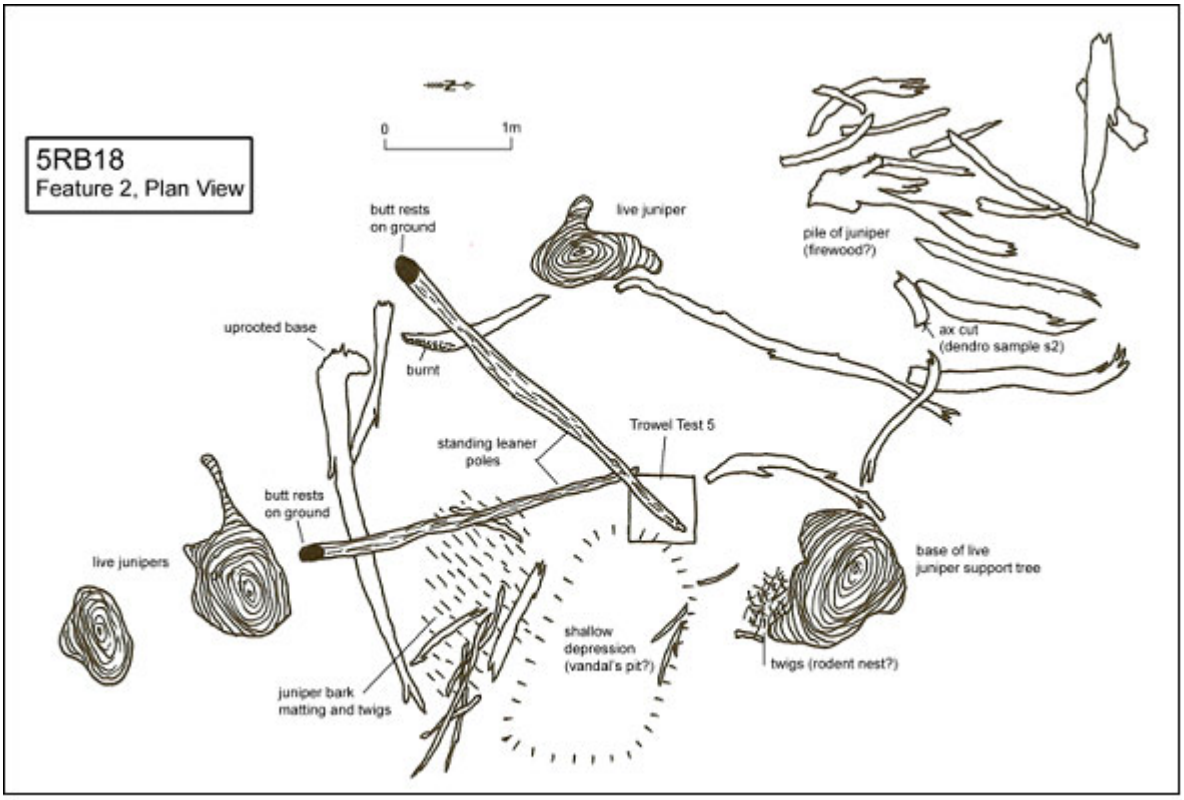


Figure 8. Plan map of Feature 2 at 5RB18, Two Tall Pole Wickiup Village.

The floor of the wickiup measures 3.50m in diameter and the interior headroom, as indicated by the two tall standing poles, is 2.20m. The floor area is calculated at 9.6 square meters (Figure 8).

Five trowel tests were conducted within the interior of the wickiup. No artifacts were encountered, however burnt and unburnt, butchered, green fractured, and calcined (extremely heated) bone fragments of Odocoileus (deer) and Sylvilagus (rabbit) were recovered (Plate 14c) as were remnants of juniper bark matting and what appears to be evidence of a centrally located interior hearth.

Feature 3 is a collapsed two-pole utility rack or pole cache that possibly had originally been supported by a living juniper tree to the east of the poles. Both of the poles now rest on the ground surface. No hearth or directly associated portable artifacts were noted at or near the feature.

Feature 4 is a partially collapsed leaner wickiup with two standing poles supported by the trunk of a live juniper tree, and five additional poles collapsed nearby. Several fragments of charcoal and burnt bone were noted beneath the duff among the collapsed wickiup poles, suggesting the possibility of an interior hearth, and FCR and flake concentrations also exist several meters to the southeast of the shelter. The 1999 reevaluation report mentions that a large biface was collected near this feature.

Feature 5 is a standing pole cache. It is somewhat unusual in its design in that the two poles, spaced 60cm to 90cm apart, are leaned against the west side of a large, horizontally-growing juniper branch. The original placement of one of the poles remains in question as only one was reported to be standing in the 1999 report.

Feature 6 is a collapsed freestanding tripod or utility rack. Three of the four cultural poles retain a tripod shape where they have collapsed onto the ground surface. One of these pole ends, and that of the fourth pole nearby, exhibit metal ax cut ends. This is the first freestanding utility rack thus far recognized by the Colorado Wickiup Project, which is somewhat surprising considering the commonality of freestanding tripods shown in historic photographs of Ute and other Native American encampments.

Tree-ring samples were collected from both of the metal ax cut poles. One of the samples could not be dated, however the second one produced a non-cutting date of AD1844. Even though an unknown number of outside rings are missing from this pole, it is highly unlikely that enough have weathered away to make this feature contemporaneous with Feature 1 which produced a cutting date of AD1915/1916. The accuracy of these dates is, of course, contingent upon the assumption that they were ax cut while green and still growing.

Feature 7 is a collapsed freestanding wickiup. All 14 of the structural poles rest on the ground. It is possible that the shelter was originally supported by a still extant overhanging limb of a nearby live juniper tree, however no direct evidence remains to substantiate this. Five small fragments of charcoal were noted at the southwest edge of the collapsed poles and

six others near the center of the pole concentration suggesting the possibility of an associated hearth. Also, Hearth 2, an area of ashy soil with a nearby possibly-cultural rock alignment and a possible firewood pile (Feature 13) are located 10m to the north.

Feature 8 is a partially collapsed freestanding wickiup. Thirteen of the 14 structural poles rest on the ground, and the remaining pole has fallen against the base of a nearby juniper tree. The original nature of the structure is undeterminable and it could also have been a utility rack of some description. It is possible that the shelter was originally supported by a still extant overhanging limb of the tree, however no direct evidence remains to substantiate this.

A trowel test conducted at the east edge of the pole scatter produced slightly ashy soil, numerous small fragments of charcoal, and one small burnt bone fragment. Also, Hearth 1, a concentration of FCR and gray (possibly ashy) soil is located 7m southeast of the feature.

Feature 9 is a newly recorded, partially collapsed three-pole pole cache (or possibly simply a firewood cache). One of the poles is leaning against the trunk of a live juniper tree and the other two now rest on the ground surface. No hearth or directly associated portable artifacts were noted at or near the feature.

Feature 10 is a newly recorded, partially collapsed windbreak or lean-to style shelter with nine standing poles and four additional collapsed poles. The feature is atypical not only because of its lean-to design but also by the use of a main pole that leans onto the dead standing juniper support tree. Four of the standing poles lean onto this main pole and four others lean directly onto the support tree trunk. Also, unusually small twigs and branches were used–two of those leaned against the trunk are un-limbed, less than 1m long, and range from only 2.5cm to 4cm in mid-pole diameter.

Feature 11 is a newly recorded firewood pile associated with Feature 10. It consists of two adjacent stacks of juniper wood with the sticks in each pile lying roughly parallel to each other on the ground; as apparently distinct “arm loads” of wood. Several fragments of charcoal and some ash-stained soil are present in the immediate vicinity that possibly indicate the presence, or former presence, of an associated hearth.

Feature 12 consists of a newly recorded culturally modified tree, also associated with Features 10 and 11. A living juniper tree exhibits a horizontal ax (or saw?) cut mark on the western side of its trunk at a height of 77cm above the present ground surface. The bark below the cut appears to have been partially stripped from the cut down nearly to the ground surface. To the south, and approximately 20cm above the ground, is a smaller branch that also appears to have been stripped of its bark.

Feature 13 is another newly recorded firewood pile. It consists of a collection of juniper wood with the branches lying roughly parallel to each other on the ground and near an apparent hearth area. To the northwest of Feature 13 is a six meter long, semi-circular

alignment of unmodified sandstone slabs and cobbles that trends northeast-southwest. An area of FCR and gray (possibly ashy) soil measuring approximately one meter in diameter is situated beneath and immediately north of Feature 13.

Evaluation and Management Recommendation

The site has been officially determined to be eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, thermal features, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, it is recommended that the current project's research be used to substantiate the site's eligibility. Preservation is recommended for the entire site area. The wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of the features, is recommended.

Site **5RB53, the Duck Creek Wickiup Village**, is a large, open village of aboriginal wooden features including wickiups, a possible tipi, utility poles, a livestock pen, and a culturally modified tree consisting of a series of pulled down branches (Figure 9). In addition, the site has produced thermal features and a few lithic flakes. The original site form mentions that flakes, hammerstones, manos, scrapers, a metate fragment, and a projectile point were collected from the site surface however no additional descriptions are provided.

The village is located on the southwest end of a ridge top at an elevation ranging from 6480 to 6530 feet (Figures A-19 and A-20). The vegetation consists of piñon/juniper forest with an understory of sagebrush, prickly pear cactus, snakeweed, and sparse bunch grasses. The soil consists of brown to light-brown pebbly, sandy loam of varying depths of up to 30 or more centimeters. The Colorado Wickiup Project has increased the site size to 190m northeast-southwest by 100m northwest-southeast. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features.

This site was placed on the National Register of Historic Places in 1973 and a protective fence was constructed around the site under the direction of the BLM. A metal plaque was erected outside the person-gate to the site that identifies the resource as the Duck Creek Wickiup Village and suggests that it is the "largest reported village of this type in Colorado having standing wickiups"–a claim that is certainly no longer valid.

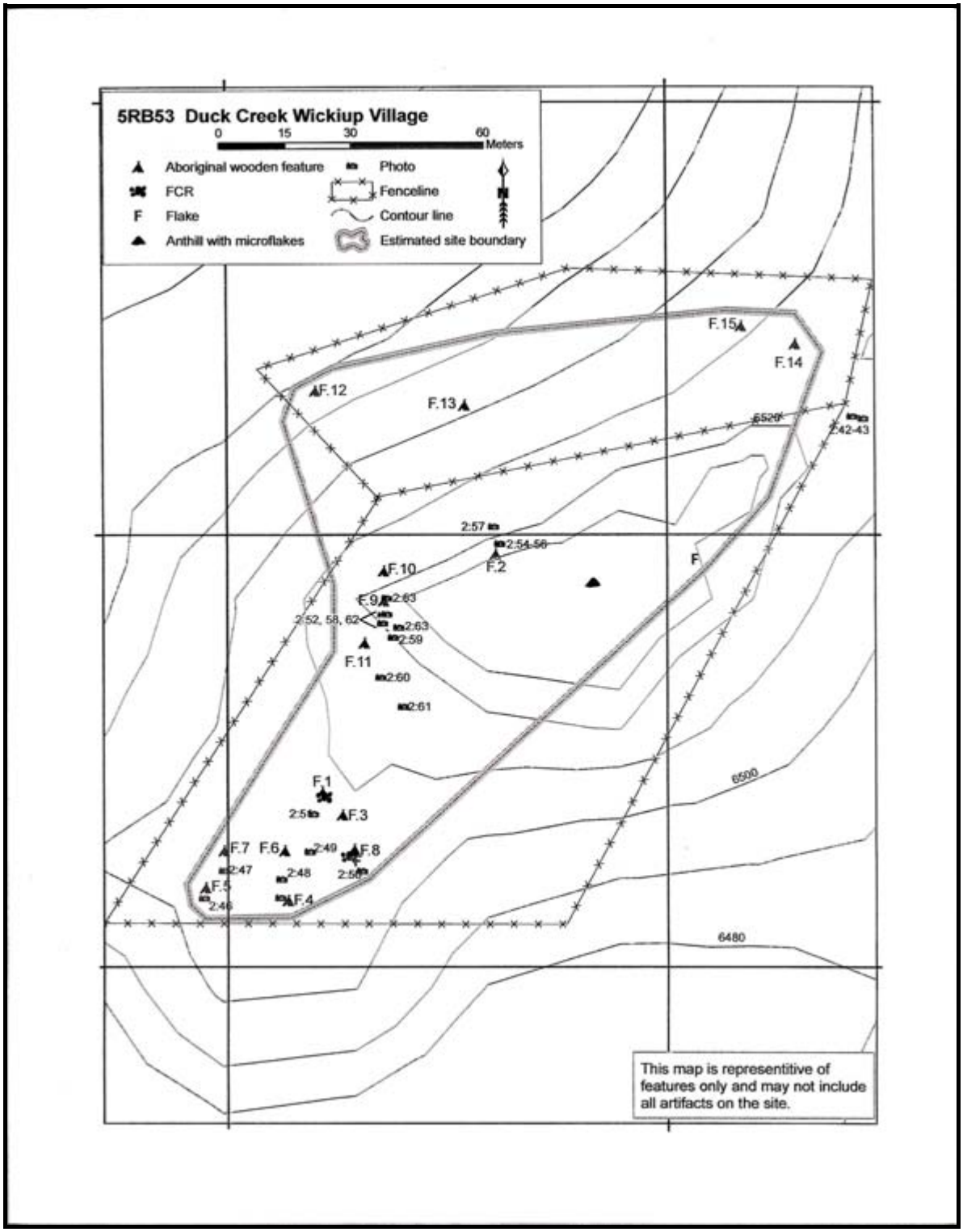


Figure 9. Site plan of 5RB53, Duck Creek Wickiup Village.

The site was originally recorded by Bob Hurlbutt of the University of Colorado in 1973. A reevaluation of the site was conducted by the BLM in 1976. The 1973 site form mentions "11 wickiup structures on the site and four to six probable wickiup remains to the northwest and southwest of the site." A very crude site map is appended to the site form showing the rough locations of the 11 primary "wickiups" with no feature descriptions or photographs provided. Using this map as a guide the DARG field crew was able to locate what appears to be all of these 11 previously recorded features, which were photographed, measured, and placed on the USGS map with the aid of a Trimble GeoXT GPS unit.

Six of these features ("Wickiups" 1, 3, 4, 5, 7, and 8) were determined to be non-cultural concentrations of wooden branches or trees that have died and collapsed onto other trees. It is possible that the remains of aboriginal wooden features that were recorded in 1973 have deteriorated to the point of being no longer identifiable as cultural manifestations, however this is unlikely at this particular site. Also, it is rumored that some feature poles from this site were unwittingly removed and used as posts during a fencing project several decades ago.

For each of the remaining five features, an Aboriginal Wooden Feature Component Form was completed. In addition, four more wooden features, Features 12 through 15, were found by the DARG crew at the conclusion of the 2007 field season and remain only partially recorded–it is recommended that additional measurements and more thorough component forms be completed for these features in the future.

A metal detector was utilized to scan a majority of the site area with special emphasis within and surrounding each of the wooden features. No metal artifacts were located, and no other evidence of European trade goods were found on the site in the form of metal ax cut poles, glass beads, etc. during the 2007 field season, however, during a revisit to the site by the CWP crew in 2008, a metal chain fragment and a .44 caliber cartridge were found near Feature 14, and will be reported on in the Phase V report.

Table 3 presents a list of the feature designations and short descriptions.

Table 3: List of Features at The Duck Creek Wickiup Village

DUCK CREEK WICKIUP VILLAGE (5RB53)	
Designation	**Description**
Feature 2	Collapsed Freestanding Wickiup
Feature 6	Livestock Containment Pen
Feature 9	Standing Utility Pole

Designation	Description
Feature 10	Standing Utility Pole
Feature 11	Large Partially Collapsed Leaner Wickiup (possibly Tipi)
Feature 12	Large Partially Collapsed Leaner Wickiup (possibly Tipi)
Feature 13	Partially Collapsed Leaner Wickiup
Feature 14	Standing Utility Rack
Feature 15	Culturally Modified Tree

Feature 2 appears to be the remains of a collapsed freestanding wickiup, however the original nature of structure is no longer identifiable and the feature could have been a utility rack, sun shade, etc. The pole scatter consists of three larger, forked poles and approximately 14 smaller branches and twigs. It is even possible that the structure was a utility tripod (as often seen in historic photographs of Ute and other Native American encampments). Occasional charcoal fragments were noted throughout the feature elements.

Feature 6 is the remains of what appears to have been a livestock containment pen. Brush corrals and other livestock containment features are present, although uncommon, on Ute sites, however this one is smaller than the others known to the project. The feature consists of eight juniper poles and branches arranged in an oval enclosure measuring from 4.1m to 5.0m in diameter, and incorporating four living and dead juniper trees in the construction (Figure 10). The inferred purpose for the enclosure is for the containment of horses, cattle, or sheep.

Feature 9 is a standing one-pole utility rack. It consists of a 2.06m long, apparently juniper, pole leaning against the limb of a live juniper support tree.

Feature 10 is a standing one-pole utility rack. It consists of a single, 1.9m long juniper pole that leans against a fallen, dead juniper which, in turn, leans against a dead standing juniper tree. It is not readily apparent as to whether the dead fallen tree was intentionally placed against the standing "support" tree by human activity, or whether it fell there naturally.

Feature 11 is an extremely large, partially collapsed leaner wickiup (Figure 11). It is the best preserved wickiup on the site, with 5 of the 9 poles still standing and leaning into the limbs of a live juniper support tree, and onto other standing poles (Plate 4). This feature is by far the largest, and tallest, wickiup thus far recorded by the CWP. Similar to Feature 2 at site 5RB18, it is suggested that hide or canvas was possibly employed as a covering, and that this feature could likely represent the remains of a tipi rather than a wickiup *per se*, a communal shelter, or simply the domestic dwelling of a person or persons of high status. Historic photographs exist showing similar large Ute shelters with high headroom leaned into juniper

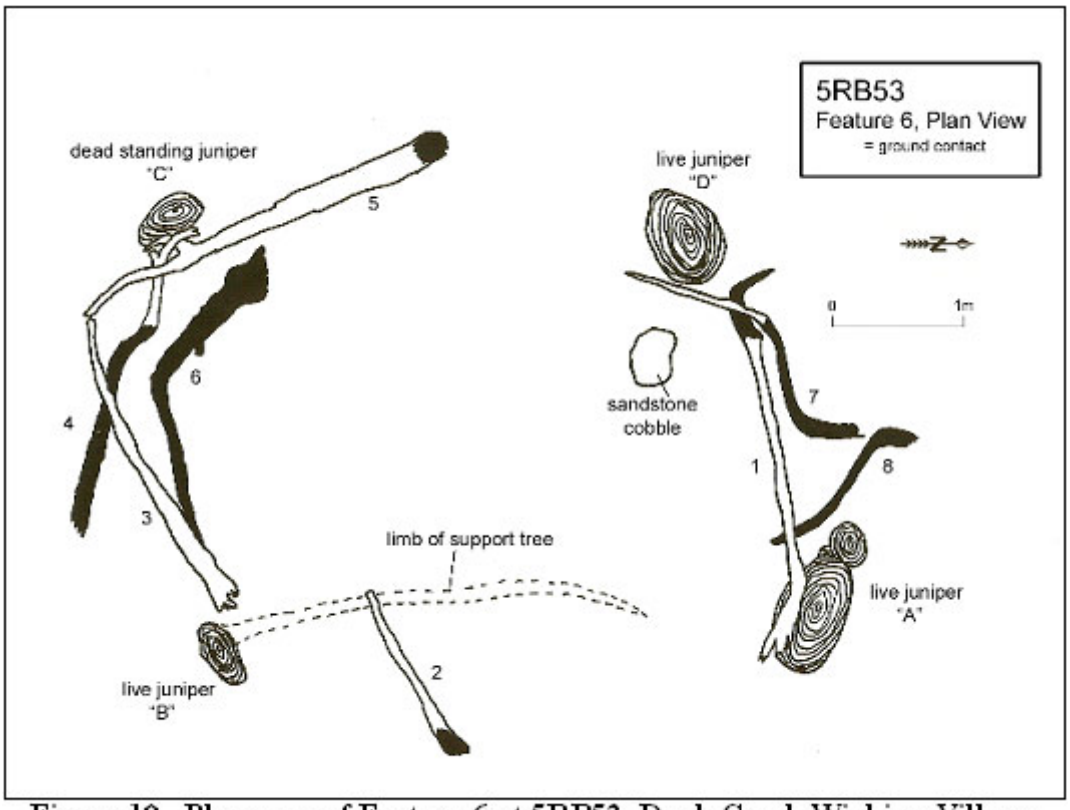


Figure 10. Plan map of Feature 6 at 5RB53, Duck Creek Wickiup Village.

trees and covered with canvas (Plate 5). A space between two of the standing poles on the north side of the shelter possibly served as an entryway.

An additional element in this feature is a small branch of juniper leaning into the crotch between the two main trunks of the support tree on the interior of the shelter. Although it appears to be a culturally-placed element, its purpose is unclear. It possibly could have served as a low hanger or rack or even as a backrest. Trowel tests within the feature suggest the presence of a juniper bark floor mat and a centrally-located interior hearth.

Feature 12 is an another large, tall, partially collapsed leaner wickiup situated on the talus to the north of the main body of the site on the ridge above. There are four standing poles and an undetermined number of collapsed poles. Similar to Feature 11 on this site, and Feature 2 at site 5RB18, it is suggested that hide or canvas coverings were possibly employed on these larger shelters, and that they could likely represent tipis rather than wickiups. This feature is newly discovered and only partially recorded at this time.

Feature 13 is another partially collapsed leaner wickiup situated on the talus below and to the north of the main body of the site. There are four standing poles and an undetermined number of collapsed poles. This feature is newly discovered and only partially recorded at this time.

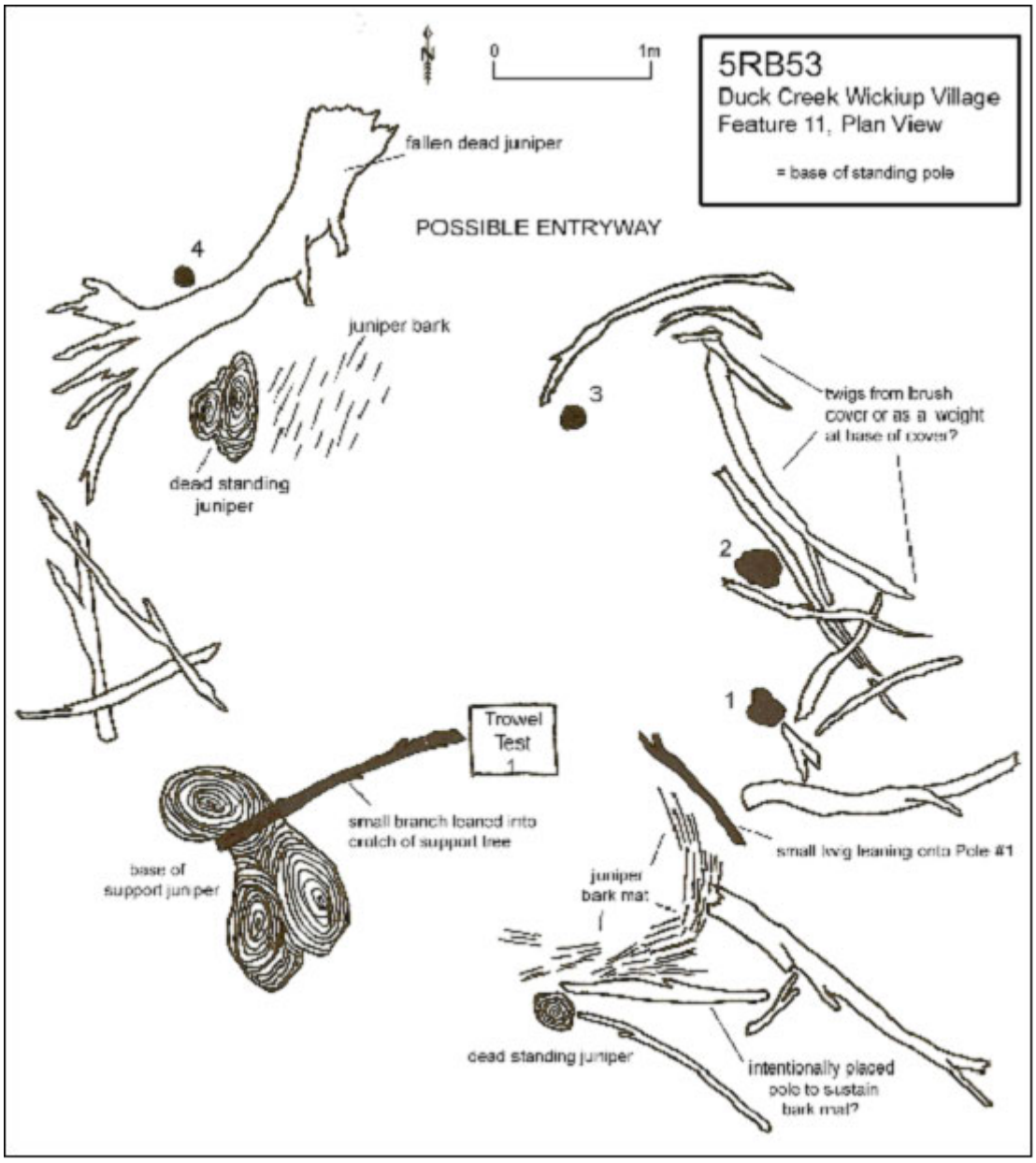


Figure 11. Plan map of Feature 11 at 5RB53, Duck Creek Wickiup Village.

Feature 14 is a standing two-pole utility rack leaning against a limb of a live juniper support tree situated on the talus below and to the north of the main body of the site. This feature is newly discovered and only partially recorded at this time.

Feature 15 is a possible culturally-modified tree consisting of a series of pulled down branches in a live juniper tree situated on the talus below and to the north of the main body of the site. This feature is newly discovered and only partially recorded at this time. Its purpose remains undetermined.

Evaluation and Management Recommendation

This site was placed on the National Register of Historic Places in 1973 and a protective fence was constructed around the site under the direction of the BLM. Test excavations, particularly in the vicinity of Feature 11, are recommended. The site should be revisited and Features 12 through 15, which remain only partially recorded at this time, should be completed.

Site **5RB57** was originally recorded by "Jim (Narootte?)", affiliation unknown, in 1973 as "scattered flakes with a few wickiups and fire pits". No other site description was provided. Intensive survey of the entire area by the CWP crew failed to locate any cultural resources whatsoever. As a result, no changes have been made to the original site form and no recommendations or eligibility statement can be proposed.

Site **5RB58**, consists of a single, partially collapsed, leaner wickiup. The structure is located on an east-west trending ridge top at an elevation of 6450 feet (Figures A-21 and A-22). The vegetation consists of piñon/juniper forest with an understory of mountain mahogany, serviceberry, rabbit brush, snakeweed, and bunch grasses. The soil consists of brown to light brown gravelly, shaley, sandy loam of unknown depth. The site measures 95m northwest-southeast by 25m northeast-southwest.

The site was originally recorded by Jean Didien as part of the University of Colorado Museum Archaeological Survey in 1973. The wickiup was relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed. A mano, a hearth, a single chert flake, and an anthill containing micro flakes define the remainder of the site.

Feature 1 is a partially collapsed wickiup. One of the poles remains leaning onto the trunk and limbs of a live juniper support tree. One of the other poles is supported by this standing pole and the other two are collapsed onto the ground surface. It is possible that the four poles actually represent the remains of a partially collapsed utility rack as opposed to a shelter.

Evaluation and Management Recommendation

No National Register criteria or eligibility was noted on the original site form. Due to the presence of a rare and fragile aboriginal wooden structure that would be likely to yield important information regarding the area's Protohistory and Early History, the current project

recommends that the site be evaluated as eligible. The wooden feature is threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Preservation and avoidance is recommended for the site area.

Site **5RB144**, consists of two possible collapsed wickiups. The site is located on a prominence that forms the southeast end of a northwest-southeast trending ridge at an elevation of 6900 feet (Figures A-23 and A-24). The vegetation consists of piñon/juniper forest with an understory of sagebrush, snakeweed, and bunch grasses. The soil consists of brown gravelly loam of unknown depth. The site, based upon the extent of the lithic scatter, measures 125m in diameter.

The site was originally recorded by Cathy Holder (BLM?) in 1974. The features were relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and Aboriginal Wooden Feature Component Forms were completed. The 1974 site form mentions "6 hearths", and that a projectile point had been collected. No further descriptions were given and none of the hearths were relocated by the current project.

A light lithic scatter, ceramic sherds, an FCR concentration, burnt and heavily weathered unburnt bone, and an anthill containing micro flakes were located, contributing greatly to the interpretation of the juniper elements as the remnants of cultural features. Seven fingernail impressed, brownware sherds, and burnt bone fragments were collected with surrounding soil as a thermoluminescent sample. One of the sherds has been submitted to the Luminescence Dating Laboratory for analysis, however the results have not yet been received.

Feature 1 appears to be a collapsed freestanding wickiup. It is located beneath a live juniper tree and possibly could have used the tree for support as a "leaner". It consists of seven to ten apparently juniper poles.

Feature 2 appears to be another similar collapsed freestanding wickiup that consists of seven to ten apparently juniper poles.

Evaluation and Management Recommendation

No National Register criteria or eligibility was noted on the original site form. Due to the presence of rare and fragile aboriginal wooden features and the potential of subsurface materials that would be likely to yield important information regarding the area's Protohistory and Early History, the current project recommends that the site be evaluated as eligible. The wooden features are threatened by continuing deterioration, wildfire, livestock

grazing, and intentional or inadvertent vandalism. Preservation and avoidance is recommended for the site area.

Site **5RB539** was originally recorded by Alan Olson of the University of Denver in 1975 as "1 wickiup, 1 chopper, 1 mano". No other site description was provided. Very close to the original site location the current project located a mano and a single flake. Intensive survey of the surrounding ridge top produced no additional artifactual remains and it can be assumed that this was the same mano as mentioned on the original site form. No evidence of a wickiup or any other aboriginal wooden feature could be located. It is possible that it has deteriorated to the point of no longer being recognizable. As a result, the location of the two artifacts were placed on the USGS map with the aid of a Trimble GeoXT GPS unit and no further changes were made to the original site description.

The site, as recorded by DARG, is located on a ridge at an elevation of 6510 feet (Figures A-17 and A-25). The vegetation in the area consists of piñon/juniper forest with an understory of serviceberry, sagebrush, prickly pear, rabbit brush, snakeweed, ricegrass, needle-and-thread grass, and other bunch grasses. The soil consists of light brown sandy loam and shale of unknown depth. The site, based on a buffer zone established around the two artifacts, measures 30m in diameter.

Evaluation and Management Recommendation

No National Register criteria or eligibility was noted on the original site form. Based on the current projects' inability to locate any aboriginal wooden structures or other features, it is our suggestion that the site has limited potential to yield additional important information regarding the area's Protohistory or Early History. Therefore it is our recommendation that the site be evaluated as not eligible for listing on the National Register of Historic Places, and no further investigations are recommended.

Site **5RB563, Ute Hunters' Camp**. Although undoubtedly not unique as a site, it is certainly rare in the archaeological record–nothing comparable is known to these researchers within the state. The range of activities represented (bullet reloading, meat roasting or smoking, living in wall or "cabin" tents, horse tending, hide or meat drying, possibly leather working, the making of expedient tools from food cans and other metal fragments, etc.) is highly unusual and serves as a rare insight into life at a Protohistoric of Early Historic aboriginal hunting camp.

