National Register Nomination Form Franktown Cave (5DA272) Douglas County, Colorado

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Form Submitted 2005 (citation year) Listed on the NRHP 2006 NPS Form 10-900 OMB No. 10024-0018

United States Department of the Interior National Park Service

Registration Form

This form is for use in nominating or requesting determination for individual properties and districts. See instruction in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking `x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter `N/A" for `not applicable." For functions, architectural classification, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property		
historic name Franktown Cave		
other names/site number <u>5DA272</u>		
2. Location		
street & number WSW of Franktown		Xnot for publication
city or town <u>Franktown</u>		[X} vicinity
state <u>Colorado</u> code <u>CO</u> co	unty <u>Douglas</u> code <u>035</u>	_ zip code 80116
3. State/Federal Agency Certification		
As the designated authority under the National His [X] nomination [] request for determination of eli National Register of Historic Places and meets th my opinion, the property [] meets [] does not considered significant [] nationally [X] statewide [igibility meets the documentation standa e procedural and professional requirem ot meet the National Register criteria.	ards for registering properties in the ents set forth in 36 CFR Part 60. In I recommend that this property be
Signature of continues official/Title	State Historic Preservation Officer	Date
Signature of certifying official/Title Office of Archaeology and Historic Pres State or Federal agency and bureau	servation, Colorado Historical S	
In my opinion, the property [] meets [] does not ([] See continuation sheet for additional commer		
Signature of certifying official/Title		Date
State or Federal agency and bureau		
4. National Park Service Certification I hereby certify that the property is:	Signature of the Keeper	Date of Action
entered in the National Register See continuation sheet. determined eligible for the National Register See continuation sheet. determined not eligible for the National Register removed from the National Register other. explain		54.0 0.7.04.011
See continuation sheet.	-	

Franktown Cave		Douglas County, Colorado		
Name of Property	County/State			
5. Classification				
Ownership of Property (Check as many boxes as apply)	Category of Property (Check only one box)	Number of F (Do not count previou Contributing		ithin Property
[x] private[] public-local[] public-State	[] building(s)[] district[X] site	0	0	buildings
[] public-Federal	[] structure [] object	1		sites
		0	0	structures
		0	0	objects
		1	0	Total
Name of related multiple property is not part of a multiple property is not part of a multiple property. N/A			contributing listed in the	
6. Function or Use				
Historic Function (Enter categories from instructions) Domestic Subsistence/processing		Current Functi (Enter categories from instance) Not in use		
7. Description				
Architectural Classificatio (Enter categories from instructions)	n	Materials (Enter categories from inst	ructions)	
N/A		foundation N/A walls		
		other		

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

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Name of Property	County/State	
8. Statement of Significance		
Applicable National Register Criteria (Mark ``x" in one or more boxes for the criteria qualifying the property for	Areas of Significance (Enter categories from instructions)	
National Register listing.)	Archaeology/Prehistoric	
[] A Property is associated with events that have made a	Industry	
significant contribution to the broad patterns of our	Economics	
history.	Settlement	
[] B Property is associated with the lives of persons	Social History	
significant in our past.		
[] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.	Periods of Significance 6400 B.CA.D. 1725 Significant Dates N/A	
[xx] D Property has yielded, or is likely to yield, information important in prehistory or history.		
	Significant Person(s)	
Criteria Considerations	(Complete if Criterion B is marked above).	
(Mark ``x" in all the boxes that apply.)	N/A	
Property is:		
[] A owned by a religious institution or used for religious purposes.	Cultural Affiliation Archaic	
	Early Ceramic	
[] B removed from its original location.	Middle Ceramic	
[] C a birthplace or grave.	Proto Historic	
[] D a cemetery.		
[] E a reconstructed building, object, or structure.	Architect/Builder	
[] F a commemorative property.	N/A	
[] G less than 50 years of age or achieved significance within the past 50 years.		
Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)		
9. Major Bibliographical References		
Bibliography (Cite the books, articles and other sources used in preparing this form on one or mo	ore continuation sheets.)	
Previous documentation on file (NPS):	Primary location of additional data:	
[] preliminary determination of individual listing (36 CFR 67) has been requested	[X] State Historic Preservation Office	
[] previously listed in the National Register	[] Other State Agency	
[] previously determined eligible by the National Register	[] Federal Agency [] Local Government	
[] designated a National Historic Landmark	[] University	
[] recorded by Historic American Buildings Survey		
#	[xx] Other	
[] recorded by Historic American Engineering Record #	Name of repository: Colorado Historical Society University of Denver, Department of Anthropology and Museum of Anthropology	

Franktown Cave	Douglas County, Colorado
Name of Property	County/State
10. Geographical Data	
Acreage of Property15 acres	
UTM References (Place additional UTM references on a continuation sh	neet.)
1. Center of the sit	
2. Zone Easting Northing	See continuation sheet
Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)	
Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)	
11. Form Prepared By	
name/title Kevin Gilmore/Director, Archaeo	logical Posparch Instituto
	-
organization Department of Anthropology, I	
street & number 2000 E. Asbury Ave.	telephone_303-871-2959
city or town <u>Denver</u>	state Colorado zip code 80208
Additional Documentation	
Submit the following items with the complete	ted form:
Continuation Sheets Maps	Photographs Representative black and white photographs of the property.
A USGS map (7.5 or 15 minute series) indicating property's location. A Sketch map for historic districts and properties having large acreage or numerous resources.	Additional Items
Property Owner	
(Complete this item at the request of SHPO or FPO.)	
name Waldo Morris	
street & number 4512 Lakeside Rd.	telephone <u>319-377-8283</u>
city or town <u>Marion</u>	state IA zip code 52302

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq. Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

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DESCRIPTION

Located 2.5 miles southwest of the town of Franktown, Colorado (Figure 1), Franktown Cave is a large rockshelter that contained artifacts from many prehistoric occupations that occurred over 5000 years of time. Evidence of these occupations included rare perishable artifacts manufactured from hide, wood and fiber, and plant material such as corn.

Environmental Setting

Franktown Cave is located 40 km (25 mi) south of Denver, on the north edge of the Palmer Divide, an area above 6000 ft (1830 m) in elevation characterized by the resistant rock units of late Cretaceous and early Tertiary age which form an area of greater relief than that of the surrounding plains (Figure 2). The Palmer Divide forms the drainage divide between the South Platte River to the north and the Arkansas River to the south. Franktown Cave is an east-facing rockshelter 60 m above the bed of Willow Creek, a tributary of Cherry Creek, which flows north to its confluence with the South Platte River within the city of Denver. The rock overhang that forms the rockshelter developed at the contact between two sedimentary rock units: the harder Castle Rock Conglomerate above, which forms a 15 m thick caprock in the area, and the softer, finer textured rocks of the Dawson Arkose formation below. The majority of the artifacts recovered from all episodes of excavation at the site were found in the upper sediments of the northern two-thirds of the shelter.