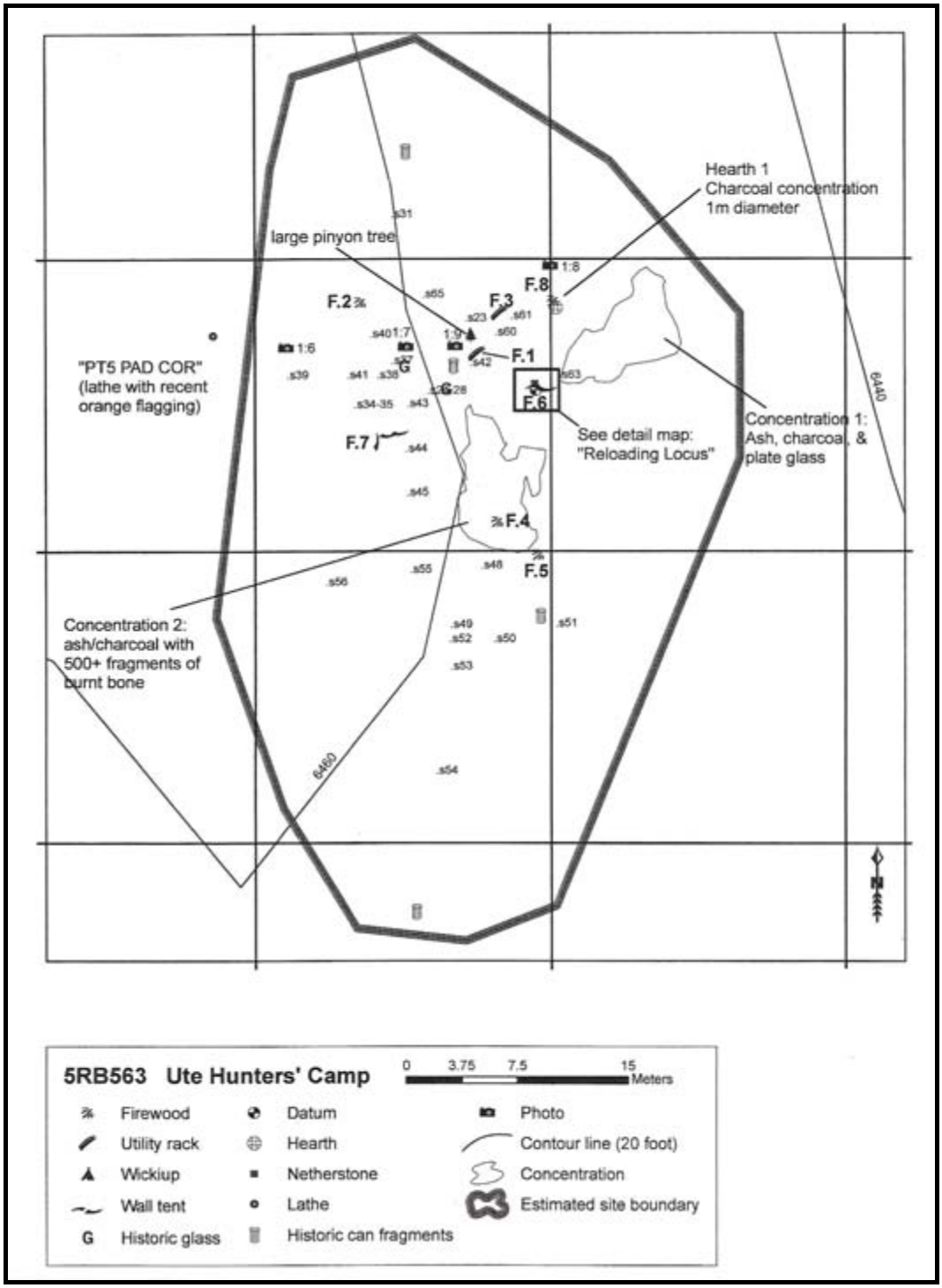


Figure 12. Site plan for 5RB563, the Ute Hunters' Camp.

The site is an open encampment consisting of aboriginal wooden features including two apparent wall tent localities, utility poles, piles of firewood in association with large game processing areas, and an undisturbed locus (apparently within one of the tents) where bullets were being readied for reloading and possibly leather was being processed (Figures 12 and A-26). In addition, the site has produced a wide variety of metal and other trade ware artifacts including numerous spent and unspent bullet primers, bullet lead and a casing, decorative brass or bronze items, horse tack, a shanked ball or "shoe" button, small iron punches or awls, thin plate glass fragments possibly from a broken mirror, food cans, numerous identifiable burnt and unburnt bone fragments including deer and horse, ceramic and non-ceramic buttons, and a series of expedient cutting or scraping tools manufactured from food cans and other metal fragments–including a gun powder scoop fashioned from the lid of a gun powder tin (Plates 15 through 20).

The camp is located on a ridge top at an elevation of 6460 feet (Figure A-21). The vegetation consists of a piñon/juniper forest with virtually no understory (a few sagebrush, prickly pear, and sparse bunch grasses). The soil consists of brown to light-brown sandy loam of varying depths of up to 25 or more centimeters. The site measures 60m north-south by 35m east-west. The cultural affiliation of the site is apparently Protohistoric/Early Historic Numic (probably Ute however possibly Shoshone), dating to AD1879 based on a tree-ring cut date from Feature 3. Two other non-cutting dates (outer rings missing) of AD1870 and 1875 were procured from Features 1 and 3 (see Appendix D).

The site was originally recorded by Alan Olson of the University of Denver in 1975. Olson originally described a site on this portion of this ridge top as containing "3 fallen wickiups" and a variety of lithic tools. It remains unclear as to whether he was referring to this resource, however as no other site matching that description could be located by the current project it was jointly decided by DARG and Michael Selle, BLM archaeologist from the White River Area Office, to utilize the previously existing site number for this camp site.

All features were photographed, measured, and placed on the USGS map with the aid of a Trimble GeoXT GPS unit and an Aboriginal Wooden Feature Component Form was completed for each. Table 4 presents a list of the feature designations and brief descriptions. A metal detector was utilized to scan the entire site area. As a result, numerous metal artifacts were located (see Table 5: Field Specimen List for Ute Hunters' Camp and Plates 15 through 20). Many of these specimens were buried up to 2 or 3cm below PGS and one, Specimen s34, a .44-40 caliber cartridge casing, was found 11cm below PGS. While in the process of troweling down to find this artifact (based on the signal from the metal detector) a non-metal clothing button was found (Specimen s35) at a depth of 4 to 6cm. This, the good state of preservation of the bone and wooden features, and the sheer number of metal artifacts recovered, suggest that a large number of non-metallic artifacts remain *in situ* below the site's surface.

Table 4: List of Features at Ute Hunters' Camp

UTE HUNTERS' CAMP (5RB563)	
Designation	**Description**
Feature 1	Three-pole Utility Rack
Feature 2	Firewood Pile
Feature 3	Three One-pole Utility Poles
Feature 4	Firewood Pile
Feature 5	(recent firewood pile)
Feature 6	Wall Tent
Feature 7	Wall Tent
Feature 8	Firewood Pile
Concentration 1	Area of Ash, Charcoal, and Plate Glass Fragments
Concentration 2	Area of Ash, Charcoal, and 500+ Fragments of Processed and Burnt Bone
Reloading Locus	Dense Concentration of Bullet Primers, Bullet Lead, Decorative Items, Iron Punches, Horse Tack, etc. (within Feature 6)

Table 5: Field Specimen List from Ute Hunters' Camp (5RB563)

Specimen	Description
5RB563.s1	Sandstone netherstone with cut marks on one face (not collected)
5RB563.s2	Spent bullet primer (in Reloading Locus)
5RB563.s3	Brass or bronze fragment (in Reloading Locus)

Specimen	Description
5RB563.s4	Decorative brass/bronze band fragment with stamped decorative design and hole at one end (in Reloading Locus)
5RB563.s5	Spent bullet primer (in Reloading Locus)
5RB563.s6	Ceramic 4-hole “Prosser” button
5RB563.s7	.40 caliber spent bullet lead (2 cm below PGS in Reloading Locus)
5RB563.s8	Two interlocked links of a metal hook-and-eyelet bridle “jingle” (in Reloading Locus)
5RB563.s9	Spent bullet primer (2 cm below PGS in Reloading Locus)
5RB563.s10	Decorative brass/bronze band fragment with stamped decorative and hachure design (in Reloading Locus)
5RB563.s11	Iron fragment (horse tack?) (1-2 cm below PGS in Reloading Locus)
5RB563.s12	Spent bullet primer (in Reloading Locus)
5RB563.s13	Blunt-ended metal tool fragment (punch for removing spent bullet primers?) (2 cm below PGS in Reloading Locus)
5RB563.s14	Spent bullet primer (2 cm below PGS in Reloading Locus)
5RB563.s15	Fragment of decorative brass/bronze band compressed into tight roll (2 cm below PGS in Reloading Locus)
5RB563.s16	Fragment of brass/bronze band with hole at one end that has been split lengthwise (in Reloading Locus)
5RB563.s17	Fragment of thin plate glass (mirror fragment?) with residue on one surface (reflective metallic coating?) (in Reloading Locus)
5RB563.s18	Small brass/bronze ball (“shoe”) button with wire loop shank (in Reloading Locus)
5RB563.s19	Metal punch or awl (round at one end, squared at the other) (in Reloading Locus)

Specimen	Description
5RB563.s20	Spent bullet primer (in Reloading Locus)
5RB563.s21	Spent bullet primer (1 cm below PGS in Reloading Locus)
5RB563.s22	Metal punch or awl with squared tang and round point (1 cm below PGS in Reloading Locus)
5RB563.s23	Eqqus (horse) fibula (found w/point stuck in ground near Feature 1)
5RB563.s24	Flattened gun powder can (the lid was used to create a powder scoop, s41) (.s24 through .s28 found in a row measuring 90 cm NE-SW near Feature 1)
5RB563.s25	Metal fragment (near Feature 1)
5RB563.s26	Triangular, scored and snapped metal fragment (near Feature 1)
5RB563.s27	Metal food can lid (near Feature 1)
5RB563.s28	Baking powder can (near Feature 1)
5RB563.s29	Sample of nine of the larger fragments of thin plate glass (mirror fragments?) from a concentration measuring 2m diameter (near Feature 1). 25 additional fragments visible on surface were left *in situ*. Additional scattered sherds extend 4m north (up to the base of large piñon) and 3m to west.
5RB563.s30	Baking powder can and lid (found 12cm apart)
5RB563.s31	Baking powder can with two holes punched in rim for holding a (missing) wire bale
5RB563.s32	Dendrochronological core sample from metal ax cut butt of standing Pole #1 of Feature 3
5RB563.s33	Dendrochronological core sample from metal ax cut butt of standing Pole #2 (middle of 3poles) of Feature 3
5RB563.s34	.44-40 caliber Cartridge casing (11cm below PGS)
5RB563.s35	Two-hole hard rubber (?) button (4-6cm below PGS while excavating for .s34)
5RB563.s36	Dendrochronological sample: metal ax cut butt of Pole #1 of Feature 1
5RB563.s37	Decorative brass (?) stud/tack

Specimen	Description
5RB563.s38	Metal tack
5RB563.s39	Metal fragment (tack fragment?)
5RB563.s40	Spent bullet lead
5RB563.s41	Lid from gun powder can (Specimen s24) (cut and bent to use as powder scoop for reloading bullets)
5RB563.s42	Small triangular cut metal fragment (possibly used as an awl or needle?) (found ~2m SW of Feature 1)
5RB563.s43	Curved fragment of brass or bronze (possibly a shell casing fragment)
5RB563.s44	Unburnt Odocoileus femur fragment
5RB563.s45	Unburnt Odocoileus tibia fragment
5RB563.s46	Two burnt Odocoileus bone fragments (north portion of Concentration #2 near Features 4 and 5)
5RB563.s47	Sample of 11 burnt and unburnt Odocoileus bone fragments (Concentration #2 near Features 4 and 5)
5RB563.s48	Fragment of can top with a central orifice for a pry-out lid (from the same can as Specimens s50, s51, and s53) (found 1m south of Feature 4)
5RB563.s49	Unburnt Odocoileus tibia fragment (Concentration #2 near Features 4 and 5)
5RB563.s50	Fragment of can top with a central orifice for a pry-out lid (from the same can as Specimens s48, s51, and s53) (Concentration 2, 2m SW of Feature 5)
5RB563.s51	Can top fragment (apparently cut to use as an expedient cutting tool) (near Features 4 and 5)
5RB563.s52	Unburnt Odocoileus phalanx (near Features 4 and 5)
5RB563.s53	Fragment of the base (?) of a can (from the same can as Specimens s48, s50, and s51) (south of Concentration #2)
5RB563.s54	Fragment of metal strip
5RB563.s55	Unburnt Odocoileus humerus fragment (on west side of fallen piñon near Concentration 2)
5RB563.s56	2 unburnt Odocoileus bone fragments

Specimen	Description
5RB563.s57	16 primers (one of which is unspent) (in Reloading Locus)
5RB563.s58	5 spent primers (in Reloading Locus)
5RB563.s59	Fossilized bone or tooth enamel fragment (in Reloading Locus)
5RB563.s60	Triangular cut metal fragment with apparent utilization on two pointed corners (at base of southern-most pole of Feature #3)
5RB563.s61	Can lid (removed from can by cutting with knife) (75 cm east of bases of Feature #3 poles)
5RB563.s62	Odocoileus humerus fragment (within Hearth #1)
5RB563.s63	Metal tack
5RB563.s64	Red chert flake (against south side of large piñon tree)
5RB563.s65	Unburnt Odocoileus phalanx (3.5m NNW of large piñon)
5RB563.s66	Dendrochronological sample: *(saw*-cut butt of branch from Feature 5)
5RB563.s67	Dendrochronological sample: (butt of branch from Feature 5 with two *saw*-cut limbs at opposite end of large branch)

Feature 1 is a standing three-pole utility rack. The initial impression of the feature is that it is a classic, conical, leaner-style wickiup. Closer inspection, however, reveals that the central pole has actually been placed closer to the trunk of the living piñon support tree than the outer two poles, which therefore would have encroached onto what would have been the floor space of a sleeping shelter (Plate 6). In addition, there is an untrimmed branch on this central pole that extends into what would have been the interior space of a wickiup.

The butt of the largest pole gives the appearance of having been harvested by metal ax, and a dendrochronological sample from this pole produced a non-cutting date of AD1870.

Considering the hunting activities represented at the site, likely functions for this feature, and nearby Feature 3, would be animal hide preparation, and/or meat drying.

Feature 2 is a firewood pile that consists of seven juniper branches arranged roughly parallel to each other on the ground to the northwest of Feature 1.

Feature 3 is another three-pole utility rack situated immediately to the northeast of Feature 1. The main difference between the two features is that Feature 3 is an aggregation of three separate one-element utility poles. One of the poles is supported by a live piñon tree and the other two rest against the limbs of a live juniper. Again, based on the evidence from the rest of the site, the likely function for these poles is animal hide preparation and/or meat drying. Tree-ring samples from two of the metal ax cut poles produced a non-cut date of AD1875 and a cutting date from the piñon growing season of AD1879.

Feature 4 is a firewood pile that consists of 20 relatively short, broken juniper branches, some of which are arranged roughly parallel to each other on the ground. The wood pile rests within Concentration 2, a large meat processing area consisting of ashy soil, charcoal, and over 500 fragments of burnt and unburnt bone. Concentration 2 appears to be a surface burn with no formally prepared "feature", and there are no rocks or hearth stones in association. Its function was obviously for the processing of large amounts of meat.

A random sample of mostly identifiable specimens of the bone from Concentration 2 were collected and analyzed (see Appendix C). Those specimens that are identifiable have been identified as *Odocoileus* (probably mule deer, however, white tail deer is a possibility). At least two adult individuals (and quite possibly more) are represented as well as one newborn or full term fetus–implying a spring or early summer hunt. The diversity of the bones suggests that whole carcases were transported to the camp. Butchering marks are evident near the distal end of one humerus, which is consistent with the removal of the lower limbs and stripping meat from the upper limbs. The bone from Concentration 2 variously displays green bone fractures, implying the extraction of marrow, as well as burning and calx from processing for bone grease, or the making of stew or soup.

Feature 5 appears to be another firewood pile consisting of a large collection of approximately 50 piñon trunks and branches. The feature rests on the southeast edge of Concentration 2 and 3m from Feature 4. It was initially deduced that species-specific woodpiles were represented by these two features. Several metal ax cuts were noted in the wood of Feature 5, as well as four examples of *saw* cut branches (which does not necessarily preclude contemporaneity with the other features and artifacts on the site). It was noted, however, that the piñon wood of Feature 5 appeared notably less weathered than the juniper of Feature 4–especially regarding the presence of bark. Two dendrochronological samples were processed from saw cut elements of Feature 5 which produced cut dates from between the growing seasons (summers) of AD1978 and 1979; obviously much later and un-associated with the Numic occupation of the site exactly a century earlier.

Feature 6 is an apparent wall tent location that consists of two end-to-end, limbed poles, apparently of juniper wood, resting on the surface of the site (Figure 13). Their presence on the site at the time of occupation is unquestioned based on the fact that all of the 41 metal and glass artifacts of the "Reloading Locus" are situated immediately adjacent to, and south of, the wooden elements (Plate 7). The only artifact present to the north of the poles is Specimen s1, a large sandstone netherstone that exhibits numerous gouges or cut marks on one face as if it had been used as a "cutting board" for a process involving a metal cutting tool such as a knife.

Various designs of canvas tents were available and utilized by the Native Americans, including the Ute, during the fur trade and reservation periods in the west. Some were simple A-frame "wedge" tents (typically supported by a single vertical pole at each end), or "pyramid" tents suspended from an exterior A-frame of poles, but more common were the vertical-sided "wall" tents. These also characteristically had a vertical support pole at each end, a third interior ridge pole, and occasionally, additional exterior horizontal side poles supported at each end by short uprights (PantherPrimitives.com 2004). References and photographs exist showing Colorado Utes using canvas tents (as well as brush shelters and tipis) as primary residences into the 1920s and later (Quintana 2004).

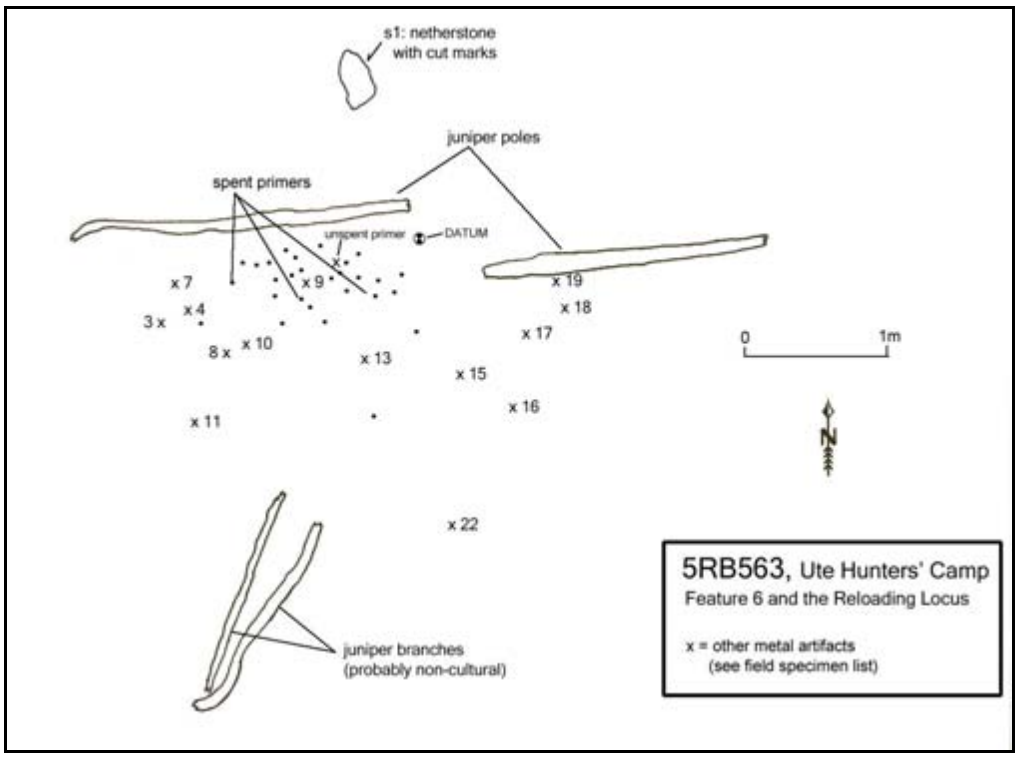


Figure 13. Plan map of Feature 6 and Reloading Locus at 5RB563, Ute Hunters' Camp

The most likely explanation for Feature 6 is that the two poles represent anchors for the bottoms of the canvas door flaps of a wall tent. The 60 to 70cm gap between the ends of the poles presumably indicates the location of the center of the north-facing doorway where a (no-longer present) vertical pole stood. The 41 small artifacts of the Reloading Locus–primarily spent primers but also a shoe button, decorative metal items, a jingle from a Spanish style horse bridle, apparent mirror glass, and leather working tools (Plates 19 and 20), apparently indicate the interior of the floor-less tent. The bulky netherstone would therefore be situated a little over a meter outside of the tent door.

Feature 7 is a second apparent wall tent location that consists of three limbed poles on the ground surface. Two of the poles meet at nearly a right angle to each other and the third one is roughly parallel with one of these (Plate 6). These last two possibly served as weights or anchors for the walls or door flaps of a wall tent, similar to those at Feature 6, and the right angle of the poles at the west side of the feature apparently is the result of one of the tent pole arrangements as described above in the Feature 6 description.

Feature 8 is an apparent firewood pile that consists of 12 juniper and piñon branches on the ground near the northeast end of the site that do not appear to have come from a dead or collapsed tree, and are therefore considered to be of cultural origin. Hearth 1, a meter diameter concentration of charcoal, is situated beneath, and immediately south of the wooden elements.

Evaluation and Management Recommendation

The site's uniqueness as a representative of a Protohistoric aboriginal hunting and butchering camp, its integrity, the presence of several rare and fragile aboriginal wooden structures including wall tent locations, surficial thermal features, and documented subsurface deposits that would undoubtedly yield important information regarding the area's Protohistory, all strongly argue that the site be nominated for placement on the National Register of Historic Places (NRHP). Preservation is highly recommended for the entire site area. The wooden features and site as a whole are threatened by continuing deterioration, wildfire, livestock grazing, energy exploration, and intentional or inadvertent vandalism. A thorough excavation of the site has been recommended, and test excavations will be conducted as part of the Phase V field work.

Site **5RB566** was originally recorded by Alan Olson of the University of Denver in 1975 as "1 wickiup; projectile point; scraper; knife; core scraper; utilized flake; manos; waste flakes". The wickiup was described as "lying on the ground in a circular pattern with wickiup poles lying like spokes of a wheel." Intensive survey of the entire area by the CWP crew failed to locate any cultural resources with the exception of a sparse lithic scatter. It is possible that the wickiup poles have deteriorated to the point of being no longer recognizable,

and that all of the mentioned portable artifacts were collected (as was typical for numerous archaeological projects at that time). As a result, no changes have been made to the original site form and no recommendations or eligibility statement can be proposed.

Site **5RB568** is an open architectural site, which consists of several aboriginal wooden features, thermal features, a few flakes, and a metate. The site was originally recorded by Alan Olson of the University of Denver in 1975. The original site form mentions that a "knife", a chopper-core, a "large light-blue bead", and a projectile point were found, however no additional descriptions are provided. The site is located atop a terrace to the northwest of the rim of Yellow Creek at an elevation of 6310 feet (Figures A-19 and A-27). The site measures 80m east-west by 35m north-south. The vegetation consists of a piñon/juniper forest with an understory of sagebrush, serviceberry, prickly pear, rabbit brush, snakeweed, ricegrass, needle-and-thread grass, and other bunch grasses. The soil consists of brown to light brown gravelly, shalely, sandy loam of unknown depth but of at least 25cm in places.

The current project relocated the site and each of the four features were photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and recorded on an Aboriginal Wooden Feature Component form. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features, evidence of metal ax cuts, and the reference to what was probably a glass pony bead.

Feature 1 is a collapsed leaner wickiup that consists of five juniper poles on the ground and associated with a dead and fallen juniper support tree. Three of the poles exhibit evidence of having been harvested with metal axes. The feature is adjacent to two live juniper trees suggesting that at least one of them had acted as a support tree, however the possibility exists that it had been a freestanding wickiup or other form of structure.

Feature 2 is a possible collapsed freestanding wickiup that consists of five to eight possibly cultural juniper poles scattered on the ground surface. No distinct indications remain of the exact nature of the feature prior to collapse.

Feature 3 consists of what appears to be several distinct "arm loads" of juniper branches, with the elements of each load lying relatively parallel to each other on the ground surface and against the trunk of a sheltering juniper tree. The apparent firewood pile contains 22 to 28 pieces of wood.

Feature 4 appears to be the remains of a collapsed two-pole utility rack that most likely had originally leaned onto an adjacent live juniper tree. The feature consists of two apparently metal ax cut juniper poles resting on the ground to the north of the tree.

Evaluation and Management Recommendation

No National Register criteria or eligibility was noted on the original site form. Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, the current project recommends that the site be listed as eligible. The wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Preservation and avoidance is recommended for the entire site area. During the initial stages of Phase V fieldwork, the site was revisited and nine dendrochronological samples were collected. These samples have been submitted for analysis and results are forthcoming.

Site **5RB2929** is an open architectural site with a single aboriginal wooden feature, four hearth features, a few flakes, a turtle-back scraper, a unifacial slab metate, and a scatter of corrugated Uncompahgre Brownware sherds. The site is located atop a broad, gently northeast-sloping bench at an elevation of 6475 feet (Figures A-17 and A-28). The vegetation consists of a piñon/juniper forest with an understory of sagebrush, prickly pear, saltbush, rabbit brush, ricegrass, needle-and-thread grass, numerous flowering plants, and other bunch grasses. The soil is brown to light brown gravelly, shalely loam of unknown depth but of at least 30cm in places.

The site measures 45m north-south by 25m east-west. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the ceramic sherds and the condition of the wooden elements of the cultural features.

The site was originally recorded by Carl Conner and Harley Armstrong of Grand River Institute as part of the Denison Resources-Rock School Project in 1989. The site was reevaluated in 1999 by Carl Conner and Barbara Davenport of Grand River Institute during the Rock School Sodium Bicarbonate Facility Project for AmerAlia, Inc.

The current project relocated the site. The feature, Feature 1, was photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and recorded on an Aboriginal Wooden Feature Component form. A metal detector was utilized to scan a majority of the site area with special emphasis within and surrounding the wooden feature. No metal artifacts were located, and no other evidence of European trade goods has been found on the site. Two of the sherds were also collected, along with surrounding soil, for potential thermoluminescent dating. One of these sherds has been submitted for dating, however the results have not yet been received. Also, a charcoal sample from Hearth 3, at the south end of the site, was dated by an earlier project and produced a date of 580+/-80BP (ca.

AD1350+/-1350)...a surprisingly early date, if considered to be contemporaneous with Feature 1, yet not an unacceptable one when the old wood factor is taken into consideration.

Feature 1 is a partially collapsed leaner wickiup situated at the extreme north end of the site and adjacent to Hearth 4, a three meter diameter concentration of FCR, charcoal, burnt bone, and microflakes. The slab metate was also found within Hearth 4. The wickiup consists of two standing and five collapsed juniper poles associated with a dead and collapsed juniper support tree. The two upright poles remain leaning against the trunk of the fallen tree. The largest of the standing poles is forked approximately half way up the pole and remains interlocked with the other standing pole.

Evaluation and Management Recommendation

The site has been officially determined to be eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of a rare and fragile aboriginal wooden structure, several thermal features, datable bone and ceramics, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, it is recommended that the current project's research be used to substantiate the site's eligibility. Preservation is recommended for the entire site area. The wooden feature is threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of Feature 1, are recommended.

Site **5RB2930** is an open architectural site containing aboriginal wooden features including wickiups, utility poles, and a firewood pile. In addition, the site has produced thermal features, a few flakes and a core, a biface mid-section, a metate, and an ax cut tree stump. A Desert Side-notched projectile point was collected during a site revisit in 1999. The site is located on a low ridge atop a broad, gently northeast-sloping bench at an elevation of 6500 feet (Figures A-17 and A-29). The vegetation consists of a piñon/juniper forest with an understory of sagebrush, prickly pear, saltbush, rabbit brush, ricegrass, snakeweed, and other bunch grasses. The soil consists of brown to light brown sandy loam of unknown depth but of at least 30cm in places.

The Colorado Wickiup Project has increased the site size to 115m northwest-southeast by 55m northeast-southwest. The cultural affiliation of the site is apparently Early Historic Numic (probably Ute however possibly Shoshone), with a dendrochronological cutting date from the summer of AD1885 procured from a metal ax cut stump near Feature 1.

The site was originally recorded by Carl Conner and Harley Armstrong of Grand River Institute in 1989 as a part of the Denison Resources Rock School Project. The site was

reevaluated by Carl Conner and Barbara Davenport, also of Grand River Institute, in 1999 during the Rock School Sodium Bicarbonate Facility Project for AmerAlia, Inc.

The current project relocated the previously recorded "Wickiups" 1 through 3 (re-designating them as "Features" 1 through 3) and newly recorded Features 4 through 7. All features were photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and recorded on Aboriginal Wooden Feature Component forms. A metal detector was utilized to scan a majority of the site area with special emphasis within and surrounding each of the wooden features. No metal artifacts were located, and no other evidence of European trade goods were found on the site with the exception of the metal ax cut juniper stump. The biface mid-section (Specimen s2) and a heavily weathered Bos (cow) scapula (Specimen s1) from the floor of Feature 6 were also collected.

Feature 1 appears to be the remains of a collapsed freestanding wickiup. Six juniper poles are scattered on the ground beneath a live juniper tree and the structure was possibly originally supported by an overhanging branch of the tree. Feature 5, a firewood pile, is situated nearby and Hearth 2, an ash stain and FCR concentration, is six meters to the south.

Feature 2 is another possible collapsed freestanding wickiup consisting of six juniper poles scattered on the ground between two live juniper trees.

Feature 3 is quite definitely a collapsed freestanding wickiup situated within a protected area created by three live junipers. It consists of nine collapsed juniper poles that still retain the original conical format of the structure. Several expedient trowel tests were conducted within the apparent floor area of this feature in search of ash, charcoal, or juniper bark matting; with negative results.

Feature 4 is a standing one-pole utility rack or pole cache, which appears to be in direct association with Feature 2; three meters to the south. It consists of a single, 2.50m long juniper pole that leans against a limb of a live juniper support tree. The steep angle of the leaning pole suggests that it would be unsuitable for a utility pole, and therefore is quite likely simply a pole cache.

Feature 5 is a pile of juniper branches lying roughly parallel to each other on the ground surface; an apparent firewood pile consisting of 12 pieces of wood. It is located several meters to the east of Feature 1.

Feature 6 is either a partially-collapsed leaner wickiup or simply a multi-pole utility rack. It consists of two standing and two collapsed poles, all apparently of juniper. The two standing poles rest against the limbs of a living juniper support tree.

Feature 7 is another partially-collapsed utility rack. It consists of one standing and one collapsed pole, both of juniper. The standing pole rests against the limb of a living juniper support tree.

Evaluation and Management Recommendation

The site has been officially evaluated as need data regarding listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, thermal features, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, the current project recommends that the evaluation be converted to eligible. Preservation is recommended for the entire site area. The wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of the features, are recommended.

Site **5RB2932** consists of a possible aboriginal firewood pile or cultural pole cache beneath the protective shelter of a live juniper tree. The site, which measures 45m north-south by 18m east-west, is located on a broad, gently northeast-sloping bench at an elevation of 6450 feet (Figures A-17 and A-30). The vegetation consists of a piñon/juniper forest with an understory of sagebrush, prickly pear, saltbush, rabbit brush, ricegrass, needle-and-thread grass, numerous flowering plants, and other bunch grasses. The soil consists of brown to light brown gravelly, shaley loam of unknown depth.

The site was originally recorded by Carl Conner and Harley Armstrong of Grand River Institute in 1989 as part of their Denison Resources Rock School Project. The feature was relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed. A metal detector was utilized to scan the entire site area. One artifactual flake was located to the south of Feature 1, and an unmodified river cobble (and possible man-u-port) was found approximately 35m to the south.

The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural feature.

Feature 1 consists of four apparently juniper poles lying parallel to each other on the ground. Several low, overhanging branches on the adjacent tree would intrude on a wickiup interior, although the feature was initially recorded as a "deteriorated pile of wood at the base of a juniper tree which may constitute the remains of a wickiup." A more likely interpretation of the wood is that it represents the remains of a firewood pile or pole cache.

Evaluation and Management Recommendation

The site has been officially determined to be not eligible for listing on the National Register of Historic Places. Based on the current project's interpretation of the wooden feature as simply an aboriginal woodpile or pole cache, although rare and fragile, and our impression that the site has limited potential to yield additional important information regarding the area's Protohistory or Early History, it is recommended that the site's evaluation remain as not eligible, and no further investigations are recommended.

Site **5RB4027** is a large, open architectural village of aboriginal wooden features including wickiups, a windbreak, utility racks, and firewood piles (Figure 14). In addition, the site has produced thermal features, a serrated side-notched projectile point, an apparent re-sharpened metal projectile point, glass seed beads, a metal food can fragment, a few lithic flakes, and a cobble man-u-port.

The village is located on a ridge top at an elevation ranging from 6430 to 6470 feet (Figures A-31 and A-32). The vegetation consists of a piñon/juniper forest with an understory of sagebrush, prickly pear cactus, rabbit brush, ricegrass, and other sparse bunch grasses. The soil consists of gravelly, brown, clay loam of varying depths of between 10 to 50 or more centimeters. The Colorado Wickiup Project has increased the site size to 145m northeast-southwest by 90m northwest-southeast. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the diagnostic trade goods and the condition of the wooden elements of the cultural features.

A protective fence was constructed around the site under the direction of the BLM at some point in the past. A large tree has fallen across the fence near the southwest end of the site, crushing the fence wire and creating a potential access point for the livestock that it was designed to keep out.

The site was originally recorded by Carl Conner, Barbara Davenport, and Sarah Koeman of Grand River Institute in 1998 as part of the American Soda Corporation Piceance Site Inventory. Their site form mentions "six clusters of leaning and/or collapsed poles", four concentrations of FCR and burnt bone, and a single groundstone cobble. A crude site map shows the rough locations of the six pole clusters with no individual feature descriptions, numbers, or photographs provided. Using this map as a guide the DARG field crew was able to locate what appears to be all of these previously recorded features, which were photographed, measured, and placed on the USGS map with the aid of a Trimble GeoXT GPS unit. Individual feature numbers were assigned, often dividing the original pole "clusters" into two or more features. In addition, a new cluster of features (Features 9, 14, and 15) was discovered on a lower terrace, to the east and below the main portion of the site and outside of the protective fence.

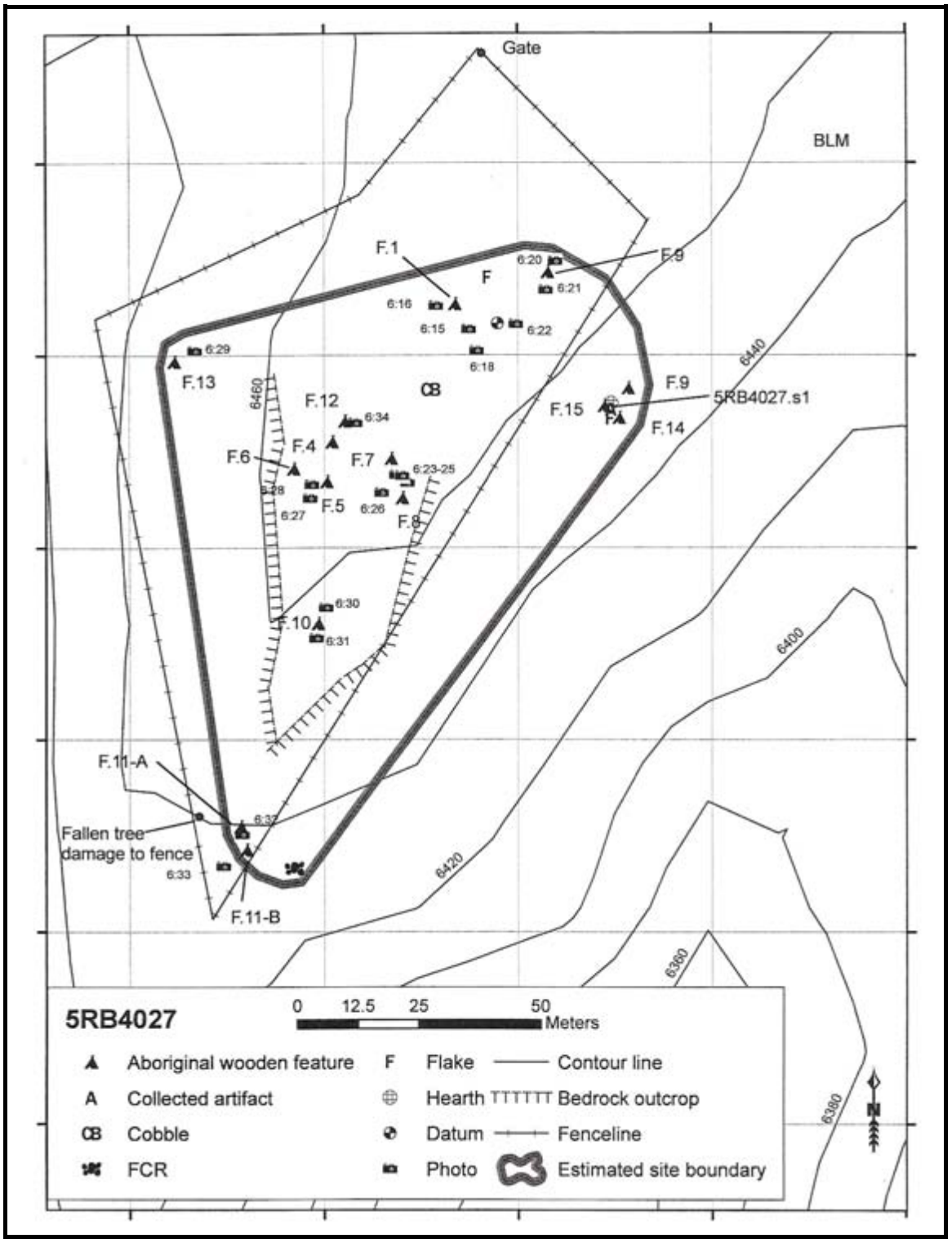


Figure 14. Site plan of site 5RB4027.

After initially assigning feature numbers “2" and “3" to concentrations of branches on the ground surface, it was determined that they were non-cultural in nature and these numbers were discarded. The remaining cultural wooden features retain the numbers Feature 1 and Features 4 through 15 (Feature 11 has been recorded as two sub-features, “11-A” and 11-B”). An Aboriginal Wooden Feature Component Form was completed for each.

A metal detector was utilized to scan the entirety of the site area with special emphasis within and surrounding each of the wooden features. Despite the discovery of trade goods in the form of glass seed beads (Plate 13d), the only metal artifacts found were Specimen s4–an apparent remnant of a metal arrow point that has been re-sharpened to the point that only the tang and proximal end of the blade remains (Plate 14b), and Specimen s9–a fragment of a metal can rim from the floor of Feature 8 that has apparently been scored and cut with metal snips.

No evidence of metal ax use was found on any of the wooden elements throughout the site, possibly suggesting that 5RB4027 represents an earlier occupation than many of the other wickiup sites in the region, however, based on the condition of the cultural wood, and the presence of trade wares, the site is estimated to date from no earlier than ca. AD1800.

Table 6 presents a list of the features at site 5RB4027 and a short description of each.

Table 6: List of Features at 5RB4027

5RB4027	
Designation	**Description**
Feature 1	Partially Collapsed Leaner Wickiup
Feature 4	Partially Collapsed Freestanding Wickiup
Feature 5	Partially Collapsed Leaner Utility Rack or Pole Cache
Feature 6	Collapsed Freestanding Wickiup
Feature 7	Partially Collapsed Wickiup
Feature 8	Collapsed Freestanding Wickiup
Feature 9	Standing Utility Pole or Pole Cache
Feature 10	Firewood Pile
Feature 11-A	Firewood Pile
Feature 11-B	Firewood Pile

Designation	Description
Feature 12	Collapsed Freestanding Wickiup
Feature 13	Standing Utility Pole or Pole Cache
Feature 14	Collapsed Freestanding Wickiup
Feature 15	Standing Leaner Windbreak or Utility Rack

Feature 1 is a partially collapsed leaner wickiup. Three of the eight feature poles are still standing; two are leaned onto a limb of a standing dead juniper support tree and the third is supported by one of them. One of the five collapsed poles on the ground is forked and remains interlocked with another of the collapsed poles (Figure 15).

The standing poles define an oval floor space measuring 3.0m by 2.6m. The interior headroom is 1.9m in height. A charcoal scatter and small reddened sandstone spalls in the southeast quadrant of the floor suggest the presence of an interior hearth. A fragment of unmodified and unidentifiable mammal long bone (Specimen s1) was collected from the base of the southern-most standing pole.

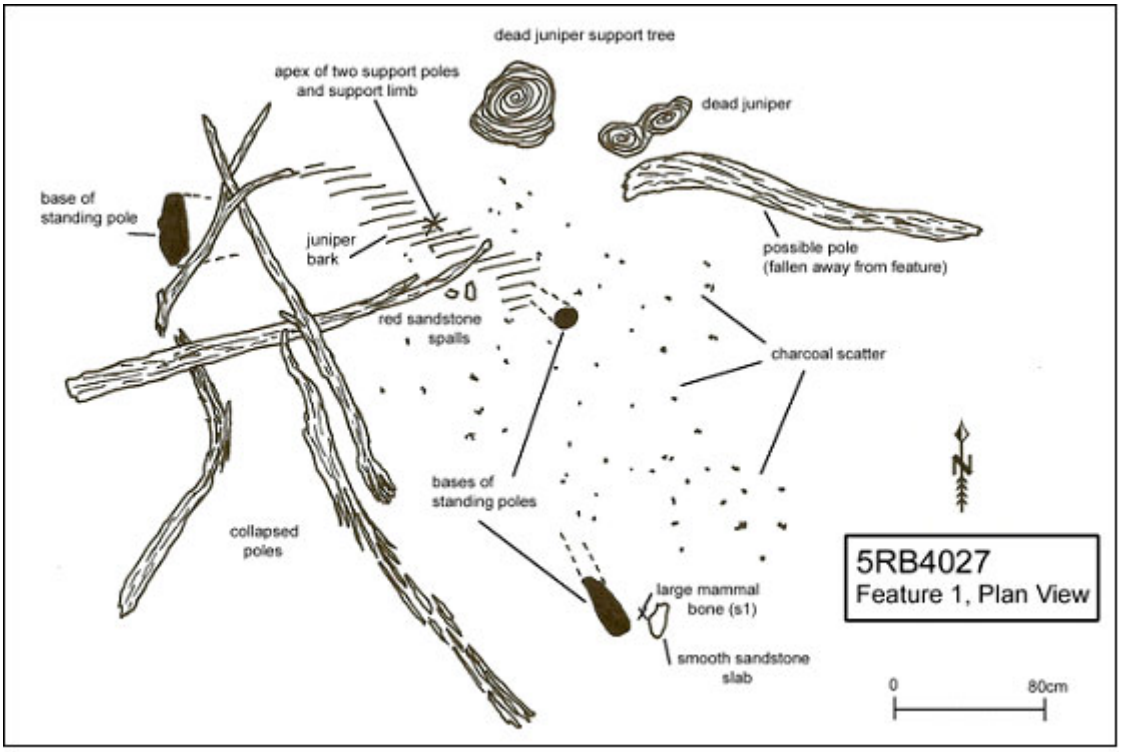


Figure 15. Plan map of Feature 1 at 5RB4027.

Feature 4 is a partially collapsed freestanding wickiup that appears to have been partially knocked over by the fall of a large, uprooted piñon that now rests on the west side of the wickiup. Two of the poles were knocked into a leaning position against a limb of a live piñon tree, two others are standing and supported by the two leaners and each other, and a single pole now leans against the fallen tree. Two additional poles lay collapsed on the ground, for a total of 7 wooden elements (Figure 16).

A scatter of small fragments of charcoal and reddened sandstone slabs in the southern portion of the feature suggests the presence of an interior hearth or nearby exterior hearth.

Feature 5 is a partially collapsed utility rack or pole cache consisting of two standing juniper poles leaning against a limb of a live juniper support tree and three or four additional, possibly cultural poles scattered on the ground nearby (Figure 17). A highly decomposed and possibly burnt medium-to-large mammal bone (Specimen s3) was collected from beneath the feature poles.

Feature 6 is an apparent collapsed freestanding wickiup consisting of 14, apparently juniper, poles resting on the ground surface beneath a large, live piñon tree.

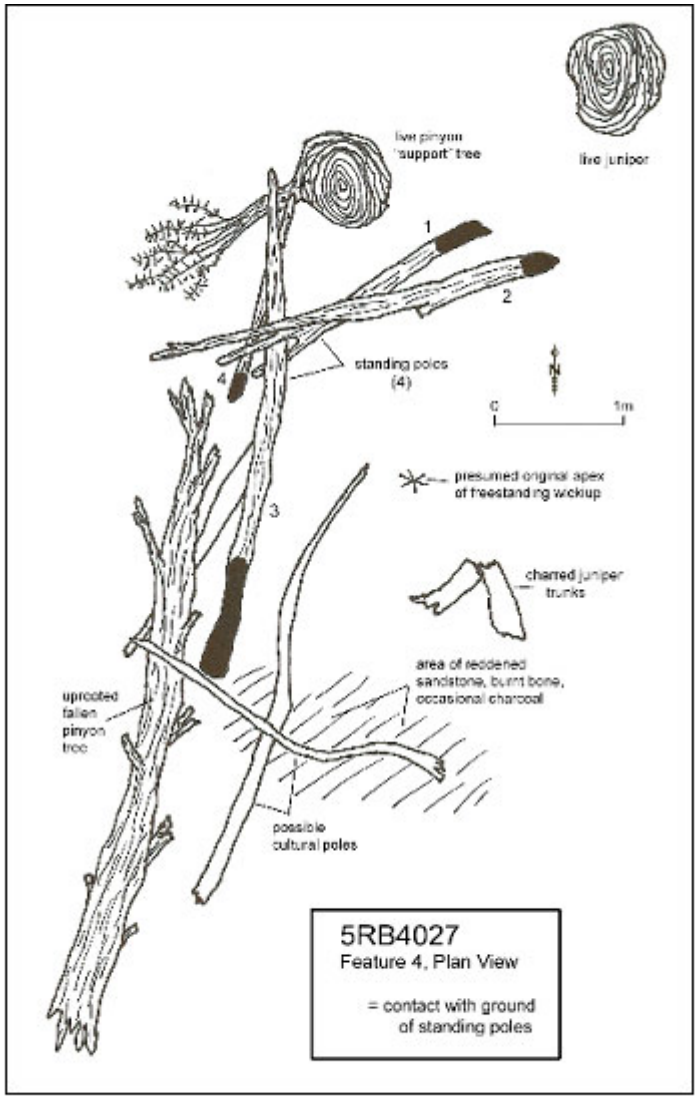


Figure 16. Plan map of Feature 4 at 5RB4027.

Feature 7 is a partially collapsed wickiup consisting of two standing leaner poles; one each resting against the trunks and limbs of a live piñon and a dead standing juniper tree, and four or five additional poles collapsed on the ground between the two trees. It is difficult to determine whether the shelter was originally freestanding, and collapsed into its current configuration, or was a leaner-style wickiup. One of the standing poles is a notably large juniper pole with a mid-pole diameter of 14cm.

Feature 8 is a collapsed freestanding wickiup that appears to have been knocked over by the fall of a juniper tree that fell from the west and now rests atop several of the structure poles. The 11 or more, apparently juniper, poles have collapsed into a wheel-spoke pattern on the ground, reflecting the original conical nature of the standing structure. A metal can fragment (Specimen s9) that has been scored and cut was recovered from the floor of the wickiup and an unburnt *Odocoileus* rib (Specimen s13) was collected from beneath the poles.

A trowel test was conducted within an interior hearth that produced ashy fill (Specimen s10), burnt bone fragments, and unburnt mammal bone (s11).

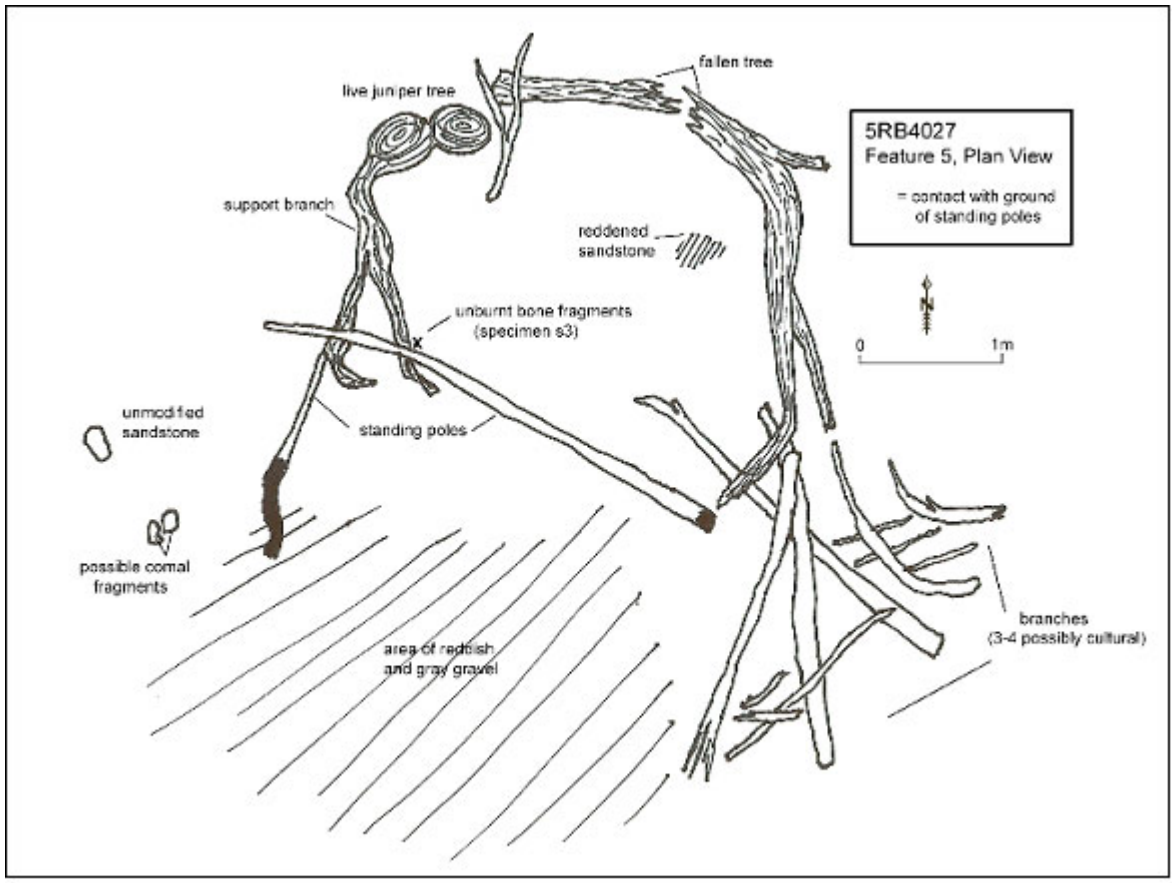


Figure 17. Plan map of Feature 5 at 5RB4027.

Feature 9 is a standing one-pole utility rack situated on a lower bench to the east of the main portion of the site. It consists of a single, 2.4m long juniper pole that leans against the limbs and trunk of a live piñon tree. It is also possible that the pole is simply a pole cache.

Feature 10 consists of a pile of approximately 11 pieces of juniper firewood situated atop a possible hearth feature. Two trowel tests were conducted near the center of the wood pile and within the concentration of charcoal. Charcoal was present up to a depth of 8cm, however no other evidence of an *in situ* thermal feature was encountered.

Feature 11-A consists of a concentration of approximately 18 fragments of juniper, an apparent firewood pile, in an area measuring 1.5m by 2.3m. Although the wood is randomly scattered on the ground, the pieces are not straight and are too short to suggest structure poles of any kind.

Feature 11-B consists of an another, nearby, apparent firewood pile consisting of ten juniper branches in an area measuring 4.3m by 3.7m. Although the wood is randomly

scattered on the ground, the pieces are not straight enough to suggest structure poles of any kind.

Feature 12 is a collapsed freestanding wickiup consisting of approximately nine juniper poles that have fallen into a roughly wheel-spoke arrangement with all pole butts to the outside and tips to the inside. An area of charcoal, burnt bone, and reddened sandstone beneath the collapsed poles suggests the presence of an interior hearth, however a trowel test produced no distinct evidence of a thermal feature at that location. Although some juniper bark near the apex of the poles (Specimens s7 and s8) possibly indicates the presence of a bark mat, a second nearby sterile test indicates that it is limited in extent.

Feature 13 is a standing one-pole utility rack situated on the talus to the west of the main portion of the site. It consists of a single, 2.10m long juniper pole that leans against the limbs of a live piñon tree. It is also possible that the pole is simply a pole cache.

Feature 14 is a collapsed freestanding wickiup consisting of approximately 13 juniper poles that have fallen into a roughly wheel-spoke arrangement with all pole butts to the outside and tips to the inside (Plate 8). It is located near Feature 9 on the lower bench to the east of the ridge top and outside of the fenced area. Two blue glass seed beads (Specimen s5) were found on the surface of the wickiup floor area (Plate 13d), a serrated, side-notched, indented base projectile point (s2) was found in the concentration of FCR, charcoal, and burnt bone 2m to the west (Plate 14d), and numerous fragments of burnt and calcined bone were retrieved from this same area (s6). The bones are from small to large mammals, some of which exhibit green fracture implying marrow and bone grease extraction.

Feature 15, situated to the west of Features 9 and 14, is a windbreak, or possible utility rack. It consists of a brush "wall" made up of two standing poles leaned onto the trunk of a small, dead, leaning juniper trunk, and a third pole suspended between the apex of the first two poles and the trunk and limb of a second support tree; a live juniper (Plate 8). The resultant wall measures 4.6m long, 1.3m wide, and 2.2m high.

As a brush wall, this feature would have served well for protection from westerly winds for occupants of wickiup Feature 14 and its associated hearth area, however it may also have doubled as a utility rack for keeping blankets, hides, food, horse tack, and personal items off of the ground.

Evaluation and Management Recommendation

The site was originally evaluated as eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, thermal features, and demonstrated subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, it is recommended that the current project's research be used to substantiate the earlier evaluation as eligible. Preservation is recommended for the entire site area. The

wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Repair of the crushed portion of fence, as well as additonal fence to enclose Features 9, 14, and 15 is highly recommended, as are test excavations, particularly in the vicinity of the wickiup features.

Site **5RB4331, the Black Sulphur Creek Wickiup**, consists of a single well-preserved, partially collapsed, leaner wickiup. The structure is located on a broad, northeast-sloping talus at an elevation of 6530 feet (Figures A-33 and A-34). The vegetation consists of mature piñon/juniper forest with an understory of prickly pear, rabbit brush, and bunch grasses. The soil consists of light brown gravelly, sandy loam of unknown depth.

The site was originally recorded by J. Brown and B. Mueller of the BLM in 2001 as part of their Cultural Resources Inventory of Selected Areas in the Piceance Basin. The wickiup was relocated by DARG, photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed. A metal detector was utilized to scan the entire site area with special emphasis beneath and surrounding the wickiup. No artifacts of any kind were located.

A dendrochronological core was taken from the base of Pole 2, the largest of the feature's poles and the only one that gave the appearance of having been possibly harvested with a metal ax (Specimen s1). Also collected was Specimen s2, a soil sample from the south edge of the wickiup floor; and Specimen s3, a sample of juniper bark mat and underlying soil from the northern edge of the floor.

The dendro sample produced a non-cutting date of AD1815 (outer rings missing); the earliest date yet received for a feature by this project. This is an early (although not entirely unacceptable) date for metal axes in western Colorado, and these authors also find the date to be unexpectedly early considering the intact and fragile nature of the standing wickiup. Pole 2 was identified as ax cut in the original report, which prompted its sampling, however at the time of this investigation the butt of the pole was buried in soil, somewhat deteriorated, and partially burnt which made it difficult to ascertain whether or not it retained distinct evidence of ax marks. Therefore, it is the opinion of these researchers that the pole was most likely harvested as dead wood by the site's occupants, and had died a number of years prior to its harvest and use.

Feature 1 is a partially collapsed wickiup that is tenuously supported by contact with an overhanging branch of a piñon support tree (Plate 9). Only one of the nine standing poles (Pole 9) rests against this limb and the other eight poles are supported by Pole 9, a small, 5cm diameter pole that stands vertically at the north side of the wickiup. An additional five structural poles have collapsed to the south side of the shelter (Figure 18). It is possible that

the wickiup was originally freestanding and has slumped to its current position, being held up only by the contact of the one pole with the piñon branch.

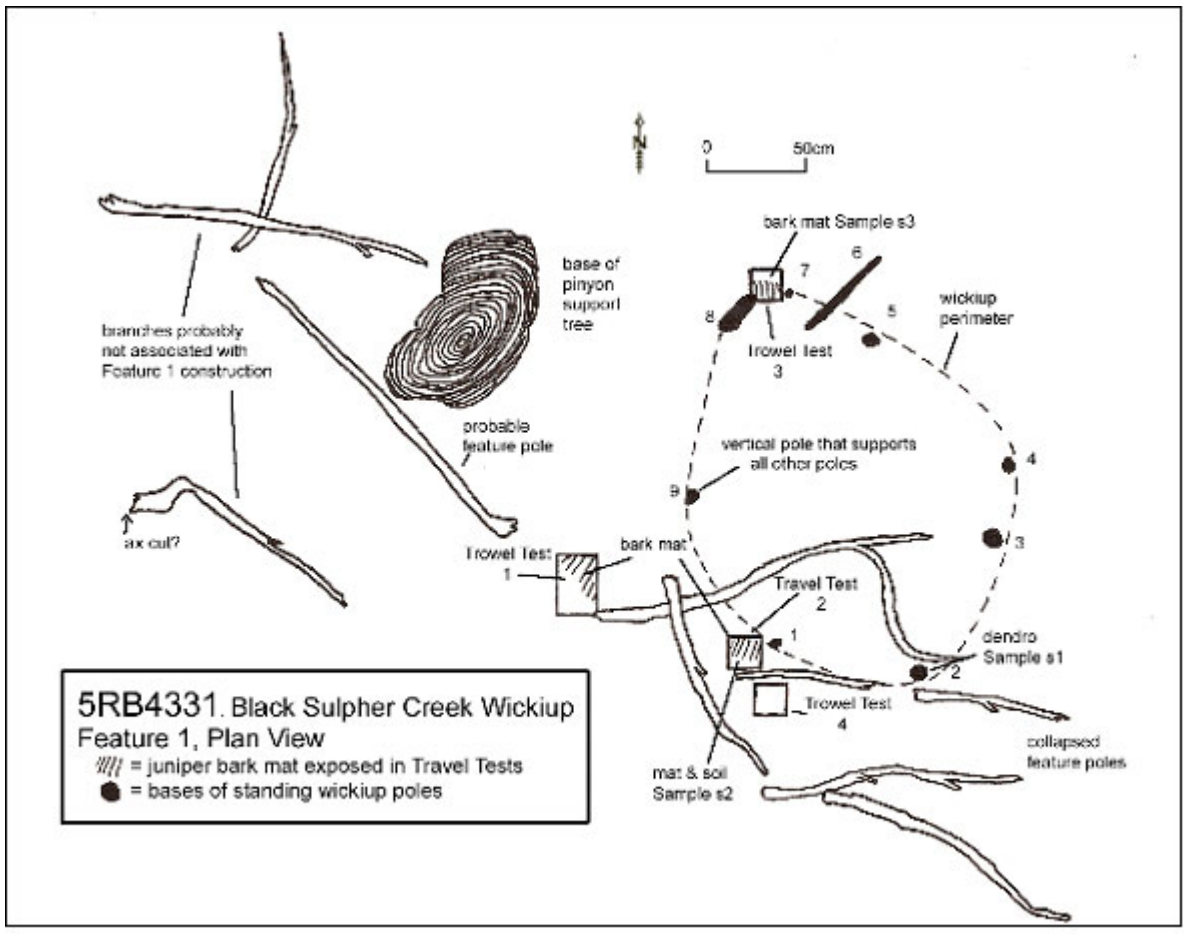


Figure 18. Plan map of Feature 1 at 5RB4331, Black Sulphur Creek Wickiup.

The wickiup floor is oval and ranges from 1.75m to 1.55m in diameter. The interior height measures 1.30m. A 95cm wide space between Poles 8 and 9, on the west-northwest side of the feature and facing directly at the trunk of the support tree was likely the entryway. A concentration of approximately 20 possibly heat-reddened sandstone fragments are eroding from a rill 17m southeast of Feature 1, and possibly represent the location of a former hearth.

Four trowel tests were conducted around the outer edges of the floor of the feature and have defined the perimeter of what appears to be a bark floor mat. Several small fragments of charcoal were noted and soil and bark samples were collected, which remain unanalyzed.

Evaluation and Management Recommendation

The site was previously evaluated as need data regarding listing on the National Register of Historic Places (NRHP). Due to the feature's integrity as a rare and fragile

aboriginal wooden structure, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, the current project strongly recommends that the evaluation be converted to eligible. Preservation is recommended for the wickiup. The wooden feature is threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Excavation, particularly within the feature itself, is highly recommended.

Site **5RB4338, Bead Village**, is an open architectural village containing wickiups, firewood piles paired with hearths, and a culturally modified tree (Figure 19). In addition, the site has produced a variety of glass seed and pony beads (Plate 13a and b), and microflakes. The village is located on the west edge of a prominence near the end of a ridge that forms a portion of the southwestern rim of a plateau. The site is at an elevation of 6300 feet (Figures A-35 and A-36). The vegetation consists of mature juniper forest with a few young piñon trees and an understory of sagebrush, prickly pear cactus, snakeweed, and ricegrass. The soil consists of gravelly, shaley, light brown loam and sandy loam of varying depths of between 5 and 50 or more centimeters.

The site measures 110m north-south by 60m east-west. The cultural affiliation of the site is Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from the summer of AD1867 based on the results of tree-ring dates.

The site was originally recorded by Jeff Brown and Brian Mueller of the BLM White River Field Office in 2001, as a part of their Selected Areas in the Piceance Basin; and was re-visited by M. Metcalf of Metcalf Archaeological Consultants in 2004, during the survey for Dominion Gas Ventures Proposed Yellow Creek Pipeline.

Using the original site sketch map as a guide the DARG field crew was able to locate all but one of the previously recorded seven aboriginal wooden features. Feature 7, described as "juniper cut poles and a chert concentration" could not be relocated at the south end of the site. The other six features, and four newly discovered ones, were photographed, measured, and placed on the USGS map with the aid of a Trimble GeoXT GPS unit. Previous feature numbers were maintained for those already recorded, and an Aboriginal Wooden Feature Component Form was completed for each.

A metal detector was utilized to scan the entirety of the site area with special emphasis within and surrounding each of the wooden features. Despite the evidence of trade goods in the form of glass beads and metal ax cut poles and firewood, no metal artifacts were found. Four dendrochronological dates were secured from ax cut wickiup poles and a piece of firewood. Two apparent cutting dates from the summer of AD1867 were produced and two non-cutting dates (outer rings missing) came in at AD1862 and AD1866, however it is likely that all of these samples had been harvested at the same time (i.e. AD1867).

Table 7 presents a list of the feature designations at Bead Village, and a short description of each.

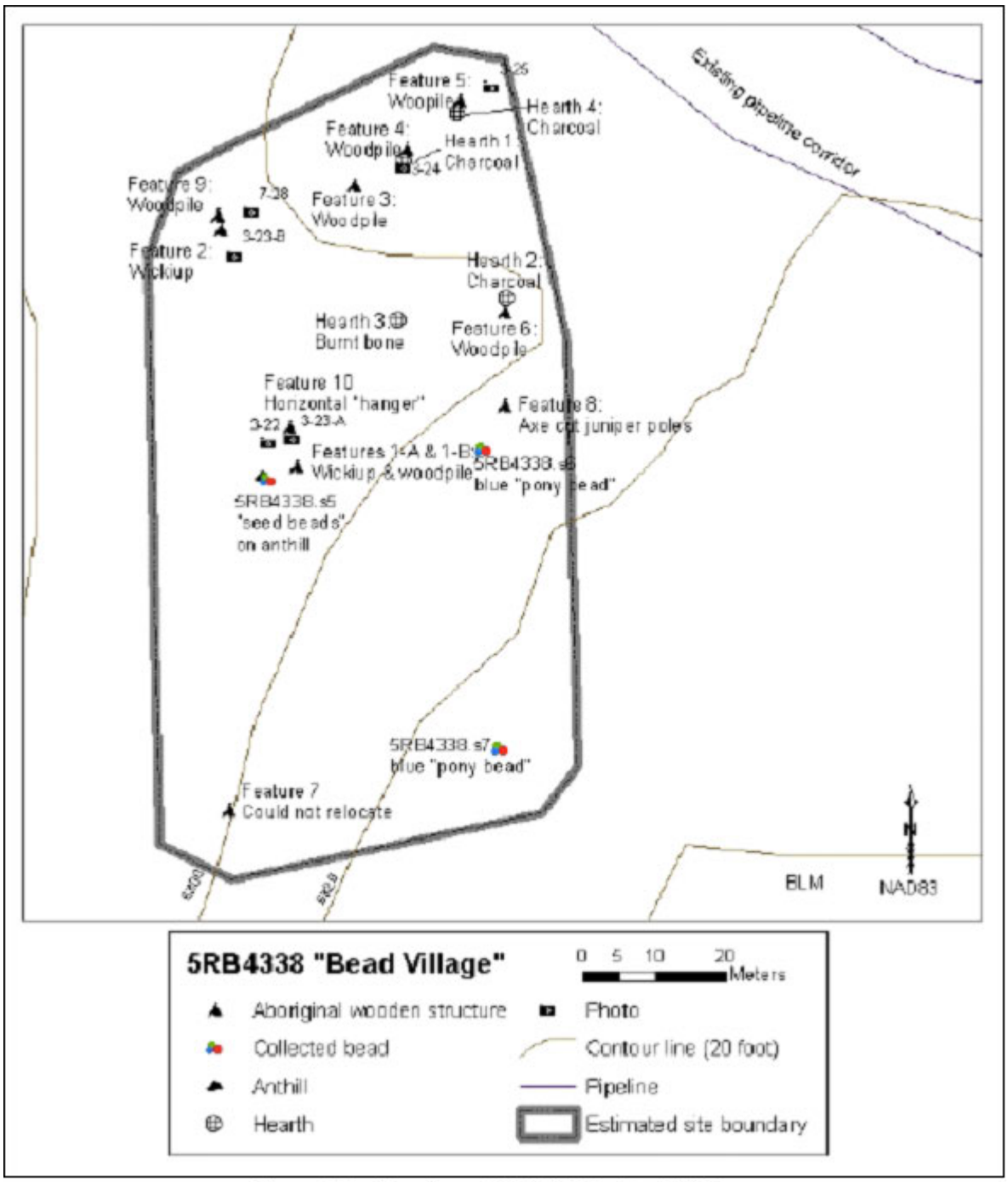


Figure 19. Site plan of 5RB4338, Bead Village.