The bedrock geology of the Palmer Divide determines the presence of Franktown Cave as well as several other rockshelters in the area. The combination of the harder, silica cemented Castle Rock Conglomerate resting directly on the softer, more finely textured and carbonate cemented (water soluble) Dawson Arkose is especially conducive to rockshelter formation. Water flows from the surface through joints in the Castle Rock Conglomerate caprock and migrates down slope along the contact between the two rock units and forms seeps where the water flows to the surface in valley cuts. These seeps dissolve the calcium carbonate cement of the softer Dawson formation, which promotes erosion of this geological unit, creating sheltered alcoves under the harder Castle Rock caprock (Figure 3). Some of these alcoves can be as large as 150 feet (45 m) wide and as much as 50 feet (15 m) from front to back. The majority of the rockshelters in the Palmer Divide have developed at the contact between these two sedimentary rock units.

Also related to bedrock geology, two lithic raw material sources important to prehistoric people are found in the Palmer Divide. Dawson formation petrified wood is derived from the Paleocene age Dawson arkose, and is also known as Parker petrified wood, this material is most often found as an opaque yellow-brown or caramel color microcrystalline rock with darker "wood grain" patterns common, but colors range to translucent light yellow and translucent to opaque white chalcedony. This material is common in the primary source area within the Palmer Divide as dispersed isolated fossil trees and angular cobbles, and in secondary deposits within and north and east (downstream) of the primary source area. All of the above described colors and qualities of material have been observed in single fossil trees (Gilmore 1989:28). Quarry sites have been recorded within the primary source area (Black 2000), but sources are much more common and dispersed than the few recorded quarries would suggest. Due to the formation process of petrified wood as single fossil trees entrained in alluvium, it is nearly ubiquitous in the area where the Dawson is exposed. This material varies from a high quality

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microcrystalline material suitable for the manufacture of small bifaces and projectile points to a low quality, brittle, incompletely silicified material containing numerous internal fractures. Dawson petrified wood was utilized extensively by the prehistoric inhabitants of the Palmer Divide, and in eastern Colorado.

A second important lithic material use by prehistoric people is the Wall Mountain tuff, an Oligocene age pyroclastic flow deposit that is exposed on the tops of mesas and buttes in the primary source area. The flaking quality of this brittle material ranges from fair to poor, and although bifaces of this material have been found, it was used prehistorically mostly as minimally modified flake tools by people living within the primary source area. This material caps a few buttes in the Palmer Divide, and also crops out at point locations throughout the northern side of the Divide. It is also common in secondary sources as alluvial cobbles and is also common as cobble and boulder sized clasts entrained in the base of the Castle Rock conglomerate which are visible in the roofs of rockshelters such as Franktown Cave. Like Dawson petrified wood, sources of Wall Mountain tuff rhyolite are ubiquitous in the northern Palmer Divide.

Directly related to bedrock lithology, soils, and elevation above the surrounding Plains, the Palmer Divide is characterized by mixed plains grassland, scrub oak, and open ponderosa pine forest plant communities. This area is in essence an ecological extension of montane environments from the foot of the Front Range that continues east onto the plains for a distance of 70 km. The topographic divide also acts as a weather barrier between the South Platte and Arkansas River basins, which creates an area on the north side of the divide that does not suffer the same extremes of temperature and moisture as either the mountains or plains that surround it. The area north of the Palmer Divide is both wetter and cooler than the plains to the east. Many of the creeks draining the north side of the divide are spring fed and flow year round. These would have provided a reliable source of water to the prehistoric inhabitants. Drainage density is less on the south side than on the north side of the Divide, and flow in the lower reaches of the major drainages is seasonal.

The climate of the Palmer Divide is affected by its proximity to the Front Range, which acts as a barrier to the free flow of air masses. Mean annual precipitation varies from 34 to 50 centimeters, with the majority of the precipitation occurring between April and October (Livingston 1949). The last frost generally occurs during the middle of May, and the first frost usually occurs in late September (Hansen et al. 1978).

This combination of physiographic and meteorological characteristics creates a circumstance in which a mosaic of plant and animal communities that are characteristic of diverse mountain, plains, and riparian environments exists as an almost continuous ecotone. As such, the Palmer Divide provided an environment full of diverse and rich resources that were important to the prehistoric occupants of the region.

Physical Characteristics of Franktown Cave

Franktown Cave is the largest of the documented rockshelters in the Palmer Divide. The overhang is 40 meters wide, and measures 20 meters between the drip line and the back of the shelter at its deepest point (Figure 4). However, the shelter ranges from 10-12 meters from the drip line to the rear wall in the northern half of the shelter where most of the excavation units were placed and the vast majority of the artifacts were recovered. The interior of the shelter is divided naturally into the "upper shelter" on

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the south side and the "lower shelter" on the north side. The floor of the upper shelter is several meters higher than that of the lower shelter, and sediments in this area are apparently quite thin over bedrock, are periodically saturated with water from the seep at the back of the overhang, and contain few artifacts (Figure 5a). Very little documented excavation occurred in this area. In contrast, the sediments in the lower shelter are deeper and dry, which is the thought to be the reason that the vast majority of the artifacts recovered, including all of the perishables, are from the lower shelter (Figure 5b).

The maximum observed thickness of sediments in the upper shelter was 1.85 meters (identified in a profile of Stratitest I), and the thickness of these sediments varied widely throughout the shelter. Five strata were identified, but the lower (older) strata were much more limited in their horizontal distribution than the more recent upper strata. Representative stratigraphic profiles drawn during the 1956-57 excavations show the thickness and relative distribution of four of the five strata (Figure 6). As a result of controlled excavations and vandalism much of the sediments in these areas have been removed, leaving formerly buried pieces of roof fall exposed on the surface.

Large blocks of Castle Rock conglomerate rest at the front of the overhang. These would have provided additional protection to the occupants. Below the overhang a jumble of boulders form a talus slope down to the valley floor. In patches of sediment between boulders and talus are covered with gamble oak, ponderosa pine and juniper. In front of the lower shelter is a substantial pile of backdirt from past excavations that begins at the drip line and extends down slope for a distance of 10-15 meters.

The more than 4000 artifacts and samples recovered from excavations dating to the 1940s and 1950s at Franktown Cave were divided into four classes of artifacts and one class of ecofacts during an inventory of the collections performed in 1974. These classes included chipped stone artifacts, (n=2180), which includes 160 projectile points and projectile point fragments; ground stone (n=234); potsherds, both cord-marked and plain wares (n=862); perishable artifacts, which includes fiber, hide, bone, and wood (n=351); and ecofacts (evidence of ancient environments), including corn and other plant remains, animal bone, shell, and wood (n=791). These artifacts can be placed into at least eleven occupations, ten of which (radiocarbon Components 1-10) are defined by both standard radiocarbon dates and the generally more accurate Accelerator Mass Spectrometry (AMS) dates (Figure 7), and one that is defined by the presence of diagnostic projectile artifacts. These components are summarized in Table 1.

Basketry, woven yucca sandals, one complete and one fragment of a moccasin, pieces of a possible rabbit fur robe, a small sinew net, pieces of stitched leather, digging sticks, weaving tools, pieces of arrow and atlatl foreshafts, and 140 pieces of cordage are only a part of the collection of 351 perishable artifacts. The collection also contains many bone and wood artifacts. The 241 ecofacts include corncobs, kernels of corn and what are thought to be portions of corn stalks, as well as tied bundles of grass and pine needles, reeds, cactus pads and yucca fibers. Perishable artifacts and ecofacts are almost completely unknown from sites in the Platte River Basin, and the quantity and variety of these materials is unmatched in the northeastern part of the state.

The Early Archaic component at Franktown Cave is defined by several projectile points resembling the Mount Albion and MM3 types which were recovered from the deepest cultural strata (Figure 8). These points resemble points from various Early Archaic sites in the Front Range and Hogbacks/foothills sites

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Table 1. Cultural Chronology at Franktown Cave

Platte Basin Cultural Period and Time Range	Franktown Cave Component	Component Age AD/BC range	Contributing Dates	Artifact Dated
	¹⁴ C Component 10	AD 1660-1950	AD 1660-1950	Corn kernel
Protohistoric	¹⁴ C Component 9	AD 1450-1650	AD 1490-1660	Corn cob
AD 1540-1860	e component y	71D 1430-1030	AD 1440-1630	Corn cob
AD 1340-1000	¹⁴ C Component 8	AD 1280-1400*	AD 1280-1400	Dismal River sherd
	c component o	71D 1200-1400	AD 1190-1290	Corn cob
			AD 1190-1290 AD 1190-1280	Sinew/twig net
	¹⁴ C Component 7	AD 1035-1290	AD 1160-1280	Corn cob
	c component i	71D 1033-1270	AD 1070-1280	Corn cob
			AD 1020-1250	charcoal
Middle Ceramic			AD 1026 1230 AD 1035-1220	Corn cob
AD 1150-1540	-		AD 1025-1190	Legging
112 1100 1010			AD 980-1160	Moccasin
	¹⁴ C Component 6	AD 890-1170*	AD 900-1160	Plain bowl sherd
		, , -	AD 900-1160	Middle Ceramic sherd
			AD 780-1150	Middle Ceramic sherd
	¹⁴ C Component 5	AD 720-980*	AD 720-980	Middle Ceramic sherd
Early Ceramic	*		AD 680-880	Early Ceramic sherd
AD 150-1150	¹⁴ C Component 4	AD 660-880	AD 670-860	Coiled basket
	1		AD 660-800	Early Ceramic sherd
Late Archaic 1250 BC-AD 150	¹⁴ C Component 3	AD 130-420	AD 130-420	Charcoal
	¹⁴ C Component 2	2870-2470 BC	2830-2470 BC	Coiled basket
	•		2870-2500 BC	Sandal
			3310-2880 BC	Sandal
			3260-2910 BC	Sandal
			3330-2920 BC	Rabbit hide robe
Middle Archaic	¹⁴ C Component 1	3350-2880 BC	3330-2920 BC	Coiled basket
3800-1250 BC	-		3350-2920 BC	Sandal
			3340-2930 BC	Coiled basket
			3340-2930 BC	Coiled basket
			3340-3020 BC	Sandal
			3345-3030 BC	Sandal
			3350-3035 BC	Sandal
Early Archaic 6400-3800 BC	Early Archaic	6400-3800 BC	Relative date	Projectile points

^{*}AMS dates on ceramics may be too old. See text (p. 6) for discussion.

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(Pustmuller 1977). These points represent an occupation that predates the occupation that contains plain weave sandals, remnants of a rabbit fur robe and basketry that were directly dated by AMS to the period 3350-2880 B.C.

Franktown Cave is the only rockshelter site in the Palmer Divide that has provided Middle Archaic dates. A suite of 12 AMS dates on six yucca plain weave sandals, five coiled basket fragments and a piece of what is thought to be a rabbit fur robe define Component 1 (3350-2880 B.C.) and Component 2 (2870-2500 B.C) (Figure 9). Although these sandals superficially resemble contemporaneous Archaic sandals from several sites in the northern Colorado Plateau (Geib 2000), preliminary examination of them suggests that they may be the product of a manufacturing sequence that in fact has no analogs at other sites; the technology is unique to Franktown Cave. Abundant research over the past half century has conclusively demonstrated that basketry, textiles, sandals, and cordage are peculiarly useful and sensitive artifacts on a number of analytical levels, and is for more useful for determining ethnic and linguistic affiliation than any other class of artifacts (Adovasio and Pedler 1994). Further analysis of the collection may offer insights into the cultural affiliation of the Middle Archaic occupants of the site.

At Franktown Cave the transition between the Late Archaic and Early Ceramic periods is represented by Component 3, which is a standard radiocarbon age on charcoal from a hearth, and diagnostic projectile points. A charcoal sample associated with a possible hearth at a depth of 80 cm below the surface returned a standard radiometric age of 1755±65 B.P., 2-sigma cal range of A.D. 130-430. This date falls into a period of time when technological changes occurred that represented the transition between Late Archaic and Early Ceramic periods. The transition between the Late Archaic and the Early Ceramic period is defined in the archaeological record of eastern Colorado by the appearance of both ceramics and small corner-notched points that indicate the arrival of the bow and arrow and its replacement of the dart and atlatl. Within a few centuries, these small points completely replace the larger points in the archaeological record. The hearth was in a stratum that contained no ceramics and large corner-notched projectile points dated at other sites to the Late Archaic period (Figure 10). This suggests that at this time the inhabitants of Franktown Cave had not yet adopted the technologies that define the beginning of the Late Prehistoric. Information from this component will offer insight into the nature of the technological transition between the atlatl and the bow and arrow.

The Early Ceramic occupation of Franktown Cave is represented by Component 4, which consists of an AMS date on a fragment of single bundle coiled basketry (Figure 11) and AMS dates on a reconstructed rim sherd (Figure 12) and a reconstructed pot (Figure 13). The only projectile point associated with this component is a single small corner-notched point (Figure 11). The technology used to manufacture the Component 4 basket is the same as that of basket fragments from Components 1 and 2, indicating that this technology persisted for over 4000 years at Franktown Cave (Gilmore and Larmore 2004). In addition to the two dated ceramics there are hundreds of sherds from other cord-marked ceramic vessels. Further analysis of the basketry may offer insights into the cultural affiliation of the Early Ceramic occupants of the site.