Table 7: List of Features at Bead Village (5RB4338)

BEAD VILLAGE (5RB4338)	
Designation	**Description**
Feature 1-A	Partially Collapsed Leaner Wickiup
Feature 1-B	Firewood Pile
Feature 2	Partially Collapsed Leaner Wickiup
Feature 3	Firewood Pile
Feature 4	Firewood Pile
Feature 5	Firewood Pile
Feature 6	Firewood Pile
Feature 8	Unstructured Firewood Cache
Feature 9	Firewood Pile
Feature 10	Culturally Modified Tree ("Hanger Rack")

Feature 1-A is a partially collapsed leaner wickiup. One of the four feature poles is still standing and leaned against the trunk of a live juniper support tree. The other three are collapsed on the ground beneath the tree branches (Figure 20). All four poles were harvested with a metal ax and additional ax cuts are visible on a nearby juniper stump and on the trunk of a collapsed sub-trunk of the support tree. Two dendrochronological dates were procured from collapsed Feature 1 poles; a probable cutting date of summer AD1867 and a non-cutting date of AD1866.

An anthill 6m southwest of the wickiup produced a variety of colors and sizes of glass seed beads (a sample of which were collected as Specimen s5–Plate 13) and several micro flakes. Three simple trowel tests were conducted within the floor area of the wickiup and to the east and west of the support tree in search of a thermal feature. No evidence of hearth activity was located.

Feature 1-B consists of a newly-recorded associated pile of approximately 10 short, broken fragments of juniper firewood immediately southeast of Feature 1-A (Figure 20). A few fragments of charcoal were noted on the surface to the south of the wood pile, however trowel tests were negative.

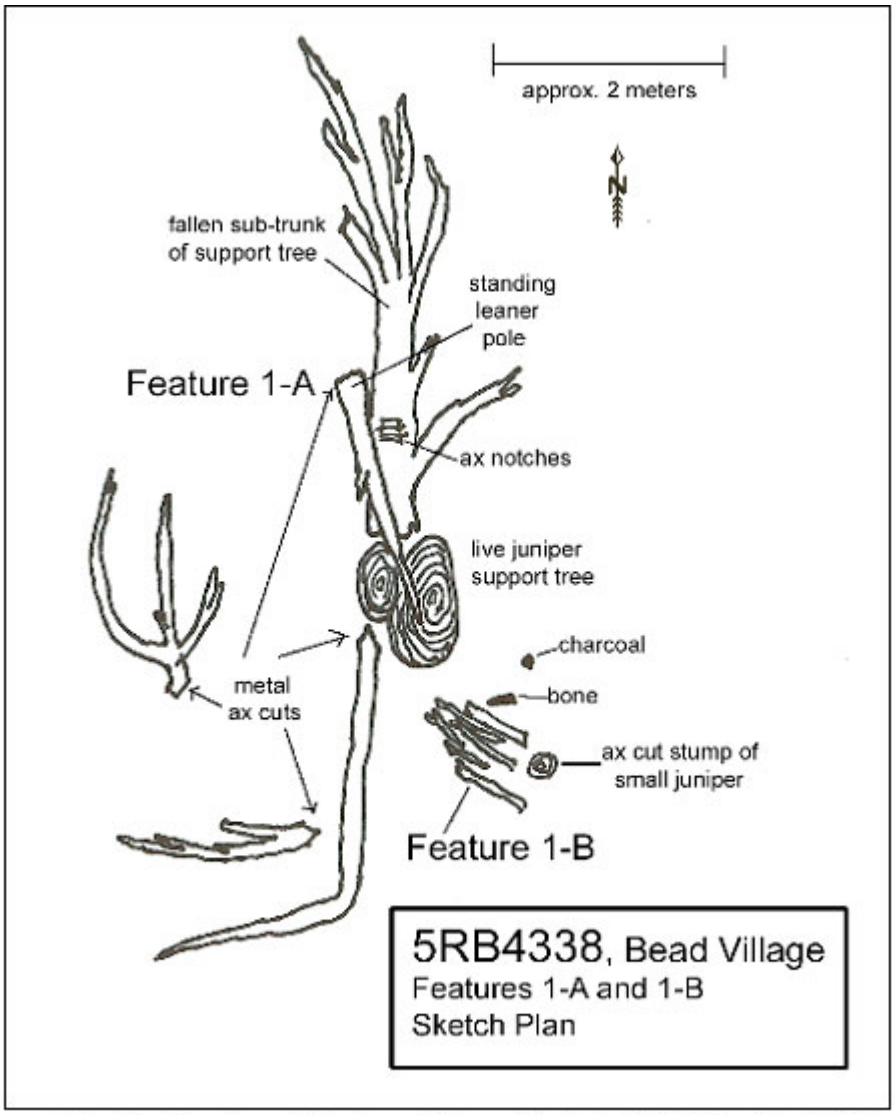


Figure 20. Sketch plan of Features 1-A and 1-B at 5RB4338, Bead Village.

Feature 2 is a partially collapsed leaner wickiup consisting of four definite cultural poles and five additional possible poles. One of the poles is still standing and leaned against the trunk of a live juniper support tree (Figure 21). Two of the poles were harvested with a metal ax, one of which produced a non-cutting date of AD1862. Feature 9, wood pile, is situated 2m east of this wickiup.

Feature 3 is a firewood pile that consists of a collection of six pieces of juniper wood lying roughly parallel to each other on the ground in an area measuring 1.2m by 2.0m. One of the pieces is an untrimmed juniper branch that is leaned somewhat into the lower branches of a small, live juniper tree. It is unclear as to whether this branch was leaned into the tree intentionally, as a pole cache or to keep the firewood off of the ground, or if it ended up in this position by happenstance.

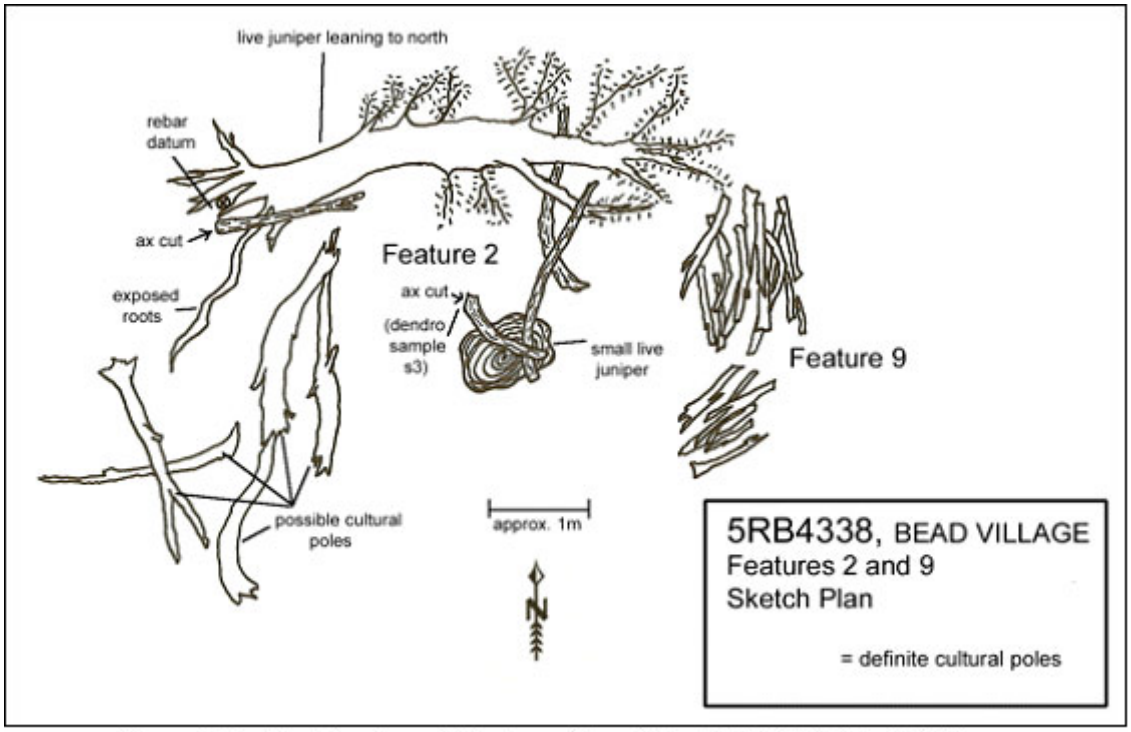


Figure 21. Sketch plan of Features 2 and 9 at 5RB4338, Bead Village.

Feature 4 is a firewood pile that consists of approximately 12 pieces of juniper lying in two distinct "arm loads" of wood, the pieces in each pile arranged roughly parallel to each other on the ground. The feature measures 1.1m by 2.2m. This is one of three firewood piles on the site (Features 4, 5, and 6) that are associated with adjacent hearth features. Hearth 1 is immediately to the south of this feature.

Feature 5 is a firewood pile that consists of approximately 20 pieces of wood (of undetermined species due to the high level of decomposition). The feature measures 2.10m by 2.75m. This is one of three firewood piles on the site (Features 4, 5, and 6) that are associated with adjacent hearth features (Plate 10). Hearth 4 is 20cm south of this feature.

Feature 6 is another firewood pile that consists of 10 pieces of juniper wood. The feature measures 2.1m by 1.5m. This is one of three firewood piles on the site (Features 4, 5, and 6) that are associated with adjacent hearth features. Hearth 2 is 2m north of this feature.

Feature 8 is an unstructured collection of six pieces of juniper wood that has been interpreted as a firewood pile. Two of the poles are leaned into a low crotch between two sub-trunks of a tree (apparently to keep the wood off of the ground). All six of the branches were harvested with a metal ax. The butt of the longest and thickest fragment produced a probable cutting date of summer, AD1867.

Feature 9 is a firewood pile that consists of approximately 25 pieces of wood (of undetermined species due to the high level of decomposition). There are three or four distinct "arm loads" of wood, with the pieces in each pile arranged roughly parallel to each other on the ground (Figure 21). The feature measures approximately 2m by 3m and is situated 2m to the east of wickiup Feature 2.

Feature 10 is a culturally modified tree associated with, and approximately 5m northwest of, wickiup Feature 1. It consists of a culturally "bent down" horizontal limb, or "hanger beam" in a live juniper tree. The limb has been wedged against the inner side of one of the tree trunks, and supported in a crotch created by another small twig. The feature is unusual in that, although larger branches have been recorded as "pull-down" or "bent-down" wickiups and utility poles, larger poles have been found wedged into tree branches as horizontal beams, and low tree platforms utilizing small branches to create "shelves" have been recorded; this feature is thus far unique in our experience as a single, small, bent down "hanger" beam.

Evaluation and Management Recommendation

The site was originally evaluated as need data and then, during the reevaluation of 2004, was recommended as eligible for listing on the National Register of Historic Places (NRHP). Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures (including dateable firewood piles paired with thermal features), rarely-found pony beads, and apparent subsurface deposits that would be likely to yield important information regarding the area's Protohistory and Early History, it is recommended that the current project's research be used to substantiate the earlier evaluation as eligible. Preservation is recommended for the entire site area. The wooden features are threatened by continuing deterioration, wildfire, livestock grazing, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of the wickiup features, are recommended.

Site **5RB5609**, is an aboriginal architectural site made up of three aboriginal wooden features including a pole cache and two single-pole "leaners" or utility poles. The site was newly recorded in 2007 by John Lindstrom, Curtis Martin, Travis Archuleta, and Jim Conner of Grand River Institute as part of the Proposed Mahogany 2D and 3D Seismic Project**.** It is located on a broad, forested, north-south trending ridge top at an elevation of 6930 feet (Figures A-37 and A-38). It measures 52m northwest-southeast by 15m northeast-southwest. The vegetation is piñon/juniper forest with an understory of sage, prickly pear, snakeweed, mountain mahogany, and sparse bunch grasses. The soil is brown sandy loam. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural features.

Feature 1 consists of five standing, partially limbed juniper poles leaned onto the trunk and branches of a live juniper support tree. Two additional juniper poles rest on the ground surface nearby. The standing poles are adjacent to the tree trunk, with very little space behind the poles that could have served as a shelter; therefore the feature has been categorized as a cache of aboriginal wooden poles (Plate 11). It is undetermined as to the purpose of these poles, however it is likely that they were collected and limbed to be used in the construction of a wickiup, a tree platform, or a series of utility poles. The possibility also exists that they had formerly been fabricated into a structure, and that the site's inhabitants simply moved them close against the support tree as a means of storing them for future use.

The poles in Feature 1 range in length from 137 to 320cm, however the longest pole is significantly longer than any of the others and possibly represents a utility pole, while the rest are wickiup poles. It is not uncommon to find one long (utility) pole in association with the shorter poles of a Ute brush shelter. Although there are metal-axe cut marks on the east side of the support tree, it is unknown as to whether they are associated with the aboriginal occupation or the more recent wood gathering and fence post cutting that is in evidence on the site and in the surrounding area.

Feature 2 is situated 17m north of Feature 1 and within 4m of the two-track road that extends along the northeast side of the site. It is a single-pole "leaner" utility pole, resting against the trunk and branches of a live juniper support tree. Utility poles such as this are common on Ute sites and were apparently utilized for animal hide treatment, meat drying racks, or simply as a hanger for keeping personal items off of the ground and out of reach of dogs and wildlife.

Feature 3 is situated 36m to the southeast of Feature 1. It is another single-pole "leaner" utility pole, resting against the trunk and branches of a dead juniper support tree. The pole is notably long at 3.10m.

A small, 25cm deep trowel test was conducted directly beneath the leaner pole at Feature 2. The upper 15cm consisted of vegetative duff and the lower fill was brown, sandy loam. No ash, charcoal, or other cultural evidence was located in the trowel test. The entire site area was metal detected, with emphasis placed on the areas surrounding the three wooden features. Results were negative. No artifacts, other than the features themselves, were found on the site surface.

Evaluation and Management Recommendation

Due to the site's integrity, the presence of several rare and fragile aboriginal wooden structures, and potential subsurface deposits that would be likely to yield important information regarding the area's Protohistory, the site is recommended as eligible for listing on the National Register of Historic Places (NRHP). Preservation is recommended for the entire site area. The most immediate threat to the site and its cultural features is the proposed

seismic activities. Additionally, the wooden elements are threatened by continuing deterioration, wildfire, and intentional or inadvertent vandalism. Test excavations, particularly in the vicinity of the features, are recommended.

Site **5RB5611**, is an open aboriginal architectural site that consists of the remains of a single aboriginal wooden feature, a collapsed freestanding wickiup. The site was newly recorded in 2007 by Curtis Martin, Kevin O'Hanlon and John Lindstrom of Grand River Institute as part of the Shell Frontier Oil and Gas Commercial Heater Test-Ryan Gulch Block Inventory**.** The site, which measures 20m in diameter, is located on a north-south trending ridge above Ryan Gulch at an elevation of 6735 feet (Figures A-37 and A-39). Vegetation is comprised of a mature pinyon/juniper forest with bitterbrush and prickly pear cactus. Soils are tan sandy loam that is at least 15cm deep. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden elements of the cultural feature.

Feature 1 is a collapsed freestanding wickiup. It consists of nine limbed juniper poles, that have settled to the ground surface in a manner that has maintained the distinctive wheel-spoke pattern of the original conical shelter (Plate 1). One of the poles is significantly longer than the others, measuring 4m in length, and it possibly served as a utility pole, or even smoke-flap pole, that extended out from the structure itself. Numerous small fragments of charcoal, and a single burnt bone, were located within and near the poles suggesting that an interior or exterior hearth existed. The wickiup is sheltered by, notably, a large pinyon tree located 2m to the north-northwest.

The unusual length (1.9 to 3.0m), straightness, and completely limbed nature of the poles, and the evidence of the shelter's original conical nature and round floor, suggest that this feature possibly could have been a hide or canvas covered tipi, rather than simply a more expedient wickiup.

The floor area was trowel tested and the feature and surrounding area were metal detected, however, the results of both were negative.

Evaluation and Management Recommendation

Despite the fact that this feature is collapsed, the original nature of the habitation is well preserved, and it possibly represents one of the rare instances of a Ute or Shoshone tipi in the archaeological record of western Colorado. It quite possibly may yield additional information important to the protohistory and early history of the area, and therefore it is field evaluated as eligible for inclusion on the NRHP. Protection and preservation are recommended.

Site **5RB5620**, is an open aboriginal architectural site that consists of the remains of a single aboriginal wooden feature. The site was newly recorded in 2007 as part of the Colorado Wickiup Project's Yellow Creek Wickiup Revisits and was found during the field crew's access to site 5RB58. The site, which measures 15m in diameter, is located near the northeast end of a northeast-southwest trending ridge above the south rim of Duck Creek, at an elevation of 6360 feet (Figures A-21 and A-40). Vegetation in the site area consists of piñon/juniper forest with an understory of sagebrush, prickly pear, snakeweed, and bunch grasses. The soil consists of shallow, light brown sandy loam that is 15cm or more in depth.

The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the condition of the wooden element of the cultural feature.

Feature 1 is a standing, one-pole "leaner" utility pole, or pole cache consisting of a single juniper pole leaning into a crotch between two sub-trunks of a live juniper support tree. The two branches of the tree trunk have partially grown around the upper end of the cultural pole.

Evaluation and Management Recommendation

Due to what is apparently a limited amount of resources at the site, and the limited potential for subsurface deposits that would be likely to yield important information regarding the area's Protohistory or early Native American history, the site is field evaluated as not eligible for listing on the National Register of Historic Places. No further work is necessary.

Site **5RB5623**, is an open aboriginal architectural site that consists of the remains of a single aboriginal wooden feature, several flakes, a hammerstone, a chopper, a metate, an applied-finish bottle neck, and two metal can fragments (one of which shows evidence of having been cut with a knife or tin snips). The site was newly recorded in 2007 as part of the Colorado Wickiup Project's Yellow Creek Wickiup Revisits. The site was found during the field crew's search for site 5RB563. The site, which measures 155m north-south by 40m east-west, is located on a north-south trending ridge above the north rim of Duck Creek, at an elevation of 6420 feet (Figures A-21 and A-41). Vegetation is comprised of piñon/juniper forest with sagebrush and very sparse bunch grasses. The soil is shallow, light brown, pebbly sandy loam that is 15cm or more in depth.

The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from AD1840 or later, based on the type of applied-finish represented on Specimen s1 (Plate 21); a bottle neck of a style known as "blob" which was manufactured from ca. AD1840 to 1860 (Specimen s1).

Feature 1 is situated near the north end of the site. It is a partially collapsed, two-pole "leaner" utility pole or pole cache with one of the poles still resting against a limb of a live juniper support tree. The other pole has collapsed to the ground beneath the tree.

Evaluation and Management Recommendation

Due to what is apparently a limited amount of resources at the site, and the limited potential for subsurface deposits that would be likely to yield important information regarding the area's Protohistory or early Native American history, the site is field evaluated as not eligible for listing on the National Register of Historic Places. No further work is necessary.

Discussion

As a continuation of the previous three years of research and data collection, Phase IV of the Colorado Wickiup Project has served to elucidate, more than ever before, the final chapters of Ute (Núu-ci) occupation in western Colorado. Particularly, in this phase of our studies, new understandings have been gained regarding the reoccupation of the traditional homelands by the Northern Ute peoples–the White River (Yampa and Grand Valley or Parusanuch), Uncompahgre or Tabeguache, and Uintah bands–after their removal to the reservation in Northern Utah in 1881.

Some of the sites were undoubtedly occupied by individuals who had never actually made the trek to Utah. In 1881 there was estimated to be approximately 2,700 Uncompahgre, White River, and Uintah Utes to be removed from Colorado (Baker 2007). In 1882 the agent at the Uintah Valley Agency at Whiterocks could account for only 275 White River Utes (Simmons 2000). Others returned to Colorado from the reservations on periodic hunting trips, or with aspirations of more permanent residency after finding life on the reservations intolerable.

It has become clear that, although numerous wooden structures remain on the landscape that date to earlier times, a majority of the surviving features have their origins in the late Protohistoric and Early Historic eras. It is our premise that only a small minority of the wickiups and platforms that remain pre-date the end of the eighteenth century. As our investigations have shown, nearly half of the sites recorded contain trade goods or evidence of metal axes. Baking powder cans (and most food cans), such as those found on several of the sites recorded by this project, for instance, were not common this far north until approximately the late 1870s (Steve Baker, personal communication). Trade goods in and of themselves fairly confidently indicate post-1800 dates for many of these sites. Although the Southern Utes had been trading out of Santa Fe long before, only a limited amount of trade goods had reached the Northern Utes before 1776, and "even by 1825 such commerce was still limited." (Reyher 2007: p. 28).

Furthermore, as demonstrated by the results of our dendrochronological research, well over half of the Protohistoric sites (those with evidence of trade) that have produced accurate tree-ring dates were occupied during post-"removal" times; after 1881.

As in previous years, the CWP's fourth year of research has proven to be not only highly productive in terms of additions to the database relating to the aboriginal wooden features of the state, but also new insights have been gained into the nature and variety of these structures, the seasonality of their manufacture and use, and the utilization of the landscape by the peoples who produced them. Two types of aboriginal shelters previously unrecorded by the CWP were recognized for the first time during the Phase IV research, and a landmark site, the Ute Hunters' Camp, has revealed a new site type in the archaeological record of western Colorado: a Protohistoric hunting camp where canvas wall tents provided

shelter for the occupants while occupied with meat and hide processing, bullet reloading, and possibly, leather working.

However, possibly the most significant aspects of the project are the insights gained regarding the age of the wickiups and other wooden features investigated. Having received the results from the dendrochronological samples from the first three seasons of field work, the absolute dates of many of these structures and sites can be assessed for the first time. Although only those wooden elements that exhibit the signs of having been harvested live with metal axes have been dated, it is notable that 46% of the sites thus far investigated by the CWP show evidence of axes or other historic trade goods.

Therefore, although it is only the sites from this latter part of the Protohistoric, and into the Early Historic period, that have provided absolute dates, the overall condition of the cultural wood from these sites can be used as a standard against which the wood from un-dated sites can be compared. In general, these comparisons led the CWP to the belief that a majority of the aboriginal wooden features still recognizable in unsheltered situations and in the Upper Sonoran environment are no more than approximately 200 to 250 years of age. Undoubtedly exceptions exist, as discussed below.

Recent work by the Old Wood Calibration Project (OWCP), a collaboration between Centuries Research, Inc. and the Laboratory of Tree-Ring Research, has unequivocally demonstrated that the old wood problem (discussed in depth in previous CWP reports) can be considered a serious issue in western Colorado regarding the overestimation of the age of thermal features from archaeological contexts (Baker, Dean, and Towner 2008). Due to various factors, ranging from the number of years that firewood has been dead prior to its being collected and used, to the number of outer rings that are missing from dated samples, old wood factors on radiocarbon dates from hearth charcoal minimally range from approximately 279 to 482 years. Taking into consideration the recentness of the sites of concern to the Colorado Wickiup Project, gaps of this magnitude between the radiocarbon results and the archaeological target dates of site occupation are enormous.

Although a majority of the structural elements that comprise the wooden features of concern to the CWP were also collected as dead wood (presumably close to 100% on pre-metal ax sites), it remains somewhat unclear as to how the old wood factors of dead-collected *hearth* wood, such as that analyzed by the Old Wood Calibration Project, compare to those for dead-collected wickiup or tree platform poles. It can be assumed that, in a piñon/juniper forest, since characteristics such as pole length, strength, and possibly even flexibility or the presence of smaller twigs and branches, were desirable aspects in the selection of poles for shelters, that these would tend to be not as long-dead, on average, as wood collected simply to burn, however this remains to be proven. It is exactly this premise that the Colorado Wickiup Project, in collaboration with the Laboratory of Tree-Ring Research, hopes to address in future studies by comparing the cutting dates of live-collected, metal ax cut structural elements with dead-collected poles from the same sites, and even the same features when possible.

for recording aboriginal wooden structures. Readers may refer to that document for general information on the Colorado Wickiup Project's strategic approach. The results of the field seasons of 2005 and 2006 are presented in the Phase II and Phase III reports of the CWP (Martin, Conner, and Darnell 2005, and Martin, Ott, and Darnell 2006). In these reports, not only was the state's database of aboriginal wooden features expanded significantly, but the activities yielded data that provided a basis for extending and refining several aspects of the project's preservation goals and research objectives.

Concepts discussed in these earlier volumes included our approaches to validating the cultural origins of wooden features, potential dating methods and the attendant problems associated with each (such as the ineffectiveness of using dead-collected old wood for radiocarbon or dendrochronological dating on sites this recent in the archaeological record), and the inferred functions of aboriginal wooden features. These topics will not be reiterated here, but rather the reader is referred to these previous documents.

Similarly, the Phase IV activities, presented in this volume, have produced additional refinements to the field methodology and analytical understanding of these structures and features. Wooden feature types new to the CWP were identified during the field season of 2007, as were newly recognized patterns regarding feature interrelationships: canvas wall tent locations, apparent freestanding and leaner-style tipis, and firewood piles paired with hearths–similar to ones noted elsewhere on sites recorded by Baker (2005a) and the Huschers (1939). New categories of trade goods were also encountered including bullet reloading materials, apparent leather working tools, mirror fragments, a variety of items of personal clothing and adornment, and expedient tools fashioned from scraps of metal. In response to these findings, recording protocols were once again refined and the Aboriginal Wooden Feature Component Form has been adapted to facilitate the recording of these new data types in the future.

Perhaps, as discussed in Volume I (Martin, Ott, and Darnell 2005), the most far-reaching significance of wickiup studies is the insight that they provide into intra-site patterning of activity areas at earlier open sites where such evidence has vanished. In the Archaeological Assessment of the Rifle Wickiup Village O'Neil et al (2004) discuss the importance of sites that retain evidence of ephemeral shelters:

> It is likely that most of the early hunting and gathering campsites once had ephemeral brush structures. Therefore, Protohistoric Era sites with brush structures often provide insight into the relationships between artifact distribution patterns and feature distributions as they relate to these structures. Thus, they can aid in the interpretation of many sites where such structures have disappeared (O'Neil et al 2004:11).

Simms, Benson, and Profaizer elaborate upon this concept:

> The knowledge that shelter is a typical accompaniment to virtually all forager activities, enlivens the potential of the common lithic scatter so familiar to archaeologists working in the Desert West. Structures once existed somewhere on the vast majority of lithic scatters. Knowing this implies that we take lithic scatter archaeology beyond the recording of lithic debris. Archaeological sites with remnants of wickiup structures in addition to the ubiquitous lithic debris provide a more complete picture of what happened at places (Simms, Benson, and Profaizer 2006:1).

Dating methods and results from Phase IV

Regarding the dating of the sites recorded or revisited in Phase IV our methods have relied again, as in the past, upon three approaches: an evaluation of the outward appearance and condition of the cultural wooden elements on a site, the establishment of (at minimum) the *terminus post quem* or date of common introduction of historic artifacts to the area, and the dendrochronological dating of *metal ax cut* poles and beams.

When no additional evidence of trade goods or dendrochronological materials are present on a wooden feature site to offer narrower dating constraints, we have adopted the use of the phrase "Protohistoric/Early Historic Numic (ca. AD1800-1920)" as a general statement concerning the "estimated age and/or cultural affiliation" line item on our Aboriginal Wooden Feature Component forms. The term "Numic" was chosen since, although a clear majority of the sites dealt with from this period in western Colorado are of Ute affiliation, Shoshone, and possibly even Comanche, occupations are known, particularly in the northwestern portion of the state. Additionally, although wooden features pre-dating 1800 undoubtedly still exist on the landscape, and some post-dating 1920 will likely be documented at some point, it remains a valid "estimate" that a vast majority of these features fall within this age range.

Tree-ring samples were only analyzed for wood that appears to have been harvested with metal axes and, therefore, most likely when green and still living. As discussed in the Phase III report, it is unfortunate that accurate "target event" dates (the date of an event of interest to an archaeologist) derived from dendrochronology can only be confidently applied to those wooden poles or beams that presumably were collected as live tree branches and trunks. Long-dead wood, such as that used for firewood and, typically, for pre-metal ax-cut poles, will only provide "dated event" dates, i.e. the time at which the tree died, typically 40 to 350 or more years before being utilized by protohistoric peoples (Baker, Dean, and Towner 2008; Conner 1978; Smiley and Ahlstrom 1997; Fetterman 1996; Dykeman 2000; and O'Neil et al 2004).

Therefore, the "old wood" factor greatly limits the value of traditional archaeometric dating techniques such as radiocarbon and tree-ring dating on all but the most recent (post-contact) Numic sites. On-going investigations by the Colorado Wickiup Project, as well as

The OWCP demonstrated that 1000 or more year-old pieces of dead piñon and juniper wood suitable for burning as firewood are present on the landscape of western Colorado, and that pieces 600 or more years old are relatively abundant. This suggests that, in spite of our hypothesis stated above that a majority of the surviving Numic wooden features are no more than approximately 250 years of age (say, later than 1750AD), the possibility exists that some of them could be of significantly greater age.

Another factor regarding the wooden elements of the cultural features that was revealed during the Phase IV investigations is that, after a certain point in the deterioration of dead piñon and juniper wood, they often both appear, visually, to consist of juniper. "Blind tests" with dead limbs collected from both species of trees showed that a majority of experienced field personnel mistakenly identified the bulk of the piñon samples as juniper. As a result, it can be considered a certainty that the huge percentage of cultural elements that have been identified thus far by the CWP (and others in the field) as juniper (98.5%) is exaggerated.

Field tests to quickly and more accurately determine the species of dead wood elements in wooden features were conducted during the initial stages of the ongoing Phase V field work, with limited success. Initial olfactory results from burn tests (where small splinters of the cultural wood were burned with a flame source to create smoke) simply resulted in ambiguous "smoky" or "burning wood" odors, irrespective of species. It was then discovered that small flameless butane cigarette lighter torches can be utilized to smokelessly vaporize the organics from small areas of the surface of the wood with no visible alteration of the wood surface. The odors of the resultant vapors are distinctly recognizable as "pine" (piñon) or "cedar" (juniper) in dead wood from still living trees, however not nearly so from the surfaces of long-dead wood such as that in the cultural poles.

However, in many cases where drills or saws are utilized for collecting dendrochronological samples, the "pine" and "cedar" odors become identifiable when the cutting tools enter the inner heartwood of the cultural poles. Tests will continue during the 2009 field season. In the meantime, a line item has been added to the CWP's Aboriginal Wooden Feature Component form in which the recorders are asked to comment on the method used to identify wood species.

Despite the newly-recognized overestimation of the importance of juniper wood in the fabrication of wickiups and other wooden features, the intentional selection of that species over piñon as the construction wood of choice by the Numic architects remains undisputed, as does their selection of junipers over piñons as support trees (86%).

A comprehensive discussion of the Protohistoric era, aboriginal wooden features, and Ute occupation in western Colorado is presented in the Archaeological Context section of *The Colorado Wickiup Project: Volume I* (Martin, Ott, and Darnell 2005). Additionally, the Strategic Plan section of that report outlines the long-range preservation goals and research objectives for the project, and Appendix D outlines recommended methods and techniques

by Centuries Research of Montrose and the Laboratory of Tree-Ring Research (Baker, Dean, and Towner 2007 and 2008), are working toward the establishment of a database correlating dates from known old wood (from such sources as hearth charcoal and dead-collected feature poles) with dates from known green wood (from such sources as metal ax-cut wickiup poles) from the same features or sites. Hopefully, when a sufficient number of such pairs of correlative dating samples have been processed, a bracket, or calibration curve, of ages can be established regarding the number of years that wood (in particular juniper) has been dead prior to its being utilized by aboriginal people as fuel wood and structural elements. Ideally, individual features and sites will produce opportunities for correlative dating among live- and dead-cut dendrochronological, radiocarbon and bone collagen, and thermoluminescent samples. Unfortunately, even such correlations will involve a statistical error (+/- factor); a critical problem for the interpretation of archaeological resources this recent in age.