Many of the artifacts recovered from Franktown Cave can probably be assigned to the Middle Ceramic period, which is indicated by the dominance of small, side-notched projectile points in the collection. The Middle Ceramic occupations are defined by Component 5 (A.D. 780-980), Component 6 (A.D. 890-

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1170) and Component 7 (A.D. 1035-1290). Component 5 consists of an AMS date from a single rim sherd (Figure 15). Component 6 is defined in part by AMS dates on a complete moccasin and a fragment of a fringed legging (Figure 16), and AMS dates derived from samples of rim sherds representing three different vessels (Figures 17 and 18). Component 7 is defined by AMS dates from a small bent twig and sinew net of unknown function (Figure 19), AMS dates on four corn cobs (Figure 20), and a single standard radiocarbon date of charcoal from a hearth. The standard radiocarbon age was from a sample dated 890±65 B.P., 2-sigma cal range A.D. 1016-1281. This sample was associated with ceramics, small side-notched projectile points, and maize from stratigraphic Level 1 "SW corner of large rock," but no additional information regarding feature context or more exact vertical or horizontal provenience is available. The small sinew and twig hoop resembles both hoops used for variations of the hoop game played historically by many Native American groups (Culin 1992 [1907]), and "dreamcatchers" ubiquitous to gift stores specializing in western or Native American crafts. Although the calibrated age ranges of both Component 5 and Component 6 fall into the Early Ceramic period, the ceramics dated are stylistically diagnostic of Middle Ceramic cultures, suggesting that there may be accuracy problems with the crushed sherd method of directly dating ceramics. In addition to the above dated artifacts, there are additional rim sherds representing 6-8 additional ceramic vessels that exhibit the constricted necks and thickened rims (called "collared" or "braced" rims) diagnostic of ceramics of Central Plains tradition cultures of the Middle Ceramic period (Figure 21). The number and variety of artifacts associated with the Middle Ceramic occupations will provide significant information to address the topics of settlement, cultural affiliation and subsistence of these people.

The Protohistoric occupation of Franktown Cave is represented by Component 8 (A.D. 1280-1400), a ceramic sherd thought to be Dismal Gray ware with an associated AMS date of 643 ± 48 (Figure 22), and Component 9 (A.D. 1450-1650), which consists of two corn cobs (Figure 19, Cat. # 3608 and 1263). Compared to the dates of other Dismal River sites in eastern Colorado, the Component 8 date on the Dismal River seems too old by about 150-200 years, which may point out a methodological problem with this component similar to that discussed above for Components 5 and 6. An AMS date on a single kernel of corn defines Component 10 (A.D. 1660-1950). The wide temporal range represented by the calibrated date makes interpretation of this single date problematic—it could be associated with historic Native American occupation of the site. However, a significant amount of the probability associated with this date falls within the historic period, and this corn may represent animal feed brought into the site when it was used as a shelter for livestock. Although it is the most recent pre-Euroamerican period represented in eastern Colorado, the Protohistoric occupation of this part of the state is perhaps the least understood. The perishable and nonperishable artifacts associated with this occupation can provide information on subsistence, technology and settlement that has not been found at any other site in eastern Colorado.

Periods of Occupation and Cultural Affiliations

Franktown Cave was occupied periodically during the Early Archaic (7500-5000 B.P., calibrated range 6400-3800 B.C.), Middle Archaic (5000-3000 B.P., calibrated range 3800-1250 B.C.), Late Archaic (3000-1850 B.P., calibrated range 1250 B.C.-A.D. 150), Early Ceramic (1850-850 B.P., calibrated range A.D. 150-1150), Middle Ceramic (850-ca. 350 B.P., calibrated range A.D. 1150-1540), and Protohistoric (A.D. 1540-1860) periods as defined in the prehistoric context for the Platte River Basin

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(Gilmore et al. 1999). The earliest occupation at the site by Early Archaic people is defined by the presence of artifacts typical of these cultures. The calibration of radiocarbon ages at Franktown Cave and the determination of calendric dates for prehistoric cultural periods modified from those for the Platte River Basin (Gilmore et al. 1999) are based on the calibration program of Stuiver and Reimer (1993).

The Archaic occupants of Franktown Cave were highly mobile, with economic strategies that focused on the resources available in the foothills and mountains, and the cultural material from these components reflects this mobility. The Archaic Stage represents a shift to a more diverse resource base and different settlement pattern from the previous Paleoindian Period, which is indicated by an increase in the diversity of faunal species utilized and an increase in the amount of ground stone associated with Archaic components, suggesting greater processing of vegetal resources. This shift came about in part as a response to changes in the environment from the cool and wet Anathermal to the warmer, dryer environment of the early to mid Holocene Altithermal period (Antevs 1955). Material culture associated with Archaic components at Franktown Cave include a series of side- and corner-notched and stemmed dart points, as well as sandals and basketry. the Archaic Stage is divided into three periods: Early, Middle and Late. Not much is known of the Early Archaic occupation of the Palmer Divide, because even though there are several excavated Early Archaic components in the area, these excavations have not been completely documented. Middle Archaic components, as represented by stemmed and lanceolate forms of spear points, are relatively common in eastern Colorado and this is reflected within the Palmer Divide. Several of these sites have been excavated, although dated components are few. Late Archaic components east of the Continental Divide in Colorado are more common than Middle Archaic components in general; however, there are proportionally fewer Late Archaic sites in the Palmer Divide compared to the rest of the eastern part of the state.

The transition between the Late Archaic and Early Ceramic periods is easily recognizable in the archaeological record of eastern Colorado because it was accompanied by obvious changes in basic technologies, increases in population and sedentism, changes in economy (more intensive processing of natural resources and increased use of cultigens), and changes in mortuary practice that echo those associated with the Plains Woodland cultures of the Central Plains (Gilmore 1999; Kalasz, et al. 1999).

Elongate, cord-marked ceramic vessels assignable to the Early Ceramic Plains Woodland culture appear in the archaeological record (including Franktown Cave) after ca. A.D. 150-300 in the eastern half of the state (Figures 12 and 13). This probably represents diffusion of technology rather than an actual migration of people from the Central Plains. Following the introduction of ceramics, there is a transition from large, corner-notched dart points to smaller corner notched points, indicating replacement of the atlatl and dart with the bow and arrow. Far from being instantaneous, this transition seems to have occurred over several hundred years (O'Neil et al. 1988). An increase in the number and size of sites dating to the Early Ceramic period may indicate that population was increasing during this period, and replacement of the atlatl by the bow and arrow and the appearance in the archaeological record of ceramics may have been in response to an increase in population that began toward the end of the Late Archaic period and culminated in the middle of the period (Gilmore 2002).

The Middle Ceramic period at Franktown Cave is represented by distinctive side-notched arrow points

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and pot sherds from globular cord-marked vessels with constricted necks. There are far fewer Middle Ceramic period sites in eastern Colorado than recorded for the previous Early Ceramic period. Populations are thought to be lower in eastern Colorado during this period, and the lower number of sites dating to this period reflects this. For the most part sites dating to the Middle Ceramic period reflect shorter occupations by smaller more mobile groups (Brunswig 1996). Middle Ceramic sites are represented equally within the Palmer Divide as they are in eastern Colorado as a whole. Franktown Cave is located where the geographic distribution of two Middle Ceramic cultures of eastern Colorado; the Upper Republican of the Platte Basin and the Apishapa of the Arkansas basin, and artifacts from the site reflect characteristics of both these cultures.