Bone for bone collagen testing, and thermoluminescent samples consisting of ceramic sherds with a sample of the surrounding soil, continue to be collected by the CWP when available. Many of these samples are yet to be processed due to budgetary constraints however, three thermoluminescent samples have been submitted to the Luminescence Dating Laboratory at the University of Washington for analysis. The results of this analysis have not yet been received by DARG, but will be presented in the Phase V report in 2009. A total of 17 tree-ring samples, however, were collected and processed during this phase of fieldwork. Additionally, the results of five tree-ring samples collected during the 2005 and 2006 seasons have been analyzed and are reported here for the first time (Appendix D).

Tree-ring samples were collected and analyzed from six separate sites during Phase IV, which produced cutting dates, or near-cutting dates, ranging from as early as AD1844 to AD1915/1916. An earlier, 1815, date was produced as well, however it is considered suspect by these researchers based upon the well-preserved, but highly tenuous nature of the standing wickiup from which the sample was obtained. It is likely that this latter feature pole, from site 5RB4331, had been collected as dead rather than green wood.

Appendix D presents a full description of the resultant dendrochronological dates from all three seasons. Of note are the dates from the Two Tall Pole Wickiup Village and Bead Village and the Ute Hunters' Camp. Two separate features at site 5RB18, the Two Tall Pole Wickiup Village, produced a non-cutting date of 1844 and a cut date from the fall/winter/spring of 1915/1916. Despite the fact that one or more outer rings are missing from the earlier date, it is inconceivable that anything approaching the 71-year hiatus represented can be accounted for by peeled or deteriorated rings. Therefore this site appears to represent a multi-component camp with, at minimum, two occupations having taken place several decades apart; each one producing and leaving behind wooden structures. On the other hand, Bead Village, 5RB4338, produced a notable cluster of four dates, two of which are cutting dates, indicating a single occupation during the summer of 1867, and the Ute Hunters' Camp, 5RB563, produced three dates that indicate a spring/summer occupation in 1879.

The results of the Phase II and Phase III dendrochronological analyses

Tree-ring and charcoal samples collected from Rader's Wickiup Village (5RB2624) and Wenger Camp (5RB266) during the Phase III investigations, and from the Brush Corral Wickiup site (5ME14260) collected during Phase II, were submitted as a part of the Phase III project, however the results had not been received in time to include in that report. The results of these analyses are also presented in Appendix D, Table D-1, along with this year's results. The 265 to 425 year difference between the tree-ring date from the ax-cut wickiup pole from Feature 3B on the Wenger Camp site and the radiocarbon date from the charcoal in the central hearth of the same shelter is of interest regarding the age of "old wood" as a firewood source.

Expanding the chronometric database obtained from aboriginal wooden features using all available methods will likely aid in yielding improvements in our understanding of temporal cultural change in western Colorado during these periods. Volume III (Martin, Ott, and Darnell 2006: 88-91) presents a comparison of dating methods as applied to Protohistoric/Early Historic aboriginal wooden structure sites and an in depth discussion of the CWP's strategies for utilizing these methods in an attempt to answer specific research questions relating to the Ute and their occupation of the state.

A Reappraisal of the Baker Model of Ute Culture History

In the section on the Ute in the chapter entitled "Protohistoric and Historic Native Americans" in the recent *Colorado History: A Context for Historical Archaeology* (Church et al 2007), the Baker Model of Ute Culture History for the Eastern Bands of Western Colorado is presented (Baker et al 2007:41). A simplification and synthesis of this model, for the purpose of emphasizing the artifactual remains that are found on Ute sites, is presented in Table 8, with additions by the senior author of this report.

For our purposes the latter two phases of Baker's model have been sub-divided into sub-phases, entitled "IV-A, IV-B, V-A", and "V-B". The Phase IV division follows Baker closely in that what we refer to here as Phase IV-B is already described by him for the Northern area of the Eastern Ute territory. This period, referred to as the Late Contact Post-Removal Fort Duchesne Phase, dating from 1881 to ca.1900, is described by Baker as being characterized by "limited sites in traditional territories in northwest Colorado." Thus far, our findings suggest that off-reservation sites from this time period are perhaps more prevalent than previously believed, and not necessarily limited to the northwest portion of the state.

Baker points out that many of the sites from the Fort Duchesne Phase look very much like Euro-American camps. Not only have we found this to be true for this period but for some earlier sites as well, such as the Ute Hunters' Camp (AD1879) with its tin cans, bullet reloading materials, buttons, and evidence of canvas wall tents.

TABLE 8: THE BAKER MODEL OF UTE CULTURE HISTORY FOR WESTERN COLORADO: ARTIFACTUAL HALLMARKS

Adapted from Baker, Carrillo, and Späth in Colorado History: A Context for Historical Archaeology 2007, p.41
(synthesis and additions by Curtis Martin)

ARCHAEOLOGICAL PHASES	DATES	SUGGESTED ARTIFACTUAL HALLMARKS
Phase "V-B": Recent Contact (Emergent Reintegration Phase)	ca. 1924-present	Reappearance of native arts and crafts
Phase "V-A": Recent Contact ("Ungacochoop Phase")	ca. 1900-1924	Post-1900 axe-cut dendro dates
Phase "IV-B": Late Contact Post-Removal (Fort Duchesne Phase)	1881-ca. 1900	– Tobacco tins appear – Sheep and goats – Wagons – Post-1881 axe-cut dendro dates
Phase "IV-A": Late Contact Pre-Removal (Chief Ouray, Chief Douglas, & Chief Ignacio Phases)	ca. 1860-1881	– Metal axes ("ubiquitous") – Canvas tipi covers – Tin objects – White-man's clothing – Bottle glass (common post 1870) – Iron stoves and wall tents – Fixed ammunition guns/cartridges (common post 1870) – Hole-in-top food cans (round cans common post 1870) – Seed beads *very* common (very small specimens late in phase) – Wickiups much better preserved and recognizable – Adobe, log, and jacal structures
Phase III: Middle Contact (Robideau Phase)	ca. 1820-1860 (Fur trade)	– Metal arrow points begin to replace lithic points – Metal axes, cutting and chopping tools – Metal cooking vessels – "Little China" Prosser buttons (post 1840) – Ceramic pipes (bore diameter important) – Horse tack – Tipis – Seed beads (post 1840) – Percussion caps – Tinkler cones – Wickiups better preserved/more recognizable
Phase II: Early Contact (Rivera Phase)	ca. 1540-1820	– First appearance of horse equipage (increases late in phase) – Tipis (*late* in phase) – Metal knives (but *few* axes apparently) – Trade beads (but only those *larger* than seed beads) – Gun flints, musket balls, gun parts (post 1800 or even later) – Brass/copper objects (as early as 1540!) – Shell buttons (post 1800) – Uncompahgre ware pottery still in vouge
Phase I: Late Pre-Contact (Canalla Phase)	ca. 1500 (?)-1540	Uncompahgre ware pottery Desert Side-notched projectile points Cottonwood Triangular projectile points (Desert S-N preforms?)

Phase V, the Recent Contact Phase, beginning at ca. 1900, is described in the Baker Model as "not believed to be appropriate for archaeological study" and no "Archaeological Phase" is defined for the period. Presumably this perception is based on the belief that there were no aboriginal peoples moving across the traditional homelands of the Eastern Utes after 1900 leaving undocumented artifacts on the landscape. The findings of the CWP, specifically those sites that have produced post-1900 tree-ring dates (Wenger Village and the Two Tall Pole site) have proven otherwise. These two sites have produced solid evidence of Numic peoples living more-or-less "traditional" Protohistoric lifestyles in western Colorado between 1914 and 1916.

As a result, this author proposes the division of Baker's Phase V, the Recent Contact Phase, into two sub-phases. Phase V-B would conform to the Baker Model's definition of "emergent reintegration" that continues to the present day. The proposed Phase V-A, however, would integrate the post-1900 Early Historic Era sites into the existing model. At this time the only suggested archaeological "hallmark" that would aid in identifying these sites in an archaeological context would be post-1900 tree-ring cutting dates (or dates on coins) associated with wickiups and other aboriginal wooden features.

The year 1924 has been selected as the terminal date for the phase for two reasons: it is a reasonable hypothetical date for the latest potential Ute habitations in western Colorado (outside of modern circumstances), and it is also the year that American Indians were awarded citizenship. Again, it is certainly not beyond the realm of possibility that wooden structures dating even later exist. Decker (2004:XII) describes how "a local family in my hometown of Ridgeway, Colorado, can remember how, in the 1930s, a few Utes who continued to survive in the area would gather in their kitchen every morning...await their daily cup of coffee...and then disappear into the timber."

In following the Baker Model format of naming the associated "archaeological phase" after Ute luminaries of the period, we have chosen to refer to Phase V-A as the "Ungacochoop Phase". Ungacochoop, or Chief Red Cap as he was also known (Plate 12), was a veteran of the Meeker Massacre and recognized leader of his people at the Uintah Valley reservation (later consolidated into the present day Uintah and Ouray Reservation). He reportedly was fluent in English and headed a delegation to Washington, D.C. in 1905 where he sought to counsel peace between his people and the United States government (O'Neil 1968 and Simmons 2000).

It was Ungacochoop who advocated a journey by his tribal members to South Dakota in 1906 to leave behind the deplorable conditions in Utah, join with the Sioux or Crow, and form a league with the Plains tribes to fight against the Whites. Under the leadership of Red Cap and others, several hundred well armed Utes, along with 1,000 head of horses and about 50 head of cattle left Whiterocks, Utah on a well-documented, peaceful exodus that passed through northwest Colorado, western Wyoming, southeast Montana, and into South Dakota where they had hoped to establish a less miserable life for themselves in league with the Sioux or Crow. Unfortunately the Sioux were unwilling to enter into an alliance; facing difficult times of their own. In 1908, 15 months into their sojourn, the Utes left South Dakota to return to Utah, escorted by members of the Tenth United States Cavalry; a journey of 1,000 miles that was completed in 101 days (ibid).

Noteworthy to our studies, the *Vernal Express* newspaper, in October of 1908, described a scene during the return trip with mention of a wickiup: "an old buck standing alongside his wyckiup [sic] while the squaw was baking bread. To the question as to what his name was he replied that he was too poor to have a name."

Seasonality

Several research questions regarding the seasonality of Numic occupations in western Colorado, and the relationship of the landscape to the occupational strategies, were posed in Volume III (Martin, Ott, and Darnell 2006: 90-91). Direct evidence of seasonality was procured during the Phase III fieldwork in the form of thousands of Chenopodium and Amaranthus seeds from beneath an overturned metate on the floor of a wickiup at Wenger Camp, which suggested a summer to fall occupancy.

Additional evidence regarding seasonality has been obtained by the results of the dendrochronological studies from all three years, and from the faunal analysis at the Ute Hunters' Camp. Roughly half of the evidence points to fall through spring residence and the rest to summer occupations which are indicated by the incomplete terminal rings on two juniper elements at Bead Village (5RB4338) that were harvested during the summer (growing season) of 1867, at the Ute Hunters' Camp during the growing season of 1879, and at 5RB2930 during the growing season of 1885.

As shown in Table D-1, the remainder of the cutting dates from the juniper and piñon cultural elements indicated harvesting *between* the summer growing seasons. This is true for the dates from Rader's Wickiup Village (5RB2624) in the fall/winter of 1883/1884, Wenger Camp (5RB266) in the fall/winter of 1914/1915, and at Two Tall Pole Wickiup Village (5RB18) between the growing seasons of 1915/1916.

Further evidence of a spring to early summer occupation comes from Ute Hunters' Camp (5RB563) where a metapodial bone from a full-term fetal or newborn deer was recovered from a thermal feature.

Although logic suggests that the finding of hearths within wickiups, as is the case at a number of the CWP sites, would indicate cold weather occupation, the mere building of expedient shelters does not. Lewis Binford (1990) surveyed housing among the world's foragers and found that some form of shelter is constructed whenever foragers stop even for a short time.

> There are no known cases among modern hunter-gatherers where shelter is not fabricated in residential sites (or anywhere hunter-gatherers plan to sleep), regardless of the expected occupational duration, and only in rare instances are sites of any kind produced by hunter-gatherers where no shelter is provided for the occupants (Binford 1990).

Newly described structure types and inferred functions

Perhaps the most significant difference in the Colorado Wickiup Project's approach regarding the interpretation of wooden features during Phase IV as compared to previous years relates to the inferred function of many of the one, two, and even three-pole features

encountered. As discussed in the Phase III report (Martin, Ott, and Darnell 2006:92), significant numbers of single and paired poles have been found leaning into trees or collapsed beneath them.

Prior to the inception of the project these had typically been recorded as wickiups and sometimes "hide-processing" or "meat-drying" poles. Although this latter interpretation appears to remain valid for a select few of these features, such as Features 1 and 3 at the Ute Hunters' Camp, the CWP has come to refer to these elements as simply "utility poles". We now think of these features in significantly broader functional terms for a number of reasons. Their distribution on the landscape, both within wickiup sites and as isolated features, occasionally even leaned onto the tops of wickiups themselves (in one case extending from the apex of one conical shelter to the apex of another), suggests that they were used to suspend any number of items such as food, saddles, bridles, other horse tack, bedding, clothing, and personal items. This would serve to keep items off the damp ground, and out of reach of dogs, wildlife, and children.

During the current year's research it began to be obvious that many of these poles appear to rest at too steep of an angle to have functioned effectively as *any* sort of utility pole. Some are even arranged with their bases adjacent to the trunks of the trees into which they are leaned, as in Feature 1 at 5RB5609 where five cultural poles rest against the trunk of a support juniper and two more are on the ground below (Plate 11). In such cases we have begun to interpret the features simply as pole caches rather than structures with an inherent purpose. Pole caches have also been found where they were intentionally laid on the ground beneath sheltering trees. The assumption is that these caches range from harvested branches and tree trunks that never were incorporated into wickiups or other structures ("spare poles"), to poles from dismantled structures that are being stored for future use upon return to a site, and possibly even as long pieces of firewood.

In a similar vein, we have broadened our concepts regarding the interpretation of tree platforms. Some of these are well-constructed platforms that obviously served as storage platforms, hunting blinds, watch "towers", or burial platforms, however many of what have been traditionally referred to as "platforms" consist solely of one or a few horizontal beams or branches supported by the limbs of a tree. Some of these quite likely served as another form of "utility pole" for hanging items from.

An additional function for these horizontal beams has been suggested by Timothy Ryder of the Southern Ute Museum in Ignacio (personal communication); roosts for tethering captive eagles. Mr. Ryder is in possession of a photograph, of unknown date, showing an eagle tethered to horizontal tree beams. It is well documented in the ethnographic literature that, for ceremonial purposes, feathers shed or plucked from live eagles have special significance over ones obtained from dead birds (White 1913). The practice of keeping live eagles for feather procurement is still known among Native Americans (personal observation by the senior author) and there are references to eagles being tethered on the roof tops of Hopi pueblos during the ceremonial season (Adams 2002:7).

Two newly recognized types of features were recorded during Phase IV: possible tipis and wall tents. Three of the wickiup structures this season have been recorded as the possible remains of tipis rather than more cursory wickiups *per se.* Two of these (Feature 2 at the Two Tall Pole Village and Feature 11 at Duck Creek Village) are partially collapsed leaner wickiups

that are characterized by unusually long poles, high headroom, and large floor size (Plate 4), suggesting possible canvas covered tipis. Plate 5 shows historic photographs of Ute leaner tipis). Another is the collapsed freestanding shelter at site 5RB5611 where the unusual length, straightness, and completely limbed nature of the poles, the evidence of the shelter's original conical nature and round floor, and the presence of a possible smoke-flap pole also suggest that the shelter could have been a tipi (Plate 1).

Feature 6 at the Ute Hunters' Camp is the most conspicuous example of what appears to be the abandoned poles from a canvas wall tent, where two juniper poles lie on the ground roughly end-to-end with a gap in between. The most likely explanation is that the poles represent anchors for the bottoms of the canvas door flaps of a tent. Forty-one small artifacts (the Reloading Locus) were situated on one side of these poles (presumably the tent interior) while only one large netherstone was found on the opposite side (Plate 7).

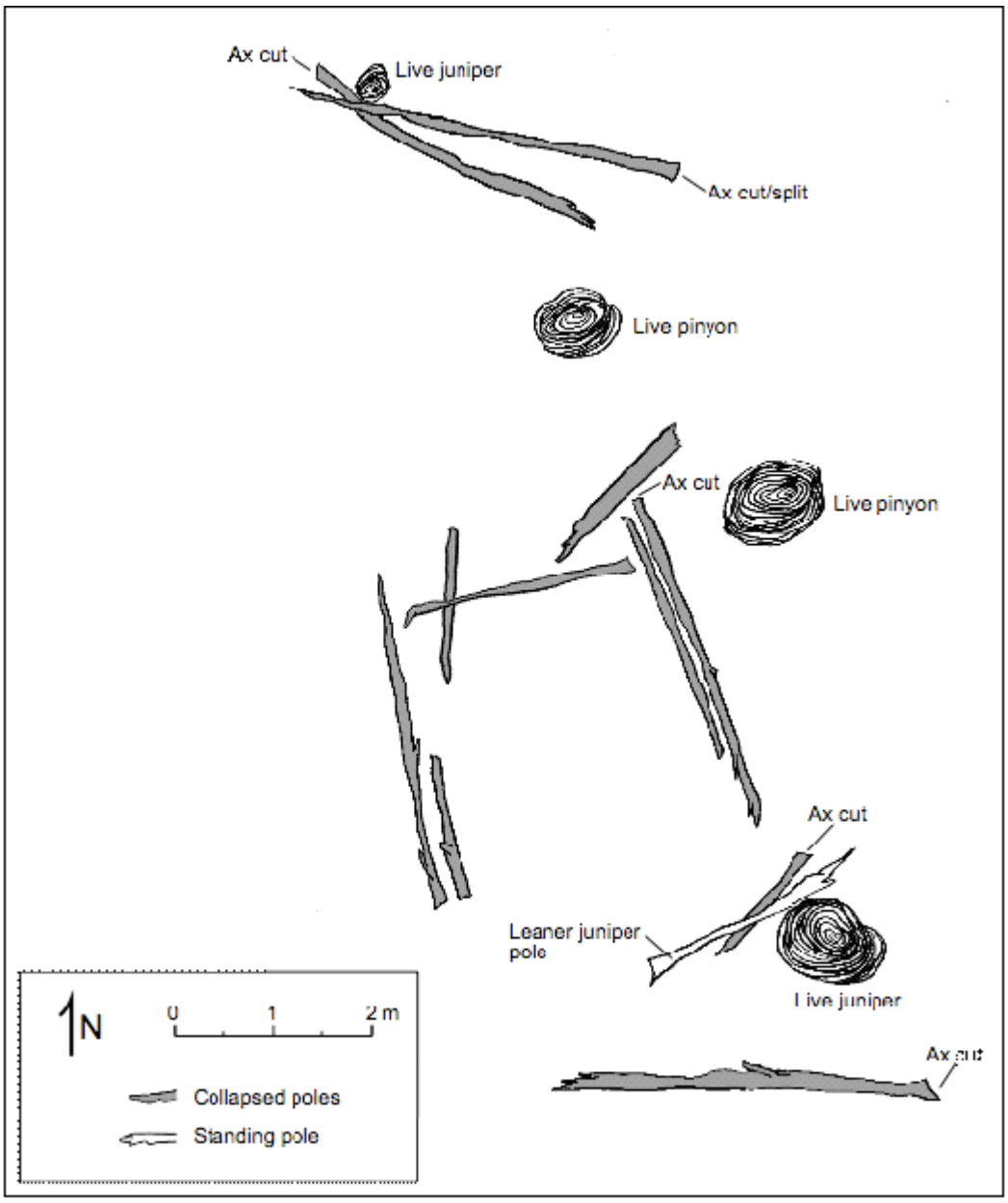


Figure 22. 5RB266, Feature 19, plan map of possible wall tent.

The insights gained from the interpretation of the poles at Feature 6 led to a similar conclusion for the three poles in an L-shaped arrangement at Feature 7 of the same site (Plate 6), and also a reevaluation of one of the perplexing features that had been recorded during the Phase III fieldwork; Feature 19 at 5RB266, Wenger Camp. This feature consists of 11 mostly ax cut poles lying on the ground to the west of a series of live trees. Seven of the poles rest in a three-sided rectangular arrangement, approximately 3 meters across, that was interpreted as a possible flat-roofed ramada, sunshade, or utility framework (Figure 22). In retrospect however, Feature 19 may very well represent the poles from a canvas wall tent. Excavations at this feature may aid in its interpretation.

Another facet of the Phase IV sites that had not been previously noted is the presence of firewood piles that are in direct association with thermal features. Bead Village, produced three such instances (Plate 10), two other examples are found at the Ute Hunters' Camp, and at least one each at sites 5GF2333 and 5RB4027. Sub-surface excavations in the vicinity of Protohistoric wood piles would undoubtedly produce more of such pairings with hearths.

Culturally modified trees, although recorded and described during Phases II and III as associated aspects of several wooden features, have been added to the database as a distinct feature type in the current phase's work.

Synthesis of Findings

With the completion of Phase IV, the Colorado Wickiup Project has documented in detail, a total of 46 aboriginal wooden structure sites and 281 individual features. A summary tabulation of some of the quantifiable aspects from the CWP dataset is presented below in Table 9. The compilation includes the findings from all phases of the project to date, as well as data from the Rifle Wickiup Village site (5GF308), recorded by DARG personnel in 2004, which is shaded gray. Phase II results are shaded peach, Phase III green, and Phase IV blue.

In this tabulation, whenever a range of possible cultural poles or beams was recorded (e.g.: "9 to 11 poles") the larger number was used. The number and species of tree branches that were utilized in the construction of brush fences and the larger corrals or animal pens do not appear in the totals. The same is true for the non-structural wood recorded as firewood piles, which account for 254 pieces of wood (recorded as 200 juniper and 54 piñon).

Site 5MF2631, the Sand Wash Wickiup site, is not included in Table 9 as the features there have yet to be completely recorded. The case is the same for the partially recorded features at 5RB53, Duck Creek Village (Features 12 through 15), and for Feature 5 at 5RB563, Ute Hunters' Camp which was determined to be a recently cut and sawn piñon tree.

Several observations are apparent from the data in Table 9. The dominant use of juniper trees rather than piñons both for the structure poles themselves (98.5% as recorded on sites within the piñon/juniper environment) and feature support trees (86%) is discussed above as well as in the Phase III report (Martin, Ott, and Darnell 2006). As noted earlier in this report, it now appears likely that the extremely high percentage of feature poles recorded as juniper is somewhat inflated.

As discussed in Phase III, a third (34%) of the wickiups thus far recorded are categorized as freestanding, rather than leaners or pull-downs. Taking into consideration the variety of factors outlined in Phase III, it remains the contention of the CWP that freestanding wickiups may have originally been as prevalent as leaner wickiups on Ute sites, perhaps even more so.

Twenty-one of the 46 sites (46%) provide evidence of post-contact trade goods (mostly in the form of metal-ax scars) and four of the seven sites (57%) that have produced tree-ring dates provided evidence of post-"removal" occupation (after 1881). If the unlikely date of AD1815 from the wickiup pole at 5RB4331 is removed from the equation this percentage increases to 67%. It is surmised that even more of the sites date to post-contact times based on the overall condition of the feature wood.

Table 9: Synthesis of Results of the Colorado Wickiup Project (2004 - 2007)

ITEMS / SITES (46)	No. of Wooden Features	Leaner Wickiups	Freestanding Wickiups	Pull-down Wickiups	Possible Tipis	Tree Beams/Platforms	Wind Breaks/Hunting Blinds/Lean-tos	Ramadas/Arbors/Shades	Canvas Wall Tents	Utility Poles/Racks	Corrals/Pens/Fences	Pole Caches	Firewood Piles	Culturally modified trees	Utility Poles as Elements of Wickiups	No. of Juniper Elements	No. of Piñon Elements	No. of Aspen Elements	No. of Juniper Support Trees	No. of Piñon Support Trees	No. of Aspen Support Trees	Evidence of Trade Goods (Including Metal Ax Cuts)	Tree-ring Dates	Post-1881 Dates
5GF308	80	47	7			1				25					NA	479	1		74	7		X		
5ME 14256	1									1						1			1					
5ME 14258	8	6					1			1						64			5	5		X		
5ME 14259	2	1	1													16			1					
5ME 14260	10	6	2								1	1				89			5	1		X		
5ME 15280	1									1						2			1					
5ME 15281	1									1						1				1				
5ME 15282	1	1														10			1					
5ME 15283	2	1	1													6	2		1			X		
5ME 15284	1									1						2				1				
5EA439	1					1										11				1				
5EA2436	1					1										16			1			X		
5GF2914	1					1										24			1					
5GF3003	1	1														11			1					
5GF3415	1						1									13								
5GF3442	1		1													17						X		
5ME 6908	4	1	1							1	1				1	23			2					
5ME 14044	1					1										15			1			X		
5ME 14071	4	1	2			1									3			111			4	X		
5RB 266	24	4	4	1		4	1	1		6		3			1	159			14	4		X	X	X
5RB 2624	42	14	16	1		3				8					1	317			26	1		X	X	X
5RB 4799	1	1														8				1				
5GF2333	5	1	2			1					1					36			3					
5ME 15794	1	1														3			1					
5ME 15907	1		1													12								
5MF3737	4	3	1													16			4					
5MF3993	1					1										15	3			1		X		
5MF4368	5	3	2													57			4					
5MF6404.1	1										1					?	?		?	?		X		
5MF6408	2										2					?	?		?	?		X		
5RB 18	13	2	2		1		1			2		2	2	1		85	7		8			X	X	X
5RB 53	5		1		1					2	1					33	3		8					
5RB 58	1	1														4			1					
5RB 144	2		2													17								
5RB 563	7								2	2			3			7	5		1	2		X	X	
5RB 568	4	1	1							1				1		43			2			X		
5RB 2929	1	1														7			1					
5RB 2930	7	1	3							2			1			28			3			X	X	X
5RB 2932	1											1				4								
5RB 4027	14	2	5				1			3			3			76			5	3		X		
5RB 4331	1	1														8	6			1		X	X	
5RB 4338	10	2											7	1		14			2			X	X	
5RB 5609	3									2		1				9			3					
5RB 5611	1				1											9								
5RB 5620	1									1						1			1					
5RB 5623	1									1						2			1			X		
TO TA LS	281	103	55	2	3	15	5	1	2	61	7	8	16	3	6	1770	27	111	183	29	4	21	7	4

O'Neil et al 2004 | Martin et al 2005 | Martin et al 2006 | Martin et al 2009

Determinations of Effect and Management Recommendations

The eligibility determination and consultation process is guided by Section 106 of the NHPA (36 CFR 60, 63, and 800). Inventory to identify, evaluate, and mitigate potential effects to cultural resources affected by an undertaking is the first step in the Section 106 process. BLM actions cannot be authorized until the Section 106 process is completed (36 CFR 800.3). Final determinations of National Register eligibility and effect should be sought from the controlling federal agencies in consultation with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation.

Potential negative impacts on aboriginal wooden structure sites can occur as a result of both natural and human causes. Resultant adverse effects on the integrity of these cultural resources range from loss of feature- and structure-specific data, to loss of site context and, in some instances, virtually total loss of the resource and its environmental context.

Natural processes such as wildfires and the inevitable deterioration, collapse, and disappearance of aboriginal wooden structures due to wind, moisture, and decay are ubiquitous threats. Judiciously applied, BLM's fire mitigation and fuels management programs may provide wooden feature sites some degree of protection from wildfires, however careful implementation of fuel reduction and other vegetation management activities is critically important. We have observed at least one instance of inadvertent damage to the integrity of aboriginal wooden features resulting from tree cutting and dead wood removal intended to mitigate the wildfire threat to a wickiup site.

Also, as reported in the CWP Phase II report (Martin, Conner, and Darnell 2005), no references have been found regarding *in situ* stabilization or reconstruction attempts for aboriginal wooden features similar to the ephemeral resources discussed herein. Wood preservation techniques have been used on wooden architectural components found in more substantial cultural resources throughout the world, however, again, similar mitigation approaches as applied to fragile features such as wickiups remain unstudied.

Further, it is acknowledged that attempts to shore up or preserve aboriginal wooden structures in the field can be only a temporary solution, at best. The value of stabilization and *in situ* preservation efforts on features such as these are debatable, and may come less from archaeological than contemporary social and cultural considerations. Ethical factors may also apply in some sensitive cases, such as the intact burial platform at site 5GF2914 and the possible burial structure at 5MF3993.

Human activities such as OHV recreation, artifact pilfering, livestock grazing, and a variety of other impacts due to increased visitation to the site areas by recreationists and people involved in energy exploration, increasingly threaten aboriginal wooden feature sites. There are well-known instances of Protohistoric wooden features having been inadvertently dismantled by modern visitors for use as fire wood or even fence posts.

As discussed in *Archaeological Assessment of the Rifle Wickiup Village* (O'Neil et al. 2004), it is difficult to determine the best means of protecting ephemeral wooden features from modern visitors. We continue to recommend that, in currently undisturbed and little-visited areas, sites and structures remain unfenced and unmarked. However, in areas where negative

visitation impacts have begun to occur — from innocent and uninformed individuals, or vandals alike — a program of public education and protection should be implemented as soon as possible.

Therefore, our management recommendations include additional Class III surveys in the areas surrounding these sites – especially in the area proposed for the Yellow Creek District, periodic monitoring of specific resources, the creation of fire breaks and fuel reduction programs, archaeological testing and excavation of selected sites and features that target gaps in the current data, additional dendrochronological, bone collagen, and thermoluminescent sampling, and the consideration of district stewardship programs in cooperation with local land owners, museums, and amateur archaeological associations.

Further discussion of NRHP eligibility for the Yellow Creek Archaeological District is presented in Part II of this report, accompanied by discussion of broader research questions, preservation challenges and management recommendations for aboriginal wooden feature sites throughout Colorado.

Future Directions and Proposed Field Work

The Colorado Wickiup Project hopes to continue the on-going re-visits and intensive recording of priority sites, selected in collaboration with BLM Field Office archaeologists. Seven sites have been targeted in the Yellow Creek Study Area of the northern Piceance Basin for consideration during the 2008-2009 Phase V field season. Four of these sites would be visited for the first time for the purpose of full-scale recordation: 5RB64, 5RB129, 5RB4543, and 5RB5624. These sites are said to contain a total of approximately 16 wooden features, however experience has led these researchers to expect to find 20% to 40% more features than what was initially noted. Also, the incompletely documented features at 5RB53, Duck Creek Wickiup Village, will be fully recorded; site 5RB2624 will be revisited for the purpose of collecting thermoluminescent dating samples; and test excavations are scheduled at 5RB563, the Ute Hunters' Camp.

In addition to the surficial documentation, DARG recommends that a program of excavation be initiated in the near future at a select number of sites previously recorded by the CWP. Several of the sites that appear to offer the greatest potential for valuable sub-surface information regarding this insufficiently documented period of Ute occupation in western Colorado during the Protohistoric and Early Historic periods include:

- 5RB18, Two Tall Pole Wickiup Village
- 5RB563, Ute Hunters' Camp
- 5RB53, Duck Creek Wickiup Village
- 5RB4027
- 5RB4331, Black Sulphur Creek Wickiup
- 5RB2624, Rader's Wickiup Village

DARG was awarded a State Historic Fund grant, with supporting funding from the Bureau of Land Management for continued investigations within the Yellow Creek Study Area. Field work for what will constitute Phase V of the Colorado Wickiup Project began in October of 2008

and will continue in the field season of 2009. The proposed scope of work under this grant will constitute Phase V of the Colorado Wickiup Project and is outlined below.

Complete the recordation of the four standing wooden features on the Duck Creek Wickiup Village (5RB53) that were discovered at the close of the Phase IV field season and remain only partially documented: Features 12, 13, 14, and 15.

Return to the location of a known ceramic scatter of Ute Brownware sherds on Rader's Wickiup Village (5RB2624), revisited and documented during Phase III, for the purpose of collecting additional sherds and surrounding soil to add to the CWP's collection of thermoluminescent samples. It is our hope that such samples will provide absolute dates for Ute sites that either do not render metal ax cut structure poles for tree-ring dating, and/or to compare the results of the thermoluminescent dating with those of ax cut dendrochronological samples from the same sites.

Fully document, to the standards established during the first four phases of the CWP, the aboriginal wooden features on four sites in the Yellow Creek Study Area that either have not yet been accessed by the project or, if so, only as a cursory visit: (5RB64, 5RB129, 5RB4543, and 5RB5624). It is anticipated that a minimum of 16 wooden features will be encountered on these resources based on the original site descriptions (experience has led these researchers to expect to find 20% to 40% more features than what was initially noted).

Conduct test excavations at the Ute Hunters' Camp (5RB563). Although undoubtedly not unique as a site, it is certainly rare in the archaeological record, as described in this report.