Arrow points, ceramics and dated corn cobs represent the Protohistoric period Dismal River complex at Franktown Cave. It is during this period that the occupants of eastern Colorado can be assigned to known Native American groups, and the Dismal River complex is thought by many archaeologists to represent the ancestors of modern Apache groups. During the Protohistoric period there is an increase in the number of sites in eastern Colorado compared to the previous Middle Ceramic period, which suggests that populations may have been increasing from the low levels of the previous period. However, this increase in the number of sites has not so far translated into greater knowledge of these people. The paucity of culturally diagnostic artifacts found at sites dating to this period in eastern Colorado has made assignments of cultural affiliation difficult.

Likely Appearance of Franktown Cave during Occupation

The environment surround in Franktown Cave has probably not seen significant change within the last 10,000 years. Although climate in eastern Colorado has fluctuated during the time that the site was occupied, resulting in changes in precipitation and to a lesser extent temperature, these changes probably did not result in great changes in local vegetation, although the prevalence of some species such as sagebrush would have increased during times of dryer and/or cooler temperatures and decreased during periods of warmer, wetter conditions relative to scrub oak and conifers through time. The greatest changes to the site itself would have been the decrease in overhead space as sediments accumulated within the rockshelter. Continued weathering of the Dawson Arkose would have contributed to the accumulation of sand and gravel and wind would have blown finer textured sediments into the shelter. Both of these process would have contributed to the infilling of the shelter and the burial of cultural debris left behind by the inhabitants of the site after each occupation

Current and Past Impacts on Franktown Cave

In addition to the four separate controlled excavations at Franktown Cave, there are accounts of local Boy Scout troops excavating in the cave prior to the 1940s. Gerold Thompson's field notes from the 1956-57 excavations at the site mention encountering "previous excavations" that did not correspond to any of the known University of Denver excavations. Franktown Cave is well known to the local residents, and between casual vandalism that is inevitable in attractive sheltered sites, the excavation by boy scouts, and the four episodes of excavation by the University of Denver, a majority of the site has been impacted. Although a one day investigation of the site in 1976 by Sarah Nelson of the University of Denver Department of Anthropology suggested that little of the site was still intact, a more intensive

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investigation of the site is warranted before a determination of how much of the site is still intact can be made. Although preliminary inspection suggests that the integrity of much of the site has been compromised, surface characteristics may not reflect the actual integrity of the deeper sediments. If any intact sediments are still present, it may be possible to obtain additional information on depositional processes and stratigraphic correlation from these area. Areas of intact site sediments could be located using remote sensing techniques.

The continuing integrity of Franktown Cave and other rockshelters in the Palmer Divide is of concern. Franktown Cave and the majority of the documented rockshelters in the Palmer Divide are found in Douglas County, which was determined to be the fastest growing county in the United States for nine of ten years between 1990 and 2000. Development in the Palmer Divide is the greatest threat to these resources, and as of the fall of 2004 a subdivision is being built on the mesa top above Franktown Cave within several hundred meters of the site. Unfortunately, the presence of a rockshelter draws the attention of the curious, which over the course of time inevitably results in vandalism.

Previous Investigations at Franktown Cave

In the Franktown Cave collection there are materials from five separate episodes of investigation, four controlled excavation and one investigation where cultural material was recovered by screening the backdirt of previous excavations and episodes of vandalism. Figure 4 contains the location of the units from the four different episodes of excavation. Unfortunately, much of the early work at Franktown Cave does not meet the modern standards for scientific excavation, but this work still provided information important to our understanding the prehistory of the region.

Hugh Capps, a graduate of the University of Denver (MA 1941) was the first person to operate a controlled excavation at Franktown Cave. All of the materials he recovered during his work at the site in 1942 were donated to the Department of Anthropology prior to his entry into military service. In a written communication to the University of Denver, Capps (1976) indicated that he had written a report and filed it with the artifacts when he donated them to the Department. However, the only records of his excavation were on the paper bags in which the artifacts were stored. Each one of the eight bags was labeled with a Roman numeral between I-IX, each designating a stratum. Unfortunately, when the collection was inventoried in the mid-1970s, the bag for Stratum IV was missing and has never been found (Pustmuller 1977). A total of 208 specimens recovered by Capps during his excavations are in the collection.

In 1949 and 1952, Professor Arnold Withers of the DU Department of Anthropology supervised the excavation by students of two contiguous stratigraphic test units, designated Stratitest I for 1949 and Stratitest II for 1952 (Figure 23). Both of these test units were excavated to a depth of 1.85 m, and artifacts recovered from these test units were assigned to natural strata (Pustmuller 1977:14). During the 1949 season, a Brunton compass was used to map the interior of the rockshelter and create a five meter grid to aid with the mapping of artifacts and excavation units. The north-south grid lines were labeled A through F from west to east, and the east-west grid lines were labeled 1 through 9 from north to south (Pustmuller 1977: Figure 5). This map shows the location of Stratitest I and 12 nonstratigraphic test units. During the excavation of Stratitest II in 1952, an additional test unit was excavated. A total of

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842 specimens was recovered from Stratitest I, and 736 specimens were recovered from the 12 test units. A total of 201 specimens was recovered from Stratitest II and the single test unit.

From 1956 to 1957, Gerold Thompson, a graduate student working under the supervision of Arnold Withers, excavated test trenches within a grid system different from that of the previous Withers excavations (Figure 24). Thompson laid out an excavation grid of 3-foot-square units along the back wall in the northern half of the shelter. Thompson recovered and labeled 1292 specimens, some with exact horizontal and vertical provenience. Thompson also integrated most of the specimens from Capps and the two Withers-supervised excavations into his catalog system. In addition, he produced a plane table map of the site, and attempted to relate his excavated materials to the alpha-numeric grid of the 1949 map. Thompson also produced 24 drawings which include topographic and stratigraphic views of his excavations, and scale drawings of 10 metates left on site. Thompson was a member of the armed services while a student at DU, and in 1957 he was transferred out of the area before he had the opportunity to complete a report.

In 1976 a brief investigation at the site was conducted under the supervision of Dr. Sarah Nelson of the University of Denver Department of Anthropology (Figure 25). The intention of this investigation was simply to determine if there were any remaining intact deposits, relocate old excavation units, clean up sidewalls of these units for photodocumentation and profile drawings, and screen portions of the substantial backfill piles to recover artifacts and ecofacts that were missed during previous investigations or episodes of vandalism. Approximately 570 specimens were recovered during a one-day investigation.

In 2003, a grant from the National Science Foundation (Grant # 0240816) provided funding for direct AMS dates and preliminary analysis on some of the perishable artifacts. Much of the above information was acquired as a direct result of this funding.

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SIGNIFICANCE

Franktown Cave is a multicomponent prehistoric rockshelter site that was first occupied sometime after 6400 B.C. and continued to be occupied intermittently during the following 8000 years. The site is eligible to the National Register of Historic Places under Criterion D because is has yielded important information important to our understanding of the prehistory of eastern Colorado, especially in the areas of industry (lithic technology, ceramic technology, textile manufacture), economics (changing use and relative importance of different animal species through time, adoption of corn horticulture), settlement (migration of people and ideas represented by changes in material culture) and social history (changes in social structure, ideology and adaptive strategies reflected in changes in material culture). The site is nominated at the state level of significance.

Of all the recorded sites in the South Platte River Basin of northeastern Colorado, the Franktown Cave collection is unique in the quantity and variety of perishable artifacts recovered. In fact, only two other documented sites in all of eastern Colorado contained significant perishables. Both of these sites (Trinchera Cave and Chamber Cave) are within the Arkansas River Basin in southern Colorado and the components containing the perishables are thought to be affiliated with cultures of the Southern Plains.

Trinchera Cave (5LA1097), located in southern Colorado, like Franktown Cave, was excavated several times during the mid 1950s to mid 1970s (Simpson 1976). The collection of perishable artifacts recovered from Trinchera Cave approaches in variety that of Franktown Cave, but this collection has not yet been analyzed or adequately documented, so no comparisons between the sites can be made. The collection is stored at Trinidad State Junior College, however, so future comparative analysis is possible.

Chamber Cave (5PE1767), southwest of Pueblo, was excavated by collectors who later allowed an amateur archaeologist to examine the artifacts for a short descriptive article (Nelson 1970). This site contained chipped stone and ceramic artifacts similar to those found in the upper components at Franktown Cave. Perishables recovered from this site included a fragment of coiled basketry, with bone, wood and leather artifacts. Because this site was excavated by collectors and is held in unknown private hands, it is unlikely that the collection will ever be available for comparative analysis.

There is a paucity of perishables from sites in the Platte Basin, and none of the sites come close to Franktown Cave. The LoDaisKa site (5JF142) southwest of Denver is a rockshelter that contained a very small number of wood artifacts, a few pieces of leather, and macrobotanical remains (including the maize discussed above) in addition to a substantial collection of nonperishable artifacts (Irwin and Irwin 1959). There are reports of macrobotanical corn from five other sites in the Platte Basin, but of these only the single corn cob from Colorow Cave is available for further study. Because these sites are the only documented collections of perishable artifacts in the region, comparisons with other similar collections or isolated artifacts can be accomplished only by going outside the region to sites in New Mexico, the Bighorn Basin in Wyoming or in the Southwest and Great Basin. Because the collections from Trinchera Cave remain unanalyzed, the collection from Chamber Cave is unavailable, and the collection from LoDaisKa contained only a minimal number of perishable artifacts, none of them diagnostic, the baseline data that analysis of the perishables in the Franktown Cave collections can provide is crucial to our understanding of the Archaic and Late Prehistoric periods of the western High Plains.

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Although there are other sites in the region that have provided information on all of the cultures represented by the artifact assemblage at Franktown Cave, most of these sites are open and unprotected from the elements, and so only the small fraction of the items made and used by prehistoric people made from non-perishable materials are preserved. None of these sites contain the variety and quantity of materials present at Franktown Cave. Franktown Cave would be a remarkable site for the lithic and ceramic artifacts alone, but the perishables make it exceptional. The perishable artifacts represent an entire class of artifacts that is almost completely unknown at other sites on the Great Plains. Although full scale analysis of these materials has not yet been accomplished, just the description, preliminary analysis and direct AMS dating of many of these perishable objects has provided information on the migration, settlement patterns, cultural affiliation, economy, manufacturing techniques, and lifeways of the prehistoric people of the region that is not available from any other site in the region. Continued research and analysis of these materials is sure to provide even more information. All of this information is of vital importance to our understanding of the prehistoric occupation of the Platte River Basin, and as such Franktown Cave is eligible under criterion D.

Although the majority of the sediments that contained prehistoric artifacts have been disturbed due to both controlled excavation and vandalism, the site meets eligibility requirements under Criterion D primarily due to the important information about the prehistory of the region that the site has already yielded through analysis of the existing artifact collection, rather than the potential for the site to provide more information. The collections from past excavations at the site will continue to yield information important to our understanding of the prehistory of Colorado as new methods of materials analysis become available. Although preliminary inspection suggests that the integrity of much of the site has been compromised, surface characteristics may not reflect the actual integrity of the deeper sediments. It may be possible to obtain additional information on depositional processes and stratigraphic correlation from areas of intact site sediments that could be located using remote sensing techniques. For example, ground penetrating radar has been used successfully to differentiate between sediments disturbed by vandals and controlled excavations from intact sediments at another rockshelter in the Palmer Divide (Tchakirides 2002). Modern excavation and sediment analysis methods applied to any areas of intact sediment could potentially provide stratigraphic information that would allow artifacts from past excavations to be placed within their stratigraphic context. Finally, it (almost) goes without saying that any additional artifacts found in undisturbed contexts within the site and recovered using modern methods would also have the potential to contribute information important to the understanding of the prehistory of Colorado.

Many research questions are suggested by the information derived from the collections from Franktown Cave. Some of these questions are general ones related to changes in prehistoric technology and subsistence over time, and others are specific to the different occupations. Many of these questions blur the boundaries of the different data categories defined for determining significance.

Research Topics

Industry/Technology

Examination of the flaked stone artifacts from all components at Franktown Cave could provide information on changes in lithic technology through time, especially as it relates to both gendered tool manufacture and increased sedentism hypothesized to have taken place during the Late Prehistoric stage in eastern Colorado. A reliance on biface technology made from a combination of local and exotic

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materials is usually associated with more mobile people, while a reliance on flake tools most often made from local materials is associated with more sedentary people (Parry and Kelly 1986). As discussed above in the environmental setting section, Both Dawson petrified wood and Wall mountain tuff are locally available lithic raw materials. Dawson petrified wood was used prehistorically for the manufacture of all stages of bifaces, as well as flake tools, and artifacts of this material are found throughout the eastern part of the state and up into the mountains. In contrast, rhyolite from the Wall Mountain tuff is only found in significant amounts in site assemblages near sources of this material in the Palmer Divide, where it can make up more than 60% of the debitage. However, the decrease of this material in site assemblages is precipitous as distance from the source increases, and at sites more than a few miles from sources this material may occur in frequencies down in the single digits. Although used for retouched tools, the majority of this material is used as modified flakes. Analysis of the lithic assemblages from Palmer Divide rockshelters, with sources of rhyolite on site, would contribute to the understanding of flake tool industries versus the biface technology that dominate assemblages elsewhere in the eastern part of the state. Do changes in both lithic technology and the frequency of use of certain lithic raw materials through time reflect changes in human settlement patterns and mobility? Based on the observation of historic hunter-gatherers, women usually cover less area during the accomplishment of their tasks than men. Are the stone tools thought to have been made and used by women (end scrapers and flake tools) more often manufactured of Wall mountain tuff than those thought to have been manufactured by men (bifaces)? If so, does this pattern change through time? Questions pertaining to the antiquity and gendered nature of the hide working sequence at Franktown have already been addressed, based on examination of hide artifacts in the collection (Gilmore 2005). Analysis of the chipped stone artifacts would add significant information to this already established line of inquiry.