> A series of five 50cm-wide test trenches are proposed to investigate the depth and nature of the subsurface deposits at the locations of the two wall tent features, the two sets of utility poles (presumably hide drying racks), and one of the large meat processing thermal features. Based upon the number and variety of metal artifacts recovered with the aid of a metal detector (up to 11cm below the present ground surface), it is anticipated that an equally high density and variety of non-metallic artifacts will be recovered by screening the fill.
>
> Also proposed is the collection of all diagnostic fragments of bone from the surface of Concentration 2 for the purpose of gaining additional information regarding seasonality and resource utilization at the site. A random sample of identifiable burnt bone from the surface of the thermal feature has already identified at least two adult and one full-term fetal or newborn deer (indicating a spring or early summer occupation).

PART II

Ute Culture History and An Assessment of NRHP Eligibility for the Yellow Creek Archaeological District

by

Richard Ott, Project Coordinator

Introduction

Hundreds of historical archaeological sites with wickiups and other aboriginal wooden features have been cataloged in western Colorado in recent decades. Many hundreds more, no doubt, have eluded recognition because of their inconspicuous presence in arboreal landscapes. Despite the significant cultural and scientific values inherent in such sites — and the well-known threats they face from environmental and human causes — they have remained, until recently, little studied and poorly documented. In recent years a number of archaeologists have quite clearly pointed out the need for more concerted efforts to expand the database for protohistoric and historic archaeology in western Colorado in general (Buckles 1971; Baker et al. 2007; and Reed 1984) and for Ute archaeology in particular (Baker 1995, 2005b; and Sanfilippo 1998).

At the same time, population growth in western Colorado in recent years, fueled in large part by booming development of natural gas, oil shale and uranium resources, has significantly increased threats to the integrity of aboriginal wooden feature sites. Colorado Preservation, Inc. added Native American Arboreal Wickiup and Teepee Sites to its Endangered Places Program in 2003 (Colorado Preservation, Inc. 2003). As can be seen in Figure A-42, sites in the Yellow Creek study area are especially threatened.

The Colorado Wickiup Project (CWP) has compiled archaeological records for upwards of 322 known sites containing more than 786 aboriginal wooden features in Colorado, located for the most part in central and northwestern Colorado (Figure 1). The project has comprehensively documented 281 wooden features in re-visits to 46 sites of those sites. An obvious cluster of sites in the Yellow Creek drainage south of the White River in Rio Blanco County was targeted for focused study during Phase IV of the project. Referred to herein as the Yellow Creek Study Area, the locale encompasses the densest concentration of wickiups known to exist in Colorado and includes a total of 44 previously recorded wickiup sites containing at least 114 aboriginal wooden features (Figure A-42). During Phase IV fieldwork a total of 15 sites were revisited or newly discovered in the Yellow Creek Study Area, and 70 aboriginal wooden features were recorded. Additionally, two sites in the area, containing four wooden features, were newly discovered as part of independent Class III investigations.

Archaeological findings for Phase IV are reported in Part I of this report. Part II, which follows, discusses the Yellow Creek Study Area's potential for nomination to the National Register of Historic Places.

Summary of Archaeological and Historical Resources in the Study Area

Table 1, in Part I, presents summary descriptions and field evaluations of the individual sites reported herein, including the non-Colorado Wickiup Project investigations. Of the 17 sites in the Yellow Creek study area documented during this phase of the project, 13 were field-evaluated as "Eligible" for the NRHP and four as "Not Eligible", as

determined using NRHP criteria for evaluation of the individual sites. Further considerations of site eligibility in relation to criteria for evaluation of multiple-properties, districts and other NRHP categories are discussed below.

During the course of this project, a spot test of records in the OAHP Compass database found 22 sites within the study area (Table 10 and Figure A-42) that reportedly do not contain aboriginal wooden features, but are described as "Ute" or "Numic" in the database's "Culture" field , presumably based on lithic, ceramic or other associative evidence.

Table 10: Other "Ute" sites in the study area (from OAHP Compass).

Site No.	Date Recorded/Revisited	Site Type	Notes/Other Features
5RB11	1973	Open lithic	3 artifact concentrations
5RB13	1973	Open lithic	2 hearths
5RB125	1998	Open camp	Hearth
5RB494	1985	Open lithic	Skeletal remains
5RB523	2006	Open camp	
5RB525	1975	Open camp	
5RB545	1975	Open lithic	
5RB551	1975	Open lithic	
5RB584	1975	Open camp	Artifact concentration
5RB608	1975	Open camp	
5RB1602	1980	I.F.	Debitage
5RB2151	1981	I.F.	"Other Architectural Feature"
5RB2170	2005	Open camp	5 artifact concentrations, proj. pt., ceramics
5RB2171	1999	Open camp	3 artifact conc., 1 hearth, burnt bone, ceramics, 2 bifaces, flakes
5RB2275	1996	Open camp	5 artifact conc., 5 FCR, hearth, 5 projectile points, groundstone, ceramics
5RB2318	1982	Open camp	Hearth
5RB2391	1982	Open lithic	Artifact concentration
5RB2934	1989	I.F.	Uniface/scraper, metate
5RB4114	1999	Open lithic	Flake concentration
5RB4162	2005	Open camp	Biface/knife, blade, flakes, mano
5RB4188	2000	Open camp	Lithics, hearth, FCR
5RB4264	2003	Open Camp	8 FCR, flakes, mano
Total Sites	**22**		

In addition to the major archaeological and historical contexts referenced above in Part I (Reed and Metcalf 1999, Church et al. 2007, Husband 1984, and Martin et al. 2005), a number of other leading sources were consulted for broad archaeological and ethnohistorical perspectives on the Yellow Creek Study Area, including Buckles (1971), Madsen and Rhode (1994), Callaway et al. (1986) and Steward (1938).

Relevant ethnographical and ethnohistorical sources reviewed for this study included Lewis (1994), Simmons (2000), White (2006), Burns (2004), Wroth (2000), Smith (1974 and 1938) and Conetah (1982). A generalized search of historic records of European-American cultural resources in the study area was also conducted, primarily from online sources, including the Colorado Office of Archaeology and Historic Preservation Compass database, the Colorado Historical Newspaper Collection (n.d.) and General Land Office Records (n.d.). Oral history archives and artifact collections at the White River Museum and the history collections of the Public Library in Meeker, CO were surveyed for relevant archaeological, historical and ethnohistorical materials. Budget for this phase of work did not allow time for a search of historical land records held at the Rio Blanco County courthouse, however that effort will be included in future research.

Culture History

In late-prehistoric and historic time frames the "Native American archaeological record of western Colorado is very largely, if not nearly exclusively, Ute derived" (Baker 1995:2). Records from Spanish explorers and colonizers in the seventeenth and eighteenth centuries produced the earliest written descriptions of the indigenous people inhabiting central and northwestern Colorado in the Early Contact phase (Sánchez 1997) and offer clear, although fragmentary, evidence of Ute presence in the region during the close of the protohistoric time frame. Later historical records, largely from the nineteenth century, chronicle the seminal incursions into the area by Euro-American explorers, trappers, traders, and miners — and ultimately the permanent occupation of the region by ranchers, settlers, and other immigrants to Colorado's last frontier (Baker et al. 2007; Husband 1984; Athern 1982). The Utes played a central role in the historic changes that occurred in western Colorado all through the nineteenth century — up to — and beyond — 1881 when they were forcibly removed to reservations in northeastern Utah. As Baker (Baker et al. 2007:31) pointed out, "the only indigenous people to reside within the state from prehistory into their Late Contact phase" were the Utes, and their living descendants continue to help shape the cultural landscape of western Colorado. Consequently, the ephemeral aboriginal wooden structures of interest to the Colorado Wickiup Project are generally considered to be of Ute origin, and this overview of culture history looks primarily at the Northern Utes, with specific focus on the White River Utes. It should be noted, however, that other indigenous groups also appear in the history of the region — notably the Eastern Shoshone and the Comanche — and they are tangentially considered in this discussion as well.

Over the past several decades, regional archaeologists have proposed a number of taxonomic models for interpreting Ute archaeology in the Protohistoric and Historic periods. These have ranged from simple two-stage divisions to various multiple-phase models. Steve Baker's multiphase model of Ute culture history for the Eastern Ute bands of western Colorado (Table 8), provides useful temporal resolution for the contact period and it is adopted in the following discussion.

The Utes, or "Nuuciyu" (Goss 1999:79), are a "culturally self-identifying group" (Lewis 1994:22) of people affiliated by shared language, lifeways, and history. The Ute language, a member of the Numic branch of the Uto-Aztecan language family, is "affiliated most closely with the Southern Paiute in the Colorado River drainage to the west, less closely with the Comanche and Northern Shoshone in the Plains and Plains-Plateau to the east and north respectively, and least closely to the Northern Paiute in the Great Basin area of western Nevada and Oregon" (Jorgensen 1965:9). Although there is disagreement regarding the earliest prehistory of Numic speakers, it is generally agreed that during the last thousand years they expanded from the southwest Great Basin to reach their historically known territory in Utah and western Colorado (Madsen and Rhode 1994). Brown ware ceramics and increasing numbers of Desert Side-notched and Cottonwood Triangular projectile points began to appear in the archaeological record of eastern Utah and western Colorado at approximately AD1100 (Reed 1994:196), and may represent the earliest known prehistoric markers of Numic-speaking people in western Colorado.

David Rich Lewis (1994:30, 191), drawing on the work of fellow anthropologists Smith, Steward, Stewart, Jorgensen and others, concisely summarizes Ute social organization as it may have existed in the Early Contact phase:

> Ute society centered around the extended bilateral family, and periodic congregation of related or affinal kindreds to form local residence groups of from twenty to one hundred persons. These groups frequently traced relations through the matriline and resided matrilocally, but membership was fluid and flexible enough to adjust to personal and local environmental realities. Local leaders were older men who, through persuasion, influence, and proven ability, achieved a level of consensus for their plans. Most groups recognized specialized leaders who directed specific activities (hunting, moving camp, dances, or raiding) and had little or no authority over the group in other matters.
>
> Larger "band" organization was limited to periodic congregations for defense, for spring Bear dances, or for summer hunting or fishing camps. Such summer congregations especially around Utah Lake, could number a thousand people. Bands consisted of local residence groups linked by bilateral kinship networks and their common territorial range — specific features usually reflected in their band name. Local groups and even

> extended family groups remained relatively autonomous, because most bands lacked formal political organization. Local leaders in band councils (which could include women) decided necessary matters subject to community approval. Dominant groups often provided the most influential leaders — leaders who ultimately came to the attention of white officials looking to negotiate with a single "chief." Ute bands recognized their larger group identity in custom, language, and territory, and remained united through kinship, trade, and defense against common enemies, but there was no larger Ute "nation" with long-lasting political allegiances or tribal councils.

The identities and territorial ranges of Ute social groups have long been of interest to archaeologists, ethnohistorians and other parties with a stake in Ute history. The Utes, however, were highly mobile in the historical period and the shifting synonymies and inconsistent spellings (Callaway et al. 1986:338, 364) used to describe their social groups in historical records reveal the complexity of this ethnohistorical theme. Literature on the theme reflects deeply divergent opinions spanning a range of conceptual, theoretical and practical issues. Goss (1999:77) goes so far as to raise the fundamental question of whether the very idea of "bands" as ascribed to the Utes and other "Numu People" is even usefully meaningful, or merely a "false model of reality" representing an artificial, ethnocentric construct. Nevertheless, by default, practicing archaeologists and ethnohistorians, faced with the task of evaluating archaeological sites and describing cultural histories, have relied for years on commonly used designations for Ute "bands". It is beyond the scope of this project to introduce alternative perspectives on the question of Ute social organization, so we find it heuristically necessary to apply what is currently known about Ute "bands" in the following discussion.

The regional setting of the Yellow Creek Study Area is within the historic territory of the "White River" Utes living today mostly on designated reservation lands in eastern Utah. This group appellation began to appear in documents in the 1860s (Baker et al, 2007:49), concurrently with the "Uncompahgre" Utes, whose traditional homelands lie immediately south. Both band names were widely adopted after the U.S. government established agencies for the Utes on the White River near Meeker in 1868 (Burns 2004), and on the Uncompahgre River south of Montrose in 1875. The names persist today in the political structure of the Northern Utes (Constitution and By-laws of the Ute Indian Tribe of the Uintah and Ouray Reservation 1937) and are widely used by contemporary Utes.

Naming specific historical antecedents of the White River and Uncompahgre Utes is not a straightforward task. Ethnohistorical descriptions of the indigenous people occupying central and northwestern Colorado prior to the 1860s are sketchy, at best, and include shifting and inconsistent names for Ute subgroups (Jorgensen 1965; Callaway et al, 1986:338). The White River and Uncompahgre Bands were nineteenth century amalgamations of earlier Ute groups which had become increasingly mobile with the widespread adoption of equestrian lifeways during the Middle Contact period. During this

time Eastern Utes expanded their territory "becoming important middlemen in the intertribal horse trade... [while clashing] more frequently with the Cheyenne, Arapaho, Lakota, and Comanche" (Lewis 1994:30-31).

The full geographic extent of Ute territory at its apex (Figure 23) is generally accepted as reaching from western Utah to the eastern slope of the Rocky Mountains in Colorado, and from northern New Mexico to the northernmost reaches of western Colorado (Callaway et al, 1986:337; Jorgensen 1965). Recent investigations (Keyser and Poetschat 2008) cite evidence — rock art, wickiups and brush fences — suggesting that the Utes ranged as far northward as Wyoming's Upper Powder Spring Basin during the Late Contact phase. Jorgensen (1972) extends his ca. 1880 "Yamparka" Ute territory to the northern reaches of Colorado's Sand Wash Basin, and ascribes lands beyond to the Wind River Shoshone. Baker and his colleagues (2007) appear to concur with Jorgensen, but only for the Phase I Late Pre-contact and earliest Phase II Early Contact periods (Figure 24), arguing that the "Sabuagana" Utes encountered by Rivera in 1765 and Dominguez and Escalante in 1776 represented the northern limit of core Ute territory at the end of protohistory in northwestern Colorado (Figure 25). They (Baker et al. 2007) further ascribe the area north of the Sabuaganas as Eastern Shoshone, during ca. AD1540-1600 (Figure 24), and Comanche during the late eighteenth century (Figure 25).

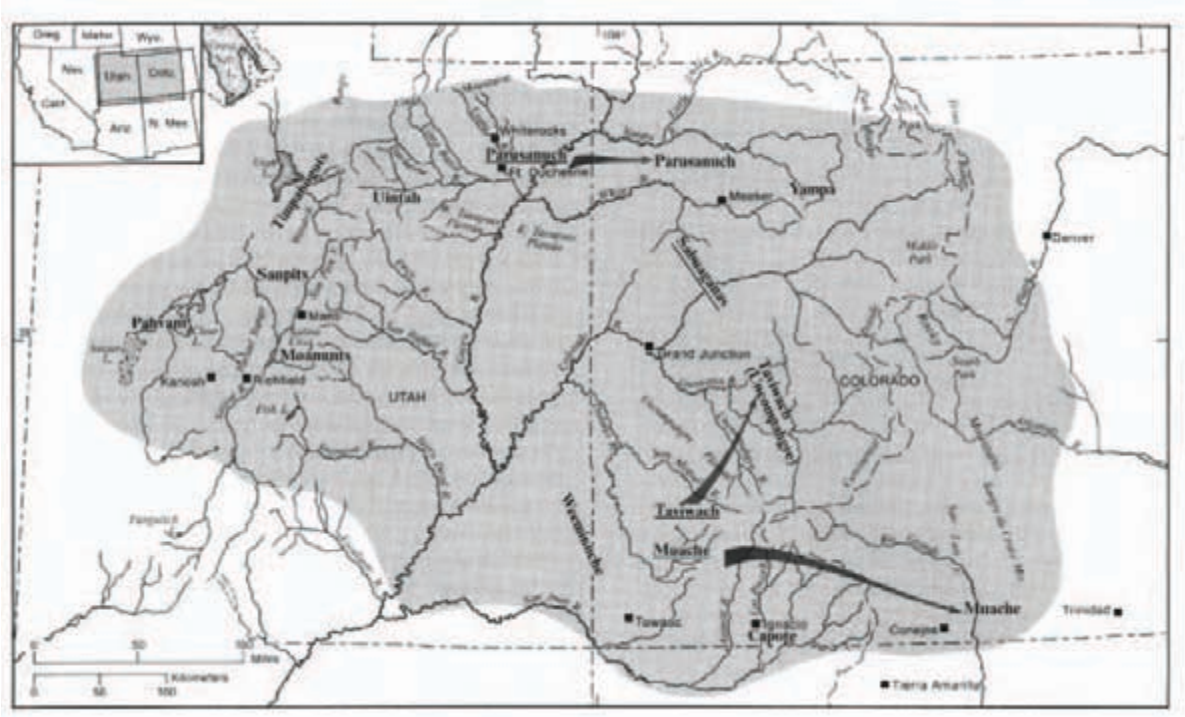


Figure 23. Early 19th century territory and modern town locations. Underlined band names are in approximate 18th century locations; those not underlined are pre-reservation (Callaway 1986:337).

Figure 24. The general cultural landscape in Colorado and surrounding regions, ca. A.D. 1540-1600 (Baker et al. 2007:35).

Figure 25. The "distribution of Native American peoples in the late eighteenth century and end of regional protohistory" (Baker et al. 2007:47).

No less than twelve (and perhaps as many as thirteen or more) distinct names — many with widely varying spellings and multiple synonyms — for Ute "bands" appear in commonly cited ethnohistorical records. In his study of the Northern Utes, Jorgensen (1965:17) goes so far as to claim that "perhaps 70 or more variously named Ute 'bands' were reported between about 1634 — when Euro-Americans first began recording the names and locations of Ute bands — until the post 1860s — when all Utes were corralled onto reservations in Utah and Colorado." Figure 26 represents a relatively recent interpretation (Simmons 2000:18) of the Ute ethnohistorical record showing the distribution of Ute bands, designated by commonly-used names, in the Early and Middle Contact phases. Of primary interest for our purposes herein are the Ute groups that are likely to have occupied or frequented areas within the Yellow Creek Study Area and the surrounding region. These have been variously identified as the Parianuche (Parusanuch), Grand River, Sabuagana, and Uncompahgre Bands.

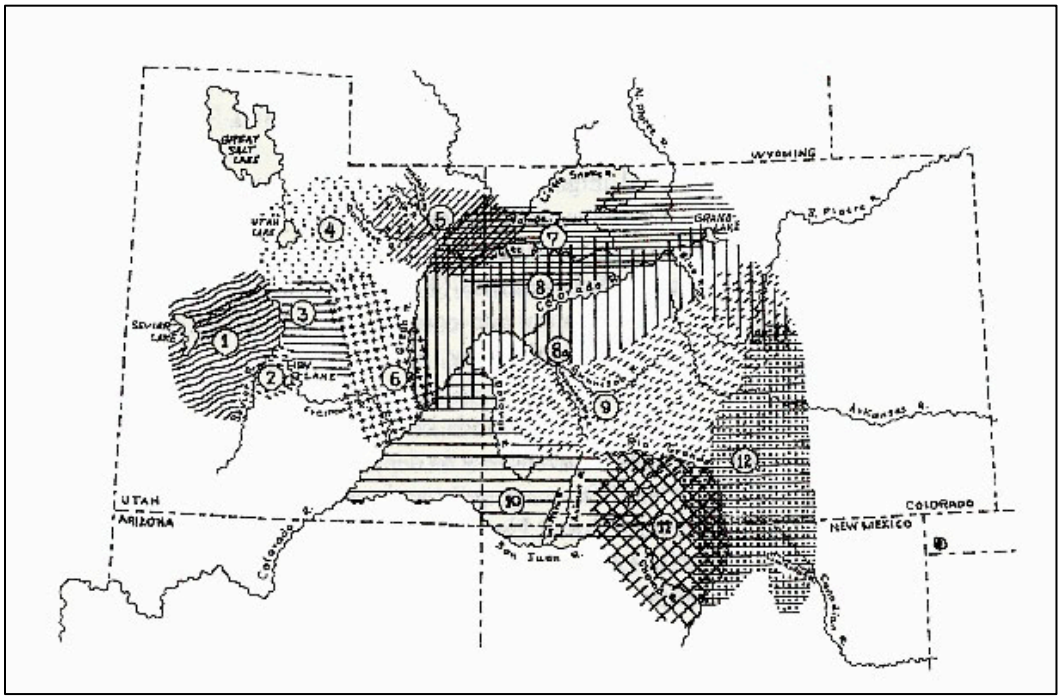


Figure 26. Distribution of Ute Indian bands: 1. Pahvant, 2. Moanunt, 3. Sanpits, 4. Timpanogots, 5. Uintah, 6. Seuvarits, 7. Yampa, 8. Parianuche, 8a. Sabuagana, 9. Tabeguache, 10. Weenuche, 11. Capote, 12. Muache (Simmons 2000:18).

The earliest known records of European contact with indigenous inhabitants in west-central Colorado are attributed to Juan Maria de Rivera, who explored parts of the region during two expeditions in 1765 (Sánchez 1997) reaching as far north as the Colorado River valley (Sánchez 1997; Vandenbusche and Smith 1981:16; Simmons 2005:35; Husband 1984:IV-12). In the following decade Fray Francisco Antanasio Dominguez and his junior

partner Escalante traveled even farther north into Colorado, reaching the White River near the present town of Rangely in 1776, then west as far as central Utah (Figure 27).

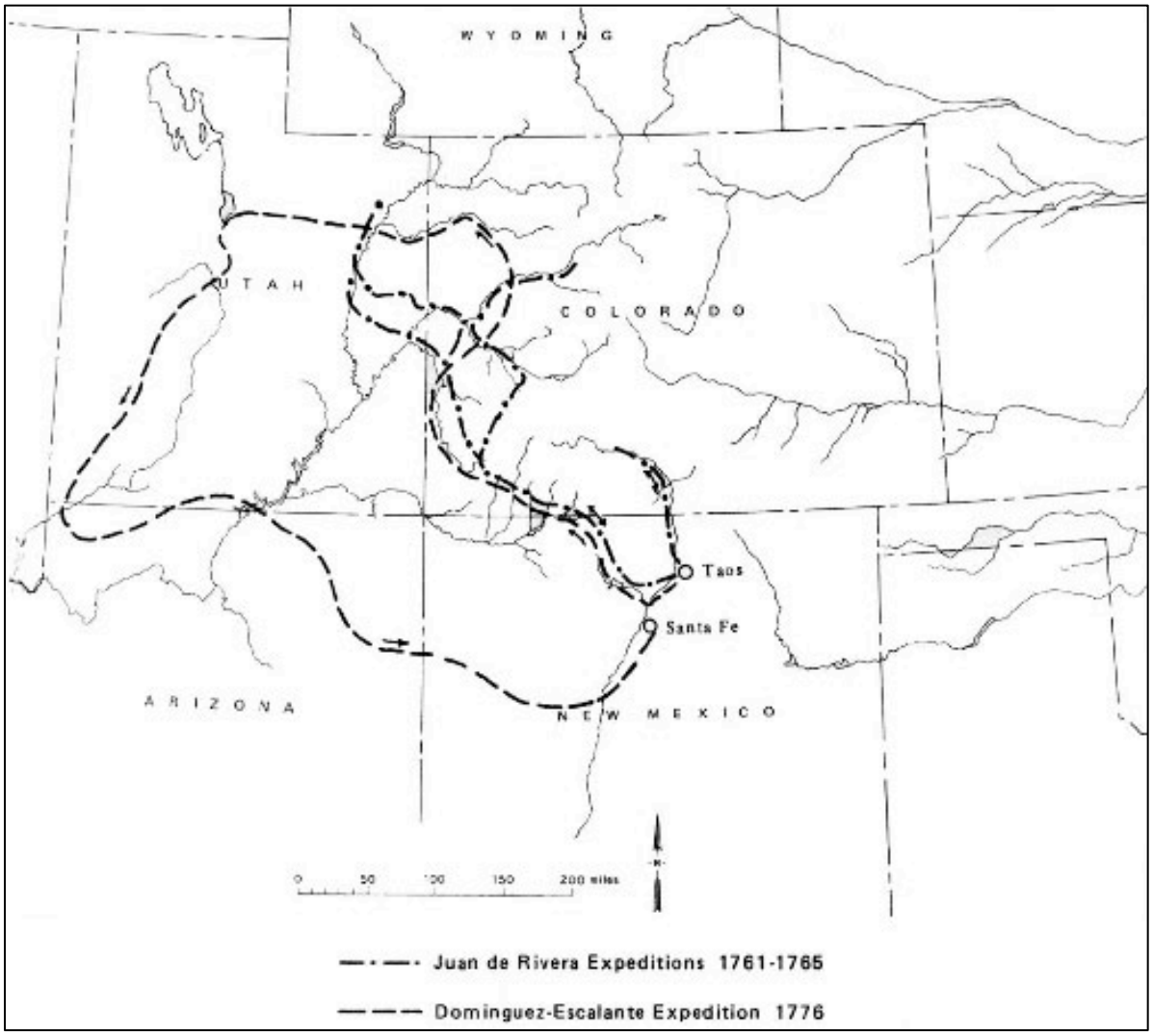


Figure 27. Spanish exploration routes in western Colorado (O'Rourke 1980).

The Dominguez-Escalante journal mentions various encounters with "Sabuagana Yutas" in the areas immediately north and south of the Colorado River near Grand Mesa and the Roan Plateau. The Uncompahgre Plateau, lying to the southwest, was referred to as "La Sierra de los Tabehuachis", apparently named in reference to the "Tabehuachi" Utes inhabiting that area (Chavez and Warner 1976). Baker (2005, 2007) contends that the Sabuaganas — first recorded by Rivera in 1765 — were the same group that later came to be called the "Uncompahgres," in reference to the Uncompahgre River, which the Utes called

"Ancapagari" (Chavez and Warner 1976:29). He also presents a strong case for the view that the Uncompahgres, as they came to be known in the Late Contact Phase, were in fact an amalgamation of the earlier, and geographically distinct, Sabuagana and Tabeguache Bands (Baker 2005, 2007).

Baker (2005) ascribes the home range of the Uncompahgre/Sabuagana Band to "the north flank of the San Juan Mountains... (generally including) the area to the west of the Continental Divide in the headwaters of the Gunnison and Uncompahgre Rivers and south of the Colorado River... (and also including) the high Grand Mesa and the eastern portion of the Uncompahgre Plateau." The original home territory of the Tabeguache Band, in Baker's (2005) view, was to the west of the Uncompahgre Band, abutting the west side of the Uncompahgre Plateau, including the headwaters of the San Miguel and Dolores Rivers, and delimited on the west by the La Sal Mountains of Utah.

Utes groups inhabiting areas north of the Colorado River and west of the Continental Divide in the nineteenth century were variously described in historical records as the Parusanuch (Parianuche), Grand River, Yampa, and Uintah subgroups (Callaway et al. 1986:339; Baker 2005). The original core territory of the Uintahs is generally thought to have ranged from Utah Lake east through the Uinta Basin to the Tavaputs Plateau in the Green and Colorado River systems (Callaway et al. 1986:339), although some Uintahs may have affiliated with the White Rivers during the Late Contact agency years (Baker 2005), and Smith (1938) stated that "their hunting parties frequently followed the White River into Colorado." The Yampas, also known as the Yampatikas or Yamparikas, were the northernmost of the Eastern Ute bands, inhabiting areas north of the White River, ranging from the Yampa River drainage into southern Wyoming on the Little Snake River, eastward into Colorado's Middle and North Parks, and westward into the Uintah Basin (Simmons 2000:20).

The "exact relationships of the Parusanuch and Grand Rivers are not well understood at all and the ethnohistories of these subgroups have not been well summarized anywhere" (Baker 2005:2.9). Simmons (2000:20-21) suggests that the Parasanuch (Parianuche, Parianuc, Pahdteeahnooch) — the "elk people" — were the same group identified in early records as the Sabuaganas, and were "later called the Grand River Utes... [whose] territory extended into eastern Utah and up the Colorado River (formerly called the Grand River) to their winter resort at Glenwood Springs, onto Grand Mesa and the Flattops, up the Roaring Fork... and into the mountains to the headwaters." The views of Simmons and Baker with regard to the Sabuaganas' eventual Late Contact phase affiliations are obviously at odds, and the discrepancy serves to illustrate the difficulty of parsing discontinuous ethnohistorical records in the search for a seamless, fine-grained culture history of the Utes.

In the decades following the Dominguez-Escalante expedition, until the 1820s, there were few direct incursions into west-central and northwestern Colorado by Euro-American

interests. The Early Contact lifeways of the Eastern Utes, however, was increasingly transformed by the acquisition of horses and trade items introduced by the Spanish (Baker et al. 2007; Simmons 2005; Lewis 1994), and by the 1820s the Eastern Utes were widely enjoying an equestrian lifeway. Jorgensen (1972) describes them as "fine horsemen with vast herds of horses" living "parts of the springs and summers in large encampments of 200 or more lodges." In his description of changes in Ute society sparked by the appearance of horses, Lewis (1994:30) notes their "accumulation of more material goods and ... an elaboration of Ute material culture", adoption of certain Plains cultural traits, expansion of their territory as "noted [horse] raiders", and their role as "important middlemen in the intertribal horse trade."

The Utes, however, were not the only indigenous people in the region who were adopting equestrian lifeways during this period. The Eastern Shoshones, mounted on horses, occupied lands north of the Utes in western Colorado and appear in the regional ethnohistories of the Yampa, Little Snake and Green Rivers. (Jorgensen 1972; Baker et al 2007). The Comanches held similar status on the east, along with other plains groups — namely the Cheyenne, Arapaho, and Lakota. The Shoshones and Comanches, even though they share language affinities with the Utes, have distinct ethnographic profiles, and their presence in northwestern Colorado is pointed to by both archaeological and ethnohistorical evidence.

In northwestern Colorado, in historic periods, local ethnic groups appear to have shifted repeatedly in the Yampa and White River drainages. As shown in Figure 25, the northern boundary of Ute occupation in west central Colorado late in the eighteenth century probably did not reach beyond the local northern extent of the Colorado River drainage (Baker et al. 2007:46-49). This supposition, based largely on the Dominguez and Escalante journal from 1776 (Chavez and Warner 1976), is supported to some degree by several rock art panels — located in Canyon Pintado south of Rangely and in West Salt Creek Canyon north of Grand Junction — which exhibit characteristics of the "Plains Biographic Style." Cole (1987:222-224) attributes this style of rock art — described as developing ca. AD 1750 (Keyser 1975, 1977, 1984) — to either Shoshone or Comanche groups.