Economics/Subsistence

An important advance in the Palmer Divide and the Hogbacks/foothills to the north during the Late Prehistoric is the development of corn horticulture. Evidence of maize in the archaeological record of northeastern Colorado is sparse, and has previously been explained as either contamination from modern sources (Cummings and Moutoux 1997; Johnson et al. 1997) or more often, as the result of trade with groups in the Southwest or to the east in the Central Plains (Eighmy 1984:86; Johnson et al. 1997:143). However, several factors suggest that that the corn from Component 7 and Component 9 (Figure 20) was grown locally. The addition of corn to the subsistence base of prehistoric hunter-gatherers represents a significant increase in energy investment required to produce food versus hunting and gathering. Analysis of the morphology, genetic make-up and trace minerals of the corn could help to answer several questions regarding its addition to subsistence during these two components. Was the corn grown locally? Was this technology disseminated from horticultural groups to the Southwest, the Central Plains, or elsewhere? What were the environmental, social, and economic factors that made the adoption of horticulture a viable option during these times?

More than 460 pieces of faunal bone are in the Franktown Cave collections. These could be used to answer questions regarding subsistence in all components. How did the subsistence of the occupants of Franktown Cave change over time? If it does change, do these changes reflect changes in economy that reflect the mobility of social groups, their size and/or organization?

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Settlement

All of the occupations of Franktown Cave have the potential to provide important information regarding the movement of people and ideas, and could provide information regarding why Franktown Cave in particular and the Palmer Divide in general were considered attractive places to live. The Early Archaic component at Franktown Cave is defined by several projectile points resembling the Mount Albion and MM3 types which were recovered from the deepest cultural strata. These points resemble points from various Early Archaic sites in the Front Range and Hogbacks/foothills sites (Pustmuller 1977). If any intact cultural strata remain at Franktown Cave they are likely to be the deeper deposits that contain evidence of this earliest occupation. How does Franktown Cave fit into the seasonal movements of Early Archaic people? Does the Mount Albion complex represent an in place cultural development from earlier occupants of the Colorado, or were they descendants of people that migrated into the area from elsewhere?

Sandals, basketry and fragments of a woven rabbit hide robe from radiocarbon Components 1 and 2 represent the only textiles recovered from a Middle Archaic component in the Platte River Basin, and the only dated textiles from eastern Colorado. Textiles (woven materials such as sandals and baskets) are rare occurrences in archaeological contexts throughout the western U.S., and are best known from dry caves from the Colorado Plateau and the Great Basin, areas on the opposite side of the Continental Divide from the Plains. Textiles are even rarer from sites on the Plains, and so the perishables from Franktown Cave offer examples of a class of artifacts that are exceptionally qualified to offer insight into the ethnic affiliation of the prehistoric occupants. Preliminary analysis of the Franktown Cave sandals suggests that they are the product of a technology unique to this site (J. M. Adovasio, personal communication 2004). Franktown Cave also lacks any projectile points of the McKean Complex, which are horizon markers of the Middle Archaic period from the northern Plains south into the Palmer Divide, although the McKean Complex is well represented at other sites in the Palmer Divide. The closest analogs to the Middle Archaic projectile points similar to those at Franktown Cave are found on the southern Plains and Texas. Does the Middle Archaic component at Franktown Cave represent an in place cultural development, or does it represent a migration of people or influx of ideas from the south?

In contrast to the pattern seen in the eastern Colorado, where there is a precipitous drop in the number of Middle Ceramic components, rockshelters in the Palmer Divide have a disproportionately high number of components dated to this period. Of the 30 components recognized in rockshelters in the Palmer Divide, 27% are assigned to the Middle Ceramic period, and several of these components are represented by substantial occupational debris. What place did Franktown Cave and other rockshelters in the Palmer Divide have in the settlement patterns of Middle Ceramic people?

Recent work in the Colorado high country suggests that early Apacheans may have entered Colorado earlier that previously proposed, based on the several sites with Dismal River material culture with associated dates between A.D. 1400-1500, or several hundred years earlier than previously thought for this culture (Larmore and Gilmore 2004). The location of all of these early sites in the mountains of eastern Colorado suggests that the earliest proto Apache residents were mountain adapted and only later moved out onto the Plains. A Dismal River rim sherd from Franktown Cave (Figure 20) suggests that this site may have been part of this early highland adaptation. Further dating and analysis of the Franktown Cave collection is necessary to ask the question: What role did Franktown Cave and the Palmer Divide play in early Apachean settlement patterns?

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Social History

Both the non-perishable and perishable artifacts associated with the Archaic occupations provide insights into the cultural affiliation of the occupants. Similarities in sandals and baskets to items manufactured by contemporaneous groups in the Southwest and Great Basin give credence to theories of contact between these areas and the mountains and foothills of eastern Colorado that were previously based solely on stone tool technology. Abundant research over the past half century has conclusively demonstrated that basketry, textiles, sandals, and cordage are peculiarly useful and sensitive artifacts on a number of analytical levels, and is for more useful for determining ethnic and linguistic affiliation than any other class of artifacts (Adovasio and Pedler 1994).

At Franktown Cave a charcoal sample associated with a possible hearth at a depth of 80 cm below the surface returned a standard radiometric age of 1755±65 B.P., 2-sigma cal range of A.D. 130-430. This date is transitional between Late Archaic period of the Archaic stage and the Early Ceramic period of the Late Prehistoric stage. The hearth was in a stratum that contained no ceramics and large corner-notched projectile points. The absence of arrow sized points in the stratum associated with this date at Franktown Cave is consistent with evidence that suggests that Archaic technologies (including use of the atlatl) persisted for centuries longer in the mountains than on the Plains (Gilmore 1999:264). The scenario of a late adoption of the bow by mountain adapted groups is consistent with the idea that the Late Archaic occupants of Franktown Cave were mountain adapted. The transition between the Late Archaic and the Early Archaic is relatively unknown in eastern Colorado, and information derived from continued analysis of material from the transitional Late Archaic/Early Ceramic occupation at Franktown Cave could potentially help fill gaps in our knowledge of this transition in eastern Colorado. What is the nature and timing of the Archaic/Late Prehistoric transition in the Palmer Divide? What are the similarities and differences between this process in the Palmer Divide and eastern Colorado as a whole?