In the early decades of the nineteenth century the fur trade rush (Figure 28) heralded the beginning of "revolutionary transformation" of Ute life (Husband 1984:IV-12). Trading posts and Euro-American trade goods became a part of the Ute landscape, and the American success in the Mexican War in 1848 marked the "beginning of the end for Ute sovereignty in the region" (Husband 1984:IV-12). In 1849, with the signing of the Calhoun Treaty by seven Ute bands, the Utes irretrievably entered the sweep of American political history and expansionist policies. Ute homelands in western Colorado were subsumed first by Utah Territory in 1851, then Colorado Territory in 1861, and finally by the State of Colorado in 1876. The treaty of 1849 was followed by a series of subsequent treaties, agreements and land cessions which constrained the Utes into ever smaller territories (Figure 29), and by the late 1870s the Eastern Utes were "among the last free roaming Native Americans in the

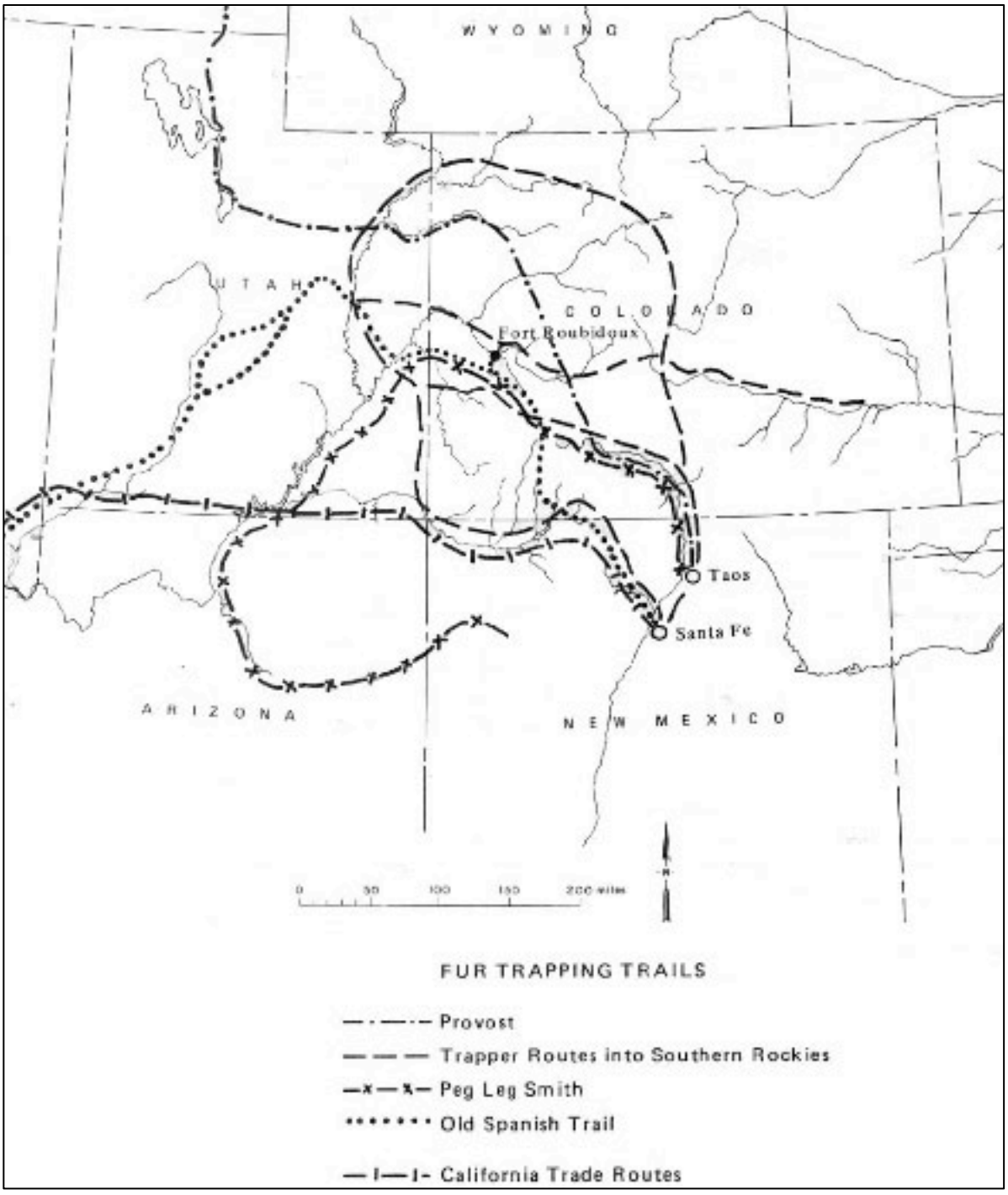


Figure 28. Fur trapping trails in western Colorado (O'Rourke 1980).

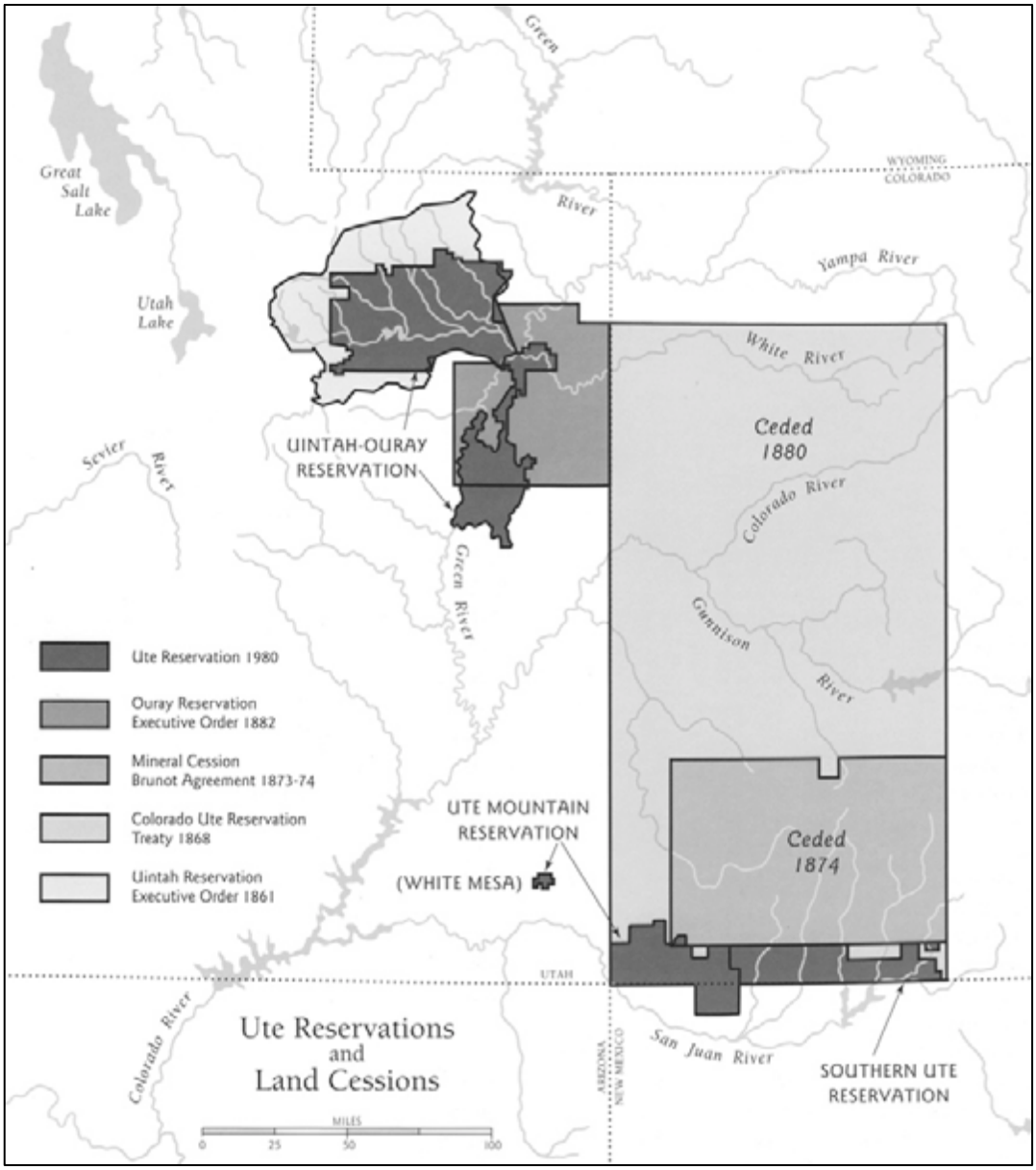


Figure 29. Ute reservations and land cessions, 1861-1980 (Wroth 2000:2)

United States" (Baker et al, 2007:74). The Ute Reservation boundary established in 1868 persisted in northwestern Colorado until 1881, when the White River Utes, along with the Uncompahgre Utes to the south, were forcibly removed to reservation lands in eastern Utah.

Ute history and ethnohistory for the Late Contact period have been expanded in recent years by historic archaeological evidence from throughout western Colorado. The Colorado Wickiup Project (Martin et al. 2007, 2008) has documented 46 aboriginal wooden

feature sites in central and northwestern Colorado — including sites located in the Yellow Creek and the Douglas Creek drainages which are reliably dated to as late as 1915 (Figures 1 and A-42).

Notwithstanding the official "removal" of the Utes from their traditional northern Colorado homelands, they clearly continued to exert a presence in western Colorado well into the twentieth century. Some northern Utes, in fact, may have remained in western Colorado (Stewart, unpublished comments at the Symposium of the Archaeology of the Eastern Ute, Grand Junction, Colorado, 1988), off reservation, after the 1881 expulsion. Utes are known to have been counted in the census records of various communities in the area (for example Collbran, Colorado) as late as the 1920s. Historical newspaper accounts describe almost annual Ute hunting forays into many areas of northwestern Colorado from 1881 to as late as 1909 (Table 11), including numerous appearances in the Yellow Creek area.

Table 11: Examples of Post-1881 News Report of Utes in Northwestern Colorado.

Year	Description	Historical Source	Source Date
1881	Utes encamped "about 20 miles below the post" (Meeker Cantonment)	Fort Collins Courier	31 March, 1881
1883	Utes, lead by Colorow, continue to camp "on the White River and its tributaries" and declare "they will not live on the reservation." White settlers petition Sec. of Interior to keep military in Meeker.	Montezuma Millrun	12 May, 1883
1889	Utes seen at the head of Elk Creek, reportedly traveling to the "old hunting ground up near the head of White River."	San Luis Valley Courier	14 August, 1899
1893	Utes hunting in Blue Mountain region and on the head of Snake River.	Aspen Weekly Times	11 November, 1893
1894	300 Ute deer hunters, reportedly "scattered over winter feeding grounds about forty miles east of Rangely."	The New Castle News	15 December, 1894
1896	Over 400 Northern Utes "in the White River country slaughtering deer and elk and defying county authorities." Governor threatens to send troops.	The Aspen Tribune	29 October, 1896
1896	Game wardens deter Utes from annual hunt. Utes were "found camped on water holes where wood, water and grazing were abundant." Game wardens visited water holes on Douglas, Yellow, Piceance, Box Elder and Willow Creeks, Three Springs on Blue Mountains, and other points on the Lower White River and the Blue Mountain country.	The Steamboat Pilot	25 November, 1896

Year	Description	Historical Source	Source Date
1897	Utes killing game in Rio Blanco County.	The Steamboat Pilot	18 August, 1897
1897	"Great numbers" of Utes in White River and Bear (Yampa) River country for "annual hunt." Utes killed in gunfight with game wardens "seven miles below Maybell."	The Steamboat Pilot	27 October, 1897
1897	80 Utes hunting deer in Lily Park, west of Maybell on the Bear (Yampa) River. Eight Utes killed by game wardens in gunfight.	The New Castle News	5 November, 1897
1899	300 Utes hunting deer on Yellow Creek "since the latter part of October." Estimated 2000 deer killed.	Aspen Weekly Times	25 November, 1899
1899	150 Utes encamped on Yellow Creek	The Steamboat Pilot	15 November, 1899
1900	"Great numbers" of Utes making "usual fall raid on the game of Rio Blanco County."	The Steamboat Pilot	24 October, 1900
1900	"A large number of Utes passed Rangely... headed for Spring Creek and Yellow Creek... believed to be killing deer in that section... Two large bands encamped in Coyote Basin."	(Boise City) Idaho Daily Statesman	30 November, 1900
1907	79 Utes, in four parties, one led by Atchee and one by Johnny P.R., hunting in head of Douglas Creek and Cathedral Spires section. Game wardens order them back to Utah. 20 game wardens authorized to patrol White River country, including Douglas Creek and Blue Mountain.	The Yampa Leader	9 October, 1907
1909	100 Utes, divided into four bands led by Shavano, Atchee, McCook and Monk, camped in the "vicinity of Douglas Creek" for "annual hunt." Game warden persuades them to return to Ft. Duchesne .	The Routt County Sentinel	26 November, 1909

Evaluation of Significance of Yellow Creek Archaeology

As noted previously, a significant proportion of the individual sites documented to date in the Yellow Creek Study Area have been determined "Field Eligible" for the National Register of Historic Places (NRHP). For the most part, these sites have been evaluated to be nationally or regionally significant because they "have yielded, or may be likely to yield, information important in prehistory or history" under Criterion D (National Park Service [NPS] 1997a). The NRHP, however, also allows archaeological properties to be classified as districts, if they represent "a grouping... or significant concentration, linkage, or continuity of sites... or structures united historically by function, theme, or physical development." The

properties within a district are usually contiguous, but may also be nominated as a discontiguous district (NPS 1993). We believe the aboriginal wooden feature sites in the Yellow Creek Study Area clearly measure up to these criteria, and those sites reported herein which have been evaluated as "Field Eligible" have also been judged to be within an Archaeological District, as we understand the NRHP criteria.

In addition we feel there is good potential for building a case of eligibility of the Yellow Creek archaeological sites under additional National Register criteria, including Criterion A, association with events that have made a significant contribution to the broad patterns of history; Criterion C, sites that embody the distinctive characteristics of a type, period or method of constructions and whose component may lack individual distinction; and possibly even Criterion B, sites that are associated with the lives of persons significant in our past — as suggested by various historical news accounts (Table 11) that place Ute leaders Shavano, Atchee, McCook and Monk in or near the Yellow Creek study area in post-removal years. These dates of these historical news accounts are with dendrochronological dates for some of the wickiups recorded in this study.

Further, NRHP (NPS 1993, 1999b) allows for multiple property submissions which "comprise a group of individual properties that share a common theme or historic context", to wit:

> Multiple property nominations facilitate the evaluation and registration of individual properties by grouping them with other properties with similar characteristics. A Multiple Property Submission calls for the development of historic contexts, selection of related property types, and the identification and documentation of related significant properties. It may be based on the results of a comprehensive interdisciplinary survey for a specific area, county, or region of a state, or it may be based on an intensive study of the resources illustrative of a specific type of site, a single cultural affiliation, or a single or closely related group of historic events or activities (NPS 1993).

Multiple property submissions require development of one or more historic contexts and determinations of how the contextual themes are significant in the history of the local area, the state or the nation. We believe that wooden feature sites in general are significant in the areas of historic aboriginal archaeology and Native American ethnic heritage, as recognized by the NRHP.

Going a step further, we also tentatively recognize at least some potential for the Yellow Creek Archaeological District as a National Historic Landmark (NHL). While we acknowledge that properties must meet a stringent test for national significance, including high historical integrity to meet NHL criteria, we see the possibility that the archaeological information in the Yellow Creek sites — following significantly more study and research — might be shown to meet one or more NHL criteria, including Criterion 1 — association

with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained; and/or Criterion 6 — properties that have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation of large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts, and ideas to a major degree.

Future Work and Research Direction

The brief discussion above is hardly more than a preliminary sketch of the wide-ranging issues associated with the nomination process for the National Register of Historic Places. Our limited work to date in the Yellow Creek Study Area has yielded ample evidence, in our opinion, of the significant archaeological value of the aboriginal wooden feature sites in the area. While the exact level of significance of these resources and the landscape in which they are located remains only partially understood, we are confident in recommending that work in the Yellow Creek Study Area should continue, and we are committed to developing a National Register Nomination for the Yellow Creek Archaeological District, as well as a thematic multiple-property nomination for Colorado's aboriginal wooden structures.

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Appendix A: Site Summary and Location Information

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix B: Collected Specimens with Location Data

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix C: Faunal Analysis
for Phase IV of the Colorado Wickiup Project

by James C. Miller

Bone recovered during the Phase IV fieldwork for the Colorado Wickiup Project was identified by James C. Miller; identifications were verified using the faunal comparative collection at the Department of Anthropology, University of Wyoming on January 3, 2008. Lawrence (1951), Brown and Gustafson (1979), and Gilbert (1980) proved valuable in the analysis. Results of the analysis are presented in Table C-1.

Four genera are represented in the assemblage. Most abundant is Odocoileus spp., probably O. hemionus (mule deer), but O. virginianus (white-tailed deer) is present in northwestern Colorado and its prehistoric range is not well known (the two species are difficult to separate with osteological remains alone). Five individuals of Odocoileus are represented: one at 5RB18, three at 5RB563 (including a fawn), and one at 5RB4027. Single specimens of Equus (horse or donkey), Bos (cattle) and Sylvilagus (rabbit) were also identified. Much of the fragmented bone could only be identified as mammal, but in some cases could be defined as to small, medium or large. Deer are considered to be medium-sized mammals and most of the unidentified (uid) bone is probably Odocoileus.

Various modifications were noted in many specimens, most from processing. Direct evidence of butchering is limited to a few specimens and consists of either cut or chop marks; identified elements include distal humerus metatarsal fragments, both Odocoileus. The position of the marks is consistent with removal of the lower limb segments and/or stripping muscle from the upper limbs. Many pieces display green bone fractures indicating marrow extraction at the time of processing. Many pieces are also variously burnt or calcined. Blackened bone is simply burnt, chiefly indicating bone was discarded in a fire. Calcined bone is heated to extreme and the exterior layer rendered to bluish-white calx. Fragmentation of the bone with burning and calx formation implies processing for bone grease or soup (Vehik 1977). Bone grease manufacture is associated with either preparation for the winter season (for example in pemmican manufacture), or extensive utilization of a carcass in late winter when stores are running low or exhausted.

All the bone is weathered to some degree. Weathering (wx) stages shown in the table are derived from Behrensmeyer's (1978) observations on bone weathering in Kenya. Most bone in the assemblage displays weathering stage 1, with a smaller percentage displaying weathering stages 3 or 4. Weathering stage 1 indicates surface exposure of one to three years; the important connotation here for bone on the surface is that the recovered bone was either protected against sunlight and rain or recently re-exposed. For buried bone, the implication is that the bone was buried relatively fast. The more advanced stage 3 and 4 weathering correlates to surface weathering for 4 to 9 years, either after recent re-exposure if found on the surface or before burial if recovered from the subsurface. Again, however, partial protection from wind and rain prolongs survivability in surface exposure. It was noted by Behrensmeyer that bone in woodland settings survived longer. Bleaching is one easily identifiable character and results from destruction of organic constituents and partial loss of phosphorus due to exposure to UV radiation and slightly acid meteoric water in a year or two. Most bleached bone exhibits weathering stage 3 or 4; however, bleached bone with weathering stage 1 indicates recent exposure.

Also collected was a piece of permineralized fossil bone or enamel at site 5RB563.

Faunal Remains by Site

Site 5MF4368

Mammal remains from the site are fragmented. Most exhibit green bone fractures from processing, some is calcined (cooked), indicating burning after processing for bone grease. Specimens 5MF4368.s1 and 5MF4368.s2 are cranial fragments identified by unique interior texture. The remainder are probably long-bone fragments processed for marrow and bone grease. Fragments of the crania may indicate use of the brain for tanning, or even for food.

Site 5RB18 (Two Tall Pole Wickiup Village)

One specimen of Odocoileus is represented by a metatarsal (5RB18.s15) with chop marks and a distal right tibia (5RB18.s16.1). A metapodial fragment (5RB18.s14) is probably a part of the identified metatarsal. The remains could suggest that only the hind quarters were carried into the camp, but this is not certain.

One specimen of Sylvilagus is represented by a distal femur and proximal tibia (5RB18.s12 and 5RB18.s13), likely from the same animal. Breakage above and below the knee joint could indicate salvage of the long bone shafts for a rabbit-bone beads or hair-pipes (long, cylindrical beads). Finally, a distal tibia of Cynomys (prairie dog) was recovered (5RB18.s16.2), but it is uncertain if this is intrusive or archaeological.

Site 5RB563 (Ute Hunters' Camp)

The most complex assemblage comes from site 5RB563. Most is Odocoileus and at least two adult individuals are represented (based on either two left naviculo-cuboids, 5RB563.s47.10 and 5RB563,s56.2; two right humeri, 5RB563.s55 and 5RB563.s62; or two left distal tibiae, 5RB563.s45 and 5RB563.s46) as well as one newborn or full term fetus identified by a metapodial epiphysis (5RB563.s47.9). The various elements from adult specimens include front and hind limbs (including phalanges), vertebra, and a rib, which suggests the carcases were transported whole to the camp. Butchering marks are evident on one humerus (5RB563.s62), near the distal end which is consistent with removing the lower limbs and stripping meat from the upper limb. The bone variously displays green bone fractures, burning, and calx from processing for marrow and bone grease or making soup.

Of interest is an Equus right fibula. The fibula in the horse is vestigial and, as Gilbert (1980) notes, can be mistaken for an artifact (1980:49), particularly an awl.

Site 5RB2930

A well weathered and lichen covered Bos calf scapula was recovered from 5RB2930.

Site 5RB4027

Faunal remains from 5RB4027 are mostly fragmented, with only a medial rib section (5RB4027.s13) identifiable as Odocoileus. Burnt and calcined bone fragments again imply bone

grease extraction or soup preparation, and green bone fractures imply processing for marrow extraction.

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TABLE C-1: Faunal remains from Phase IV of the Colorado Wickiup Project

Site	Specimen Number	Element	Side	Weathering Stage	Taxonomy	Modifications	Notes
5MF4368	5MF4368.s1	platy fragment, probably crania		1	mammal	burnt, green fracture	
5MF4368	5MF4368.s2	platy fragment, probably crania		1	mammal	calcined, green fracture	bone grease extraction
5MF4368	5MF4368.s3	platy fragments (2)		3	mammal		bleached
5MF4368	5MF4368.s4	uid platy fragments (3)		1	mammal	calcined, green fracture	bone grease extraction
5MF4368	5MF4368.s5	uid platy fragment		3	mammal	chop marks, green fracture	bleached
5RB18	5RB18.s12	femur distal	L	1	Sylvilagus	green fracture	
5RB18	5RB18.s13	tibia proximal	L	1	Sylvilagus	green fracture	
5RB18	5RB18.s14	metapodial		1	Odocoileus	green fracture	
5RB18	5RB18.s15	metatarsal		1	Odocoileus	chop marks, green fracture	
5RB18	5RB18.s16.1	tibia distal	R	1	Odocoileus	burnt, green fracture	
5RB18	5RB18.s16.2	tibia distal	L	1	Cynomys		mineralized
5RB563	5RB563.s23	fibula	R	3	Equus		bleached
5RB563	5RB563.s44	femur distal	L	1	Odocoileus		bleached
5RB563	5RB563.s45	tibia distal	R	3	Odocoileus	green fracture	
5RB563	5RB563.s46	tibia distal	R	1	Odocoileus	burnt, green fracture	lost
5RB563	5RB563.s46	2nd phalanx	R	1	Odocoileus	burnt, green fracture	
5RB563	5RB563.s47.1	astragalus	R	1	Odocoileus	burnt, split	bone grease extraction
5RB563	5RB563.s47.2	naviculocuboid	R	1	Odocoileus	burnt	
5RB563	5RB563.s47.3	phalanx distal		1	Odocoileus	burnt	bone grease extraction
5RB563	5RB563.s47.4	phalanx proximal		1	Odocoileus	burnt	bone grease extraction
5RB563	5RB563.s47.5	vertebra posterior fragment		1	Odocoileus	burnt/calcined	bone grease extraction
5RB563	5RB563.s47.6	rib proximal		1	Odocoileus	burnt/calcined	bone grease extraction
5RB563	5RB563.s47.7	vertebral process		1	Odocoileus	burnt	
5RB563	5RB563.s47.8	shaft fragments (3)		1	mammal	burnt/calcined	bone grease extraction
5RB563	5RB563.s47.9	metapodial epiphysis	L	1	Odocoileus		newborn, bleached

Site	Specimen Number	Element	Side	Weathering Stage	Taxonomy	Modifications	Notes
5RB563	5RB563.s47.10	naviculocuboid	L	1	Odocoileus	burnt	bone grease extraction
5RB563	5RB563.s47.11	podial		1	Odocoileus	burnt	bone grease extraction
5RB563	5RB563.s49	tibia distal	L	3	Odocoileus	green fracture	bleached
5RB563	5RB563.s52	2nd phalanx	R	3	Odocoileus		bleached
5RB563	5RB563.s55	humerus shaft fragment	R	3	Odocoileus	green fracture	bleached
5RB563	5RB563.s56.1	2nd phalanx	R	3	Odocoileus		bleached
5RB563	5RB563.s56.2	naviculocuboid	L	3	Odocoileus		bleached
5RB563	5RB563.s59	fossil bone or enamel				broke during examination	replaced with chert
5RB563	5RB563.s62	humerus	R	3	Odocoileus	green fracture, cut (lateral side)	bleached
5RB563	5RB563.s65	2nd phalanx	L	3	Odocoileus		bleached
5RB2930	5RB2930.s1	scapula	L	3	Bos		adolescent, bleached
5RB4027	5RB4027.s1	long bone fragment		3	mammal		bleached
5RB4027	5RB4027.s11	uid platy fragment		1	mammal	green fracture	
5RB4027	5RB4027.s13	rib, medial portion	L	4	Odocoileus		bleached
5RB4027	5RB4027.s3	cancellous bone frag		1	md/lg mammal	burnt?	mineralized
5RB4027	5RB4027.s6	cancellous & long bone fragments (40+)		1	md/sm mammal	calcined, green fracture, burnt	bone grease extraction

Appendix D: Dendrochronological Analysis for Phases II, III, and IV of the Colorado Wickiup Project

Analysis by Dr. Jeff Dean and Ronald Towner
Laboratory of Tree-Ring Research,
University of Arizona

Summary

The results of five tree-ring samples collected during the 2005 and 2006 seasons have been analyzed and are reported here for the first time along with those collected during the Phase IV fieldwork. Tree-ring samples collected from Rader's Wickiup Village (5RB2624) and Wenger Camp (5RB266) during the Phase III investigations, and from the Brush Corral Wickiup site (5ME14260) collected during Phase II, were submitted as a part of the Phase III project, however the results had not been received in time to include in that report.

A total of 17 tree-ring samples were collected and processed during Phase IV from six separate sites. Additionally, five tree-ring samples were collected and analyzed from three sites during Phases II and III. The analysis of these samples produced cutting dates, or near-cutting dates, ranging from as early as AD1844 to as late as AD1915/1916. An earlier, 1815 date, was produced as well however it is considered suspect by these researchers based upon the well-preserved, but highly tenuous nature of the standing wickiup from which the sample was obtained. It is likely that this latter feature pole, from site 5RB4331, had been collected as dead rather than green wood.

Again, it is important to note that tree-ring samples were only collected from cultural elements that appear to have been harvested with metal axes and, therefore, most likely when green and still living. A thorough discussion of the results of the analysis, and the interpretation of these results, is presented in the Discussion section of this report.

Comments Regarding the Dates in Table D-1

The sample from Feature 10 at Wenger Camp in Phase III yielded a date of fall/winter 1914/1915. The other two dates from that site yielded non-cutting dates of 1911vv and 1913vv; the "vv" indicating the possibility of missing exterior growth rings. Analyst Jeff Dean, however, feels that these two samples were "close to the true outside" rings and that, given the clustering of dates, he interpreted the samples as indicative of construction of all three structures in the fall/winter of 1914/1915.

At Bead Village, Phase IV, it is the opinion of Dr. Dean that "all four of [the] timbers probably were acquired at the same time"; that is, during the juniper growing season (summer) of 1867.

The core from an ax cut sub-trunk of the huge piñon tree that supports the Gates of Lodore Tree Platform, although not yielding a cutting date, is nonetheless a remarkable sample. Its five-inch radius contains 617 extremely tight rings (125 rings per inch). This means that the secondary trunk (which separates from the main trunk at a height of approximately 80cm above the base of the tree) was 617 years old when it was cut. The tree itself probably germinated many, "perhaps hundreds," of years before.

Key to the Outer Ring Codes as Presented in Table D-1 (after Dean and Towner n.d.)

vv Indicates the possibility of missing exterior rings and lack of terminal ring attributes such as bark. There is no way of estimating how far the last ring is from the true outside.

v A subjective judgement that, although there is no direct evidence of the true outside ring on the specimen, the date is within a very few years of being a cutting date.

r Less than a full section is present, but the outermost ring is continuous around the available circumference.

B Bark is present. The sample retains the bark and the last ring grown by the tree.

G Beetle galleries are present on the surface of the specimen.

+ One or more rings may be missing near the end of the ring series whose presence or absence cannot be determined because the specimen does not extend far enough to provide an adequate check.

comp A complete terminal ring indicating that the timber was cut after the end of that year's growing season but prior to the initiation of the next growing season (fall/winter).

inc An incomplete terminal ring indicative of a timber that was cut during the growing season (summer).

Table D-1: Dendrochronological Results from Phases II through IV of the Colorado Wickiup Project

Site	Sample Description and Specimen Number	Type of Wood	Results (outside date "AD")
Phase II			
5ME14260 Brush Corral Wickiup Village	Structure 5: Limbed tree branch (wickiup pole production) (5ME14260:Struc 5.1)	Juniper	Approx. 288 rings (no date secured due to extremely erratic growth patterns)
Phase III			
5RB266 Wenger Camp	Feature 10: Collapsed possible leaner wickiup (5RB266 Dendro Sample 1)	Juniper	1914B comp (fall/winter of 1914/1915)
5RB266 Wenger Camp	Feature 3B: Collapsed freestanding wickiup (5RB266 Dendro Sample 2)	Juniper	1913vv

Site	Sample Description and Specimen Number	Type of Wood	Results (outside date "AD")
5RB266 Wenger Camp	Feature 5: Collapsed freestanding wickiup (5RB266 Dendro Sample 3)	Juniper	1911vv
5RB2624 Rader's Wickiup Village	Feature 9: Collapsed freestanding wickiup (5RB2624, FS21)	Juniper	1883rB comp (fall/winter of 1883/1884)
Phase IV			
5MF3993 Gates of Lodore Tree Platform	Feature 1: Butt of sub-trunk of support tree for tree platform (5MF3993.s1)	Piñon	617 rings (no date secured due to extremely tight and erratic ring series and locally absent rings)
5RB18 Two Tall Pole Wickiup Village	Feature 6: Collapsed freestanding tripod or utility rack (5RB18.s3)	Juniper	216 rings (no date secured presumably due to erratic growth patterns)
5RB18 Two Tall Pole Wickiup Village	Feature 6: Collapsed freestanding tripod or utility rack (5RB18.s4)	Piñon	1844vv
5RB18 Two Tall Pole Wickiup Village	Feature 2: Wood outside of partially collapsed leaner wickiup (5RB18.s6)	Juniper	132 rings (no date secured presumably due to erratic growth patterns)
5RB18 Two Tall Pole Wickiup Village	Feature 1: Wood outside of partially collapsed leaner wickiup (5RB18.s7)	Juniper	241 rings (no date secured presumably due to erratic growth patterns)
5RB18 Two Tall Pole Wickiup Village	Feature 1: Partially collapsed leaner wickiup (5RB18.s18)	Juniper	1915 GB comp (fall/winter of 1915/1916)
5RB563 Ute Hunters' Camp	Feature 3: Three utility poles (5RB563.s61)	Piñon	1879+v inc (summer)
5RB563 Ute Hunters' Camp	Feature 3: Three utility poles (5RB563.s62)	Juniper	1875vv

Site	Sample Description and Specimen Number	Type of Wood	Results (outside date "AD")
5RB563 Ute Hunters' Camp	Feature 1: Utility rack (5RB563.s65)	Juniper	1870vv
5RB563 Ute Hunters' Camp	Feature 5: Saw-cut firewood pile (5RB563.s95)	Piñon	1978cGB comp (obviously not associated with occupation)
5RB563 Ute Hunters' Camp	Feature 5: Saw-cut firewood pile (5RB563.s96)	Piñon	1978cGB comp (obviously not associated with occupation)
5RB2930	Feature 1: Ax cut stump 5m from collapsed freestanding wickiup (5RB2930.s3)	Juniper	1885rB inc (summer)
5RB4331 Black Sulphur Creek Wickiup	Feature 1: Partially collapsed leaner wickiup (5RB4331.s1)	Juniper	1815vv (apparently collected as dead wood)
5RB4338 Bead Village	Feature 1-A: Partially collapsed leaner wickiup (5RB4338.s1)	Juniper	1867v inc (summer)
5RB4338 Bead Village	Feature 1-A: Partially collapsed leaner wickiup (5RB4338.s2)	Juniper	1866vv
5RB4338 Bead Village	Feature 2: Partially collapsed leaner wickiup (5RB4338.s3)	Juniper	1862+vv
5RB4338 Bead Village	Feature 8: Unstructured collection of wood (5RB4338.s4)	Juniper	1867v inc (summer)

Appendix E: Current Aboriginal Wooden Feature Component Form

Aboriginal Wooden Feature Component Form

Complete one form for each feature and attach to a completed Colorado Cultural Resource Inventory Management Data Form and/or Prehistoric Archaeological Component Form.
(Check as many categories as apply.)

1. Site No.: _____ **2. Temporary Site No.:**_____ **3. Feature No.:** _____
4. Previous/Temporary Feat. No./Site Name: _____
5. Location (UTM): NAD _____; Zone _____; _____mE; _____mN

6. Type of Feature:
☐ Wickiup ☐ Ramada
☐ 1-2 pole leaner ☐ Unstructured poles
☐ Tree platform ☐ Other *(Describe)*
_____
_____

7. Inferred Function of Feature:
☐ Habitation ☐ Utility pole/rack ☐ Sun shade
☐ Menstrual hut ☐ Windbreak/lean-to ☐ Corral
☐ Storage platform ☐ Sweatlodge ☐ Animal pen
☐ Burial platform ☐ Hunting blind ☐ Pole cache
☐ Other *(Describe)* _____

8. Justification for Inferred Function: _____
_____

9. Feature/Structure Format: ☐ Freestanding ☐ Leaner ☐ Pull-down ☐ Suspended in tree ☐ Other *(Describe below)*
_____
_____

10. Condition: ☐ Standing ☐ Partially-collapsed ☐ Collapsed; Comment: _____

11. Total No. of Poles: _____; No.standing/leaning _____; No.collapsed _____; No.completely suspended by tree/poles _____
12. Pole Ends: (*No. of each)* Decayed _____; Broken_____; Axe-cut _____ *(Metal axe?_____ Stone axe?_____)*; Sawn _____; Uprooted _____; Burned _____; Comment: _____
13. Is one pole significantly longer than others (extending away from structure as a rack or hanger)**?** ☐ No ☐ Yes
If Yes: Length: _____ *m*; Mid-pole diameter _____ *cm*; Comment: _____
14. Range of Main Pole Length(s): _____ to _____ *m* **15. Range of Mid-pole Diameter(s):** _____ to _____ *cm*
16. Pole(s) Modification: ☐ Completely limbed ☐ Partially limbed, some branches present ☐ Unlimbed ☐ Split/Shaped
Comment: _____
17. Interlocked Forked Poles as Structural Supports: Number _____ ; Description _____
18. Pole Wood: (*Number of each)* Juniper _____; Pinyon _____; Aspen _____; Lodgepole _____; Other _____
19. Pole Condition: *(Check all that apply)* ☐ Cracking across grain ☐ Lengthwise grain separation ☐ Sagging ☐ Crumbling
☐ Highly decomposed ☐ Lichens ☐ Moss Comments_____

20. If platform/horizontal beam: Height(s) above ground: _____*m*
Comment: _____
21. If leaner(s):
Top end of pole(s) *(height above ground)*: _____; _____; _____; _____; _____*m*
Base of pole(s) *(distance from support tree)* _____; _____; _____; _____; _____*m*
Angle of pole(s) *(relative to ground)*: _____; _____; _____; _____; _____°
22. Floor/Platform Plan: ☐ Circle ☐ Semi-circle ☐ Oval ☐ Triangle
☐ Rectangle ☐ Square ☐ Irregular ☐ Indeterminate
Comment: _____
23. Dimensions: Interior height *(Headroom)*: _____ *m*; Diameter: _____ *m*
OR Length: _____*m*; Direction: _____°; Width: _____*m*; Direction: _____° *Notes/Sketch, if needed*
Other sides/dimensions (Length/direction): _____
24. Floor/Platform Area: _____ m^2 *[Circle = 3.14 x radius-squared; Oval = length x width x 0.785; Triangle = 0.5 x base x height]*
25. Floor Treatment: ☐ Bark Mat *(Length)* _____ *cm*; *(Width)* _____ cm; *(Thickness)* _____ *cm*
☐ Excavated basin *(Length)* _____ *cm*; *(Width)* _____ *cm*; *(Depth)* _____ *cm*
☐ Packed soil ☐ Other *(Describe)* _____
26a. Trowel Tested? *(Describe)* _____ **26b. Metal Detected?** ☐ Yes ☐ No
27. Degree of Slope at Structure: _____° Direction _____° Comment: _____

Site No. _____ Temporary Site No. _____ Feature No. _____

28. Nature of Entry If Discernable: *(e.g. Space between poles? Lintel or sill?)* _____

_____

29. Entry Orientation: *(Direction)* _____° **30. Entry Dimensions:** *(Height)* _____ *cm*; *(Width)* _____ *cm*

31. Evidence of Covering? *(e.g. Suspended cross-beams or small branches? Rocks, branches, brush or bark at base of poles?)*

_____

32. Species of Support Tree(s): *(Number)* Juniper _____ ; Pinyon _____ ; Aspen _____; Ponderosa _____ ; Other _____

33. Condition of Support Tree(s): ☐ Living ☐ Dead **34. Diameter of Support Tree(s) Near Base:** _____ ; _____ ; _____ cm

35. Compass Direction(s) of Support Tree(s) Relative to Structure/Feature: _____ ; _____ ; _____

36. Cultural Modification of Support Tree: ☐ Limbed within interior of structure ☐ Limbed elsewhere ☐ Axe-cuts ☐ Peeled-bark ☐ Horiz. circumferential cutmarks ☐ Other *(Describe)* _____

37. Parts of Support Tree Utilized by Feature: ☐ Trunk(s) ☐ Limb(s) ☐ Limb(s) & trunk ☐ Poles supported by other poles ☐ Partially broken bent down limbs ☐ Other *(Describe)* _____

38. Hearth Type: *(If discernable)* ☐ Basin ☐ Ash stain ☐ FCR Conc. ☐ Charcoal Conc. ☐ Slab-lined ☐ Rock-filled

(Describe) _____

39. Visible Dimensions of Hearth: _____ x _____ *cm*

40. Estimated Potential for C-14 Date: ☐ Indeterminate without testing ☐ Poor ☐ Good; Material _____

41. Location of Hearth: ☐ Interior ☐ Exterior Comment _____

42. Location of *Interior* Hearth: ☐ Center of structure ☐ Other *(e.g. "inside entry", "adjacent to wall", "base of support tree")*

(Describe) _____

43. Location of *Exterior* Hearth Relative to Center of Structure/Feature: Distance _____ m; Direction _____

44. Rocks Associated with Feature: *(Number)* Interior _____ ; Exterior perimeter *(e.g. base of poles)* _____ ; Other _____

Describe type, form, size *(e.g. "two 15cm diam. river cobbles" or "one 14 x 12 x 8cm sandstone slab")* _____

_____

Inferred purpose _____ Comments _____

45. Associated Artifacts: *(Describe, give numbers)* Inside structure _____

_____ Outside structure _____

_____

Diagnostics on site _____

_____

46. Collections at Structure/Feature: *(Describe, give numbers)* Artifacts _____

_____

_____

☐ Dendrochronology (☐ *Metal axe-cut* ☐ *Other*) ☐ Radiocarbon ☐ Soil ☐ Thermoluminescent ☐ Other

(Describe) _____

_____ On file at _____

47. Estimated Age and/or Cultural Affiliation of Structure: _____

Based on _____

_____

48. Noteworthy or unusual characteristics of this feature? *(Describe, give reason)* _____

_____

_____

_____

_____

_____

Site No. _____ Temporary Site No. _____ Feature No. _____

49. Imminent Threats to Structure: ☐ Collapse ☐ Decay ☐ Erosion ☐ Fire ☐ Vandalism ☐ Construction ☐ Grazing ☐ Ips beetle Comments _____

Mitigation recommendations: ☐ Additional recording ☐ Excavation ☐ Sample collection ☐ Other _____
Comments _____

50. Photos: ☐ Digital ☐ B&W negs/prints ☐ Color negs/prints ☐ Color transparencies/Slides
Roll/disc No.(s): Exp.Nos. _____
On file at _____

51. Additional Documentation: ☐ Feature plan-view ☐ Feature elevation drawing ☐ Other _____

☐ Attached On file at _____

52. Recorder(s): _____
Date(s) _____ **Affiliation** _____
53. Previous Recordings *(Give details)* _____

ATTACH PHOTO BELOW *(Use additional sheets as necessary.)*

54. Photo Description: _____

Photo Direction: _____ **Date:** _____ **Photo Reference** (Roll/Exp)**:** _____

55. Additional Comments:

Remember, this feature may be gone before it can be recorded again.

Appendix F: Photographic Plates

Feature and Historic Photographs

Plate 1

Site 5RB5611, Feature 1, a collapsed freestanding wickiup (possibly tipi). Notice how the poles of the conical shelter have collapsed into a wheel-spoke pattern with the pole tips to the inside, or "hub" of the wheel, and the butts to the outside. These photos illustrate the value of photographing collapsed features from a high vantage point such as this. Also, note the detail visible in the photo on the bottom which was taken as a cloud passed over the sun compared to the photo at the top, which was taken in full sunlight. Photos 5RB_5611-d_4-1 and 5RB_5611-d_4-5 (looking down with south at the top).

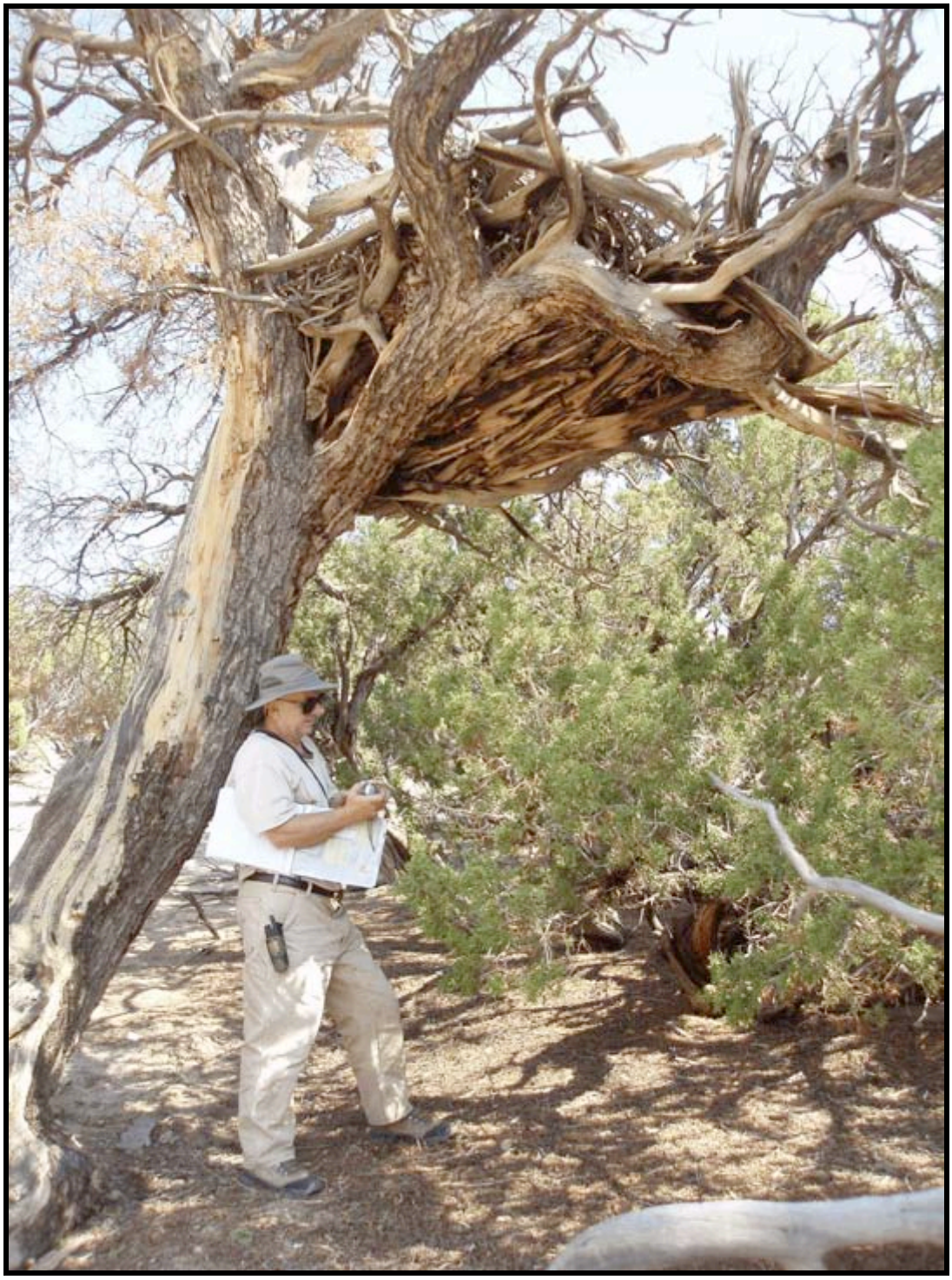


Plate 2

Site 5MF3993, Feature 1, the Gates of Lodore Tree Platform; an intact, well-constructed tree platform made of 18 or more juniper and piñon beams and branches supported on the limbs of a large, dead, piñon support tree. Archaeologist John Lindstrom for scale. Photo 5MF_3993 - d_1-16 (looking north-northeast).

Plate 3

Site 5RB18, the Two Tall Pole Wickiup Village, Feature 1; a partially collapsed leaner wickiup and one of the best preserved aboriginal wooden structures in the state. One of the feature poles on the left produced a dendrochronological cutting date of fall/winter 1915/1916. Note how the structure is situated among sheltering juniper trees. Photo 5RB_18-d_3-8 (looking north).

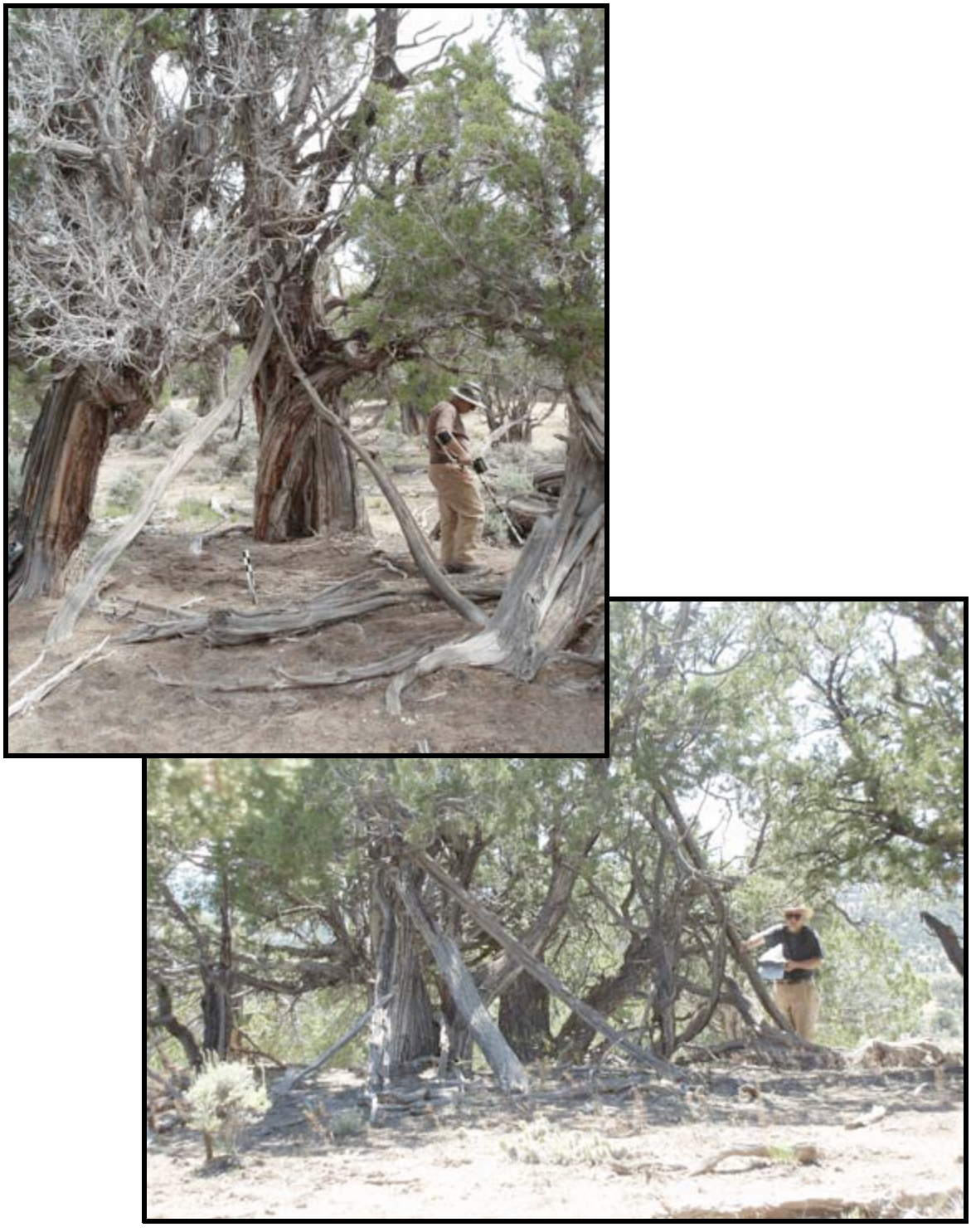


Plate 4

Site 5RB18, the Two Tall Pole Wickiup Village, Feature 2 (top), and 5RB53, Duck Creek Wickiup Village, Feature 11 (bottom). Both structures are considered possible partially-collapsed leaner tipis, similar to the ones pictured in Plate 5. Archaeologist John Lindstrom for scale. Photos 5RB_18-d_3-1 (looking north) and 5RB_53-d_2-63 (looking west-southwest).

Plate 5

Historic photographs of Ute leaner-style tipis where the canvas-covered shelters are supported by the trunks and branches of trees. Note how few poles are utilized in the top photo compared to typical Plains style tipis. Note also the canvas wall tent in the background of the upper photo. The lower photo was taken in the 1870s-1880s.

Plate 6

Site 5RB563, Ute Hunters' Camp. Feature 7, poles possibly associated with a canvas wall tent, are visible in the foreground and the three poles of utility rack Feature 1 are in the background. The left-most pole of Feature 1 yielded a non-cutting dendrochronological date of AD1870. Photo 5RB_563-d_8-21 (looking northeast).

Plate 7

Site 5RB563, Ute Hunters' Camp, Feature 6, apparent door-flap anchors for a canvas wall tent. The Reloading Locus, presumably situated on the interior of the tent, is to the right of the wooden elements, where several of the 41 spent primers and other metal and glass artifacts are marked with pin flags. Also note, 5RB563.s1, the sandstone netherstone or "cutting board" to the left of the feature. Photo 5RB_563-d_8-9 (looking southeast).

Plate 8

Site 5RB4027. Feature 15, windbreak or utility rack, from uphill. Note the collapsed poles of Feature 14, collapsed wickiup, on the ground in the background through the left portion of the windbreak. Two glass seed beads were found on the surface among the wickiup poles. The associated hearth is near the prickly pear, sage and snakeweed in the center of the photo on the far side of Feature 15. Photo 5RB_4027-d_7-11 (looking southeast).

Plate 9

Site 5RB4331, the Black Sulphur Creek Wickiup, Feature 1, partially collapsed leaner wickiup tenuously supported by a branch of a live piñon tree. Note the large, partially burnt wickiup pole on the right which yielded a dendrochronological date of AD1815, which is considered probably too early based on the condition of the feature. It is suggested that the pole was collected as dead wood. Photo 5RB_4331-d_6-3 (looking northeast).

Plate 10

Site 5RB4338, Bead Village, Feature 5, woodpile. This is one of several firewood piles paired with hearths that were recorded during Phase IV. A charcoal concentration is exposed to the left rear, between the main pile of wood and the two isolated pieces. Photo 5RB_4338-d_7-29 (looking southwest).

Plate 11

Site 5RB5609, Feature 1, a cache of five aboriginal wooden poles resting against the trunk of a juniper support tree. Archaeologists John Lindstrom and Travis Archuleta record the feature. Photo 5RB_5609-d_3-30 (looking northeast).

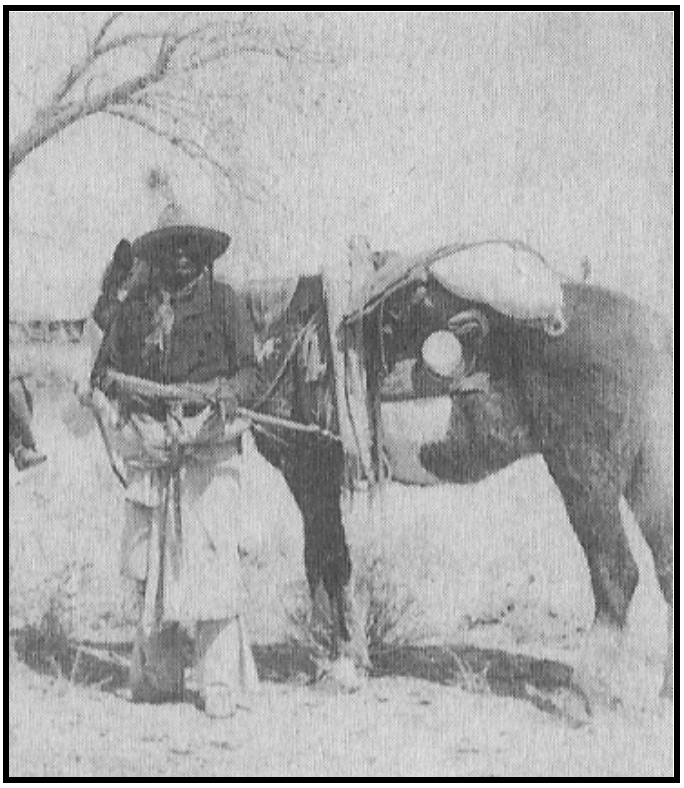


Plate 12

Photographs of Ungacochoop, or Chief Red Cap, recognized leader of his people at the Uintah Valley reservation. Under his leadership several hundred Utes left Whiterocks, Utah in 1906 on an exodus to South Dakota where they had hoped to establish a less miserable life for themselves in league with the Sioux. Fifteen months later many of them came to the conclusion that they were better off going back to the Uintah reservation, and did so in 1908.

Photographs of Collected Artifacts

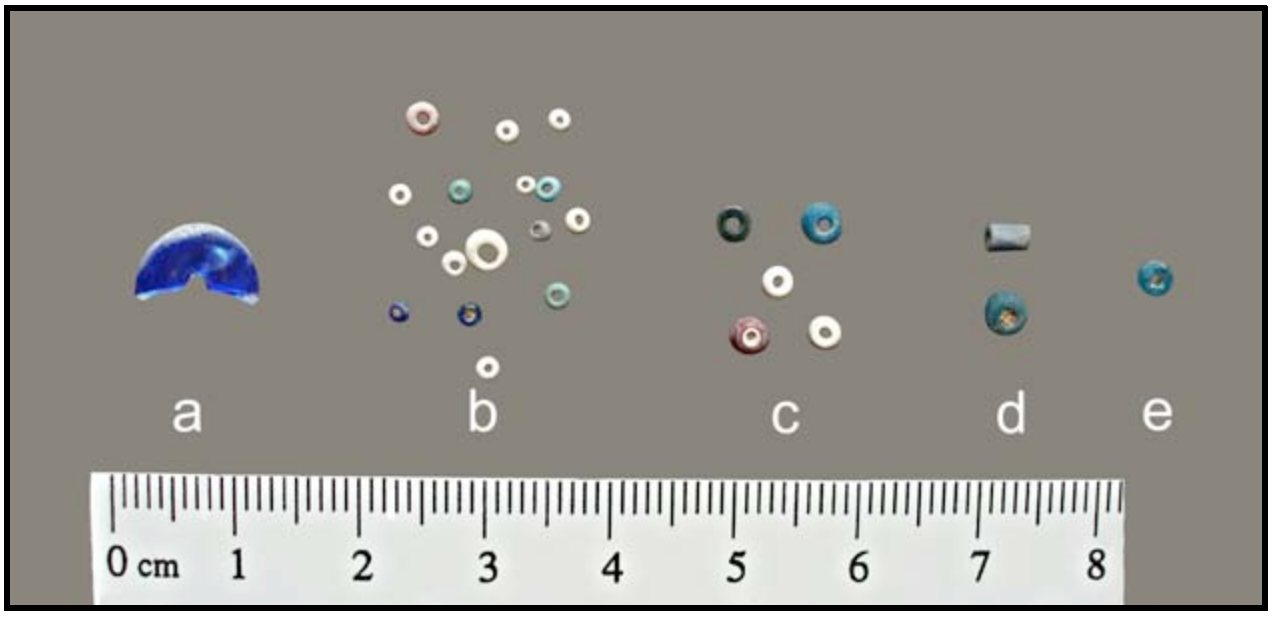


Plate 13

Glass trade beads

a) One of two nearly identical translucent blue pony bead fragments from 5RB4338, Bead Village (Specimen 6). These measure from 9.1mm to 9.4mm in diameter (across the hole) and from 7.1mm to 7.2mm in width (through the hole).

b) Seed beads from site 5RB4338, Bead Village (Specimen 5). One pink (2.6mm x 1.7mm), eight small white (from 1.6mm x 1.0mm to 2.0mm x 1.2mm), four turquoise (from 1.7mm x 1.1mm to 2.1mm x 1.2mm), one large misshapen white (3.4mm x 1.5mm), one blue (1.6mm x 1.1mm), and one translucent blue (1.9mm x 1.0mm). One turquoise fragment is not shown.

c) Seed beads from 5RB18, Two Tall Pole Wickiup Village (Specimen 1). 3.5mm x 2.3mm (translucent bluish-green), 3.4mm x 2.4mm (turquoise), 2.5mm x 1.7mm (white), 3.0mm x 2.2mm (red with white "heart"), and 2.6mm x 2.4mm (white).

d) Seed beads from floor of wickiup Feature 14 at 5RB4027 (Specimen 5). 2.2mm x 3.4mm light blue tube or "bugle" bead and 3.5mm x 3.1mm blue.

e) Isolated find 5RB5625 found on an anthill with no associated site or other cultural materials. 2.8mm x 1.8mm translucent turquoise.

Plate 14

Projectile points and butchered bone

a) Desert Side-notched projectile point from 5RB18, Two Tall Pole Wickiup Village (Specimen 2).

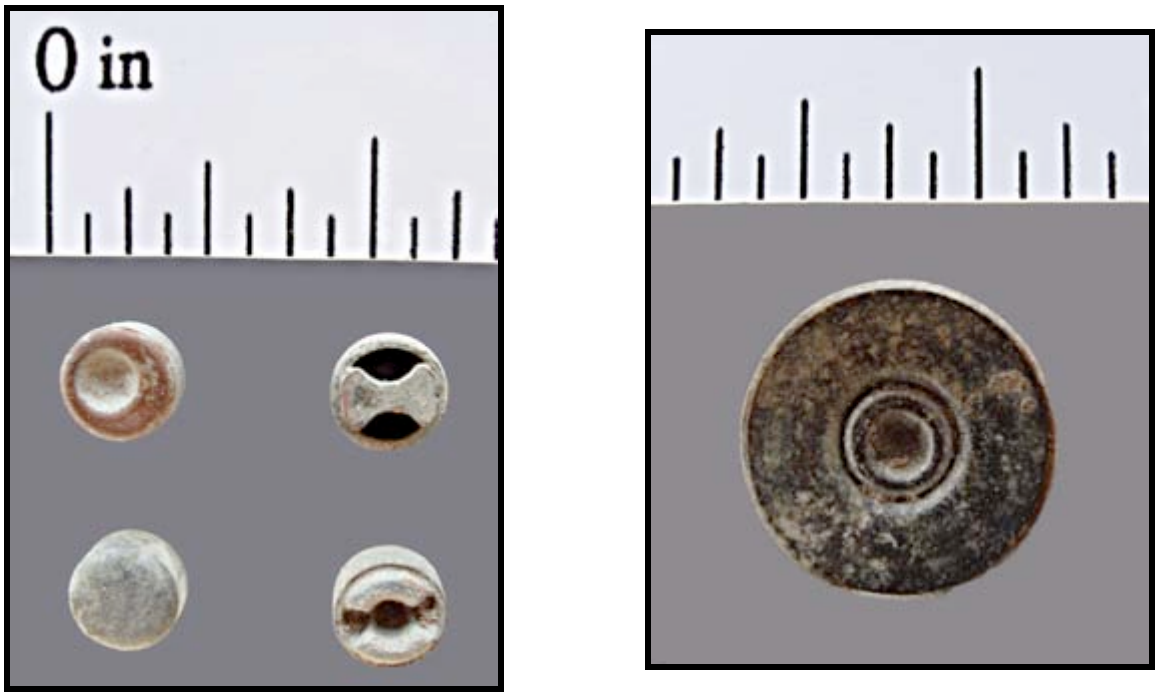
b) Apparent heavily reworked remnant of metal arrow point from 5RB4027. Note sharpened edges on upper blade portion of artifact (Specimen 5).

c) Butchered Odocoileus metatarsal from the floor of wickiup/tipi Feature 2 at 5RB18, Two Tall Pole Wickiup Village (Specimen 15). Note chop marks at lower end, apparently from metal cutting tool.

d) Serrated, side-notched projectile point from 5RB4027 (Specimen 2). Comparable to Middle to Late Archaic Uncompahgre Complex Roubideau Phase Roubideau Points (Type 23), 3000-500bc (Buckles 1971) or Elko Corner-notched, 5600bc to ad200 (Holmer 1978).

Plate 15

Evidence of bullet reloading from 5RB563, Ute Hunters' Camp. On the left is a selection of the 37 primers found in the Reloading Locus associated with Feature 6 (note the sole unspent primer at lower left), in the center are the two spent bullet leads (Specimens 7 and 40), and on the right is the 44-.40 caliber cartridge casing found 11cm beneath the present ground surface (Specimen 34).



a b

Plate 16

a) Details of boxer-type bullet primers from the Reloading Locus at 5RB563, Ute Hunters' Camp.

b) The head of the sole casing found at 5RB563, Ute Hunters' Camp. Note the spent primer still in place and the lack of a head stamp on the 44-.40 casing (Specimen34).

a

b

Plate 17

a) Collected cans and can lids from 5RB563, Ute Hunters' Camp. Can at lower left is a gun powder container. Note Specimen 41 above it that is half of the lid that has apparently been bent for use as a powder scoop (see Plate 19). Note also lids that have been removed by cutting with knife.

b) Four fragments of what is apparently a single can lid (Specimens 48, 50, 51, and 53). Note rim of hole for pry out lid.

a

b

Plate 18

Expedient metal tools collected at 5RB563, Ute Hunters' Camp

a) Four iron and can fragments apparently cut and fashioned for use as tools. The item at upper right (Specimen 41) is half of the lid from the gun powder tin (see Plate 17) that appears to have been altered for use as a powder scoop for reloading bullets. The other three are possible cutting or butchering tools and a possible small awl or punch.

b) Detail of Specimen 42, possible small awl or punch.

a

b

Plate 19

a) Iron leather working or bullet reloading punches and awls from the Reloading Locus at 5RB563, Ute Hunters' Camp (Specimens 22, 13, and 19–top to bottom). Note file marks across Specimen 13 and residue (handle adhesive?) on Specimen 19. Item on right is a tightly rolled band of decorative brass or bronze with the remnants of a hole cut in one end (Specimen 15).

b) Decorative bands of brass or bronze from 5RB563. Note holes at left ends of two items (Specimens 10 and 16–top row, and 4 and 54–bottom row).

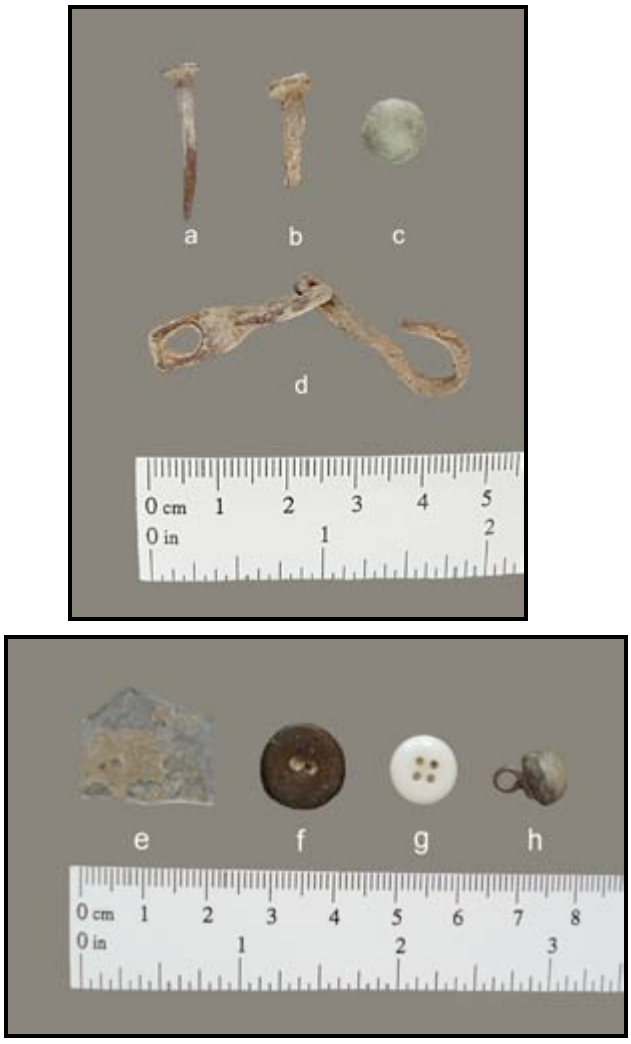


Plate 20

Miscellaneous trade artifacts from 5RB563, Ute Hunters' Camp

a) and b): small metal tacks (Specimens 38 and 63)

c) head of decorative brass tack or stud such as used to decorate various wood and leather articles including saddles, gun stocks, cradle boards, ax handles, mirrors, etc. (Specimen 37)

d) metal tinkler from a Spanish style bridle (Specimen 8)

e) one of numerous sherds of thin plate glass–residue on one face suggests mirror glass (Specimen 17)

f) hard rubber (?) button (Specimen 35)

g) ceramic Prosser button (Specimen 6)

h) metal ball or "shoe" button with shank (Specimen 18)

Plate 21
Applied-finish “glob” style bottle neck from 5RB5623 (ca. 1840-1860 manufacture).

Appendix G: OAHP Re-evaluation, Management, and Component Forms

(Available at OAHP and BLM White River, Little Snake,
Glenwood Springs and Grand Junction Field Offices)