Of all sites that can be assigned to a time period, sites dating to the Early Ceramic period are by far the most numerous in eastern Colorado (30 percent). This situation is reflected in the Palmer Divide, where there are proportionally even more Early Ceramic components (42 percent) than in the eastern part of the state as a whole. This pattern (along with other evidence) has been interpreted as representing a period of population growth in eastern Colorado (Gilmore 2002, 2003, 2004). This increase in population is thought to have had a significant effect on cultural evolution, and may have been the driving factor behind the adoption of the technologies that define the Early Ceramic period in the archaeological record (bow and arrow, ceramics), as well as having a significant effect on the settlement patterns subsistence and mobility of people. Although there is a greater proportion of Early Ceramic components in the Palmer Divide than the rest of eastern Colorado, there are actually fewer Early Ceramic components is rockshelters, and these occupations are not as substantial as subsequent Middle Ceramic occupations. What is the reason behind this under representation of Early Ceramic occupations in rockshelters? Did rockshelters in the Palmer Divide have a different function in settlement patterns during the Early Ceramic period than they did during the Middle Ceramic?

Even preliminary analysis of the hide artifacts associate with Middle Ceramic period Component 6 has provided information important to our knowledge of prehistory. Similarities between the Franktown Cave moccasin and those of Algonkian speakers suggests that population movement during the last 1000 years may have been greater than previously suspected, and the hypothesized ethnic affiliation of Middle Ceramic

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populations in eastern Colorado with Caddoan speakers may not prove out. Detailed analysis of the hide, ceramic and chipped stone artifacts from Franktown Cave may provide the information critical to defining the relationship between the Middle Ceramic populations of the Palmer Divide and contemporaneous Upper Republican groups to the east and Apishapa groups to the south. Superficially, the ceramics associated with the Middle Ceramic period components are similar to both Upper Republican and Apishapa ceramics, and the small side-notched projectile points are similar to those found at Apishapa sites in the Arkansas River Basin to the south. What is the cultural affiliation of the Middle Ceramic people of Franktown Cave?

Component 10 is defined by an AMS date on a single kernel of corn (A.D. 1660-1950). Although this date could be associated with a Protohistoric occupation, the calibrated range for this date extends into the historic and modern period, making interpretation and attribution difficult. Additional dating of kernels and perhaps trace mineral analysis could serve to narrow the time range and to answer the question: Is this corn associated with the historic use of the site or an older Native American occupation?

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Information on Specific Location Removed

Figure 1. Location of Franktown Cave. Castle Rock South USGS 7.5' topographic map (1966, PR 1980), T8S, R66W, 6th PM, Douglas County, Colorado.

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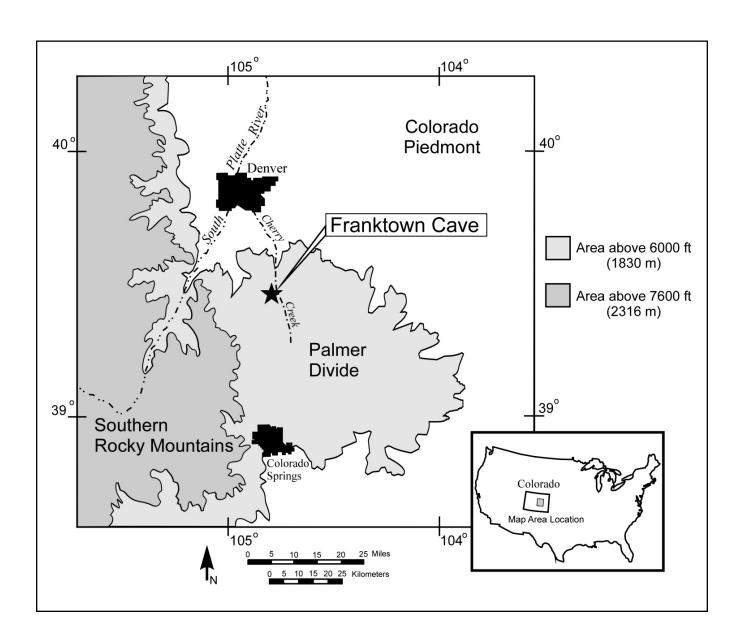
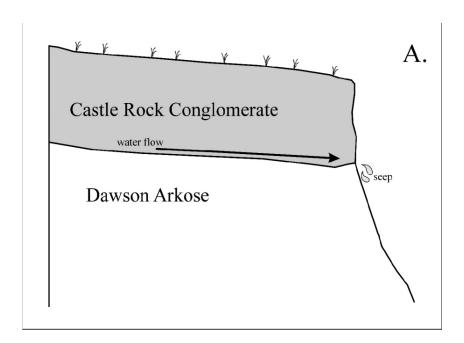


Figure 2. Location of Franktown Cave and the Palmer Divide.

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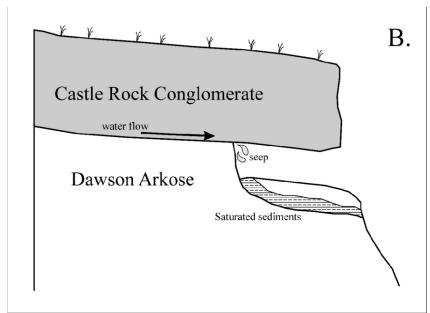


Figure 3. Formation of rockshelters at the contact between the Dawson arkose and the Castle Rock conglomerate. (A). Water from precipitation flows from the surface through joints in the silicacemented Castle Rock conglomerate and then down-slope along the contact between it and the Dawson arkose, forming seeps in valley walls where the contact is exposed. (B). Alcoves form when the calcium carbonate cement of the Dawson arkose is dissolved in these seeps, causing the formation of overhangs. The lower sediments in the resulting rockshelters are often saturated by these seeps, which can have a negative effect on the preservation of perishables.

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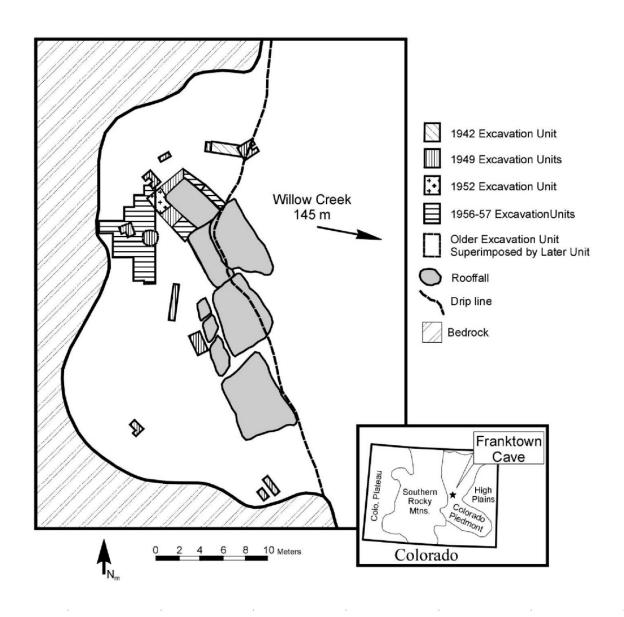


Figure 4. Site map of Franktown Cave showing history of excavations. Redrawn from Thompson (1956).

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Figure 5a. Approximate 160 degree panorama of the "Upper Shelter" in Franktown Cave. The bush at the far right is the same as the bush on the far left in Figure 5b.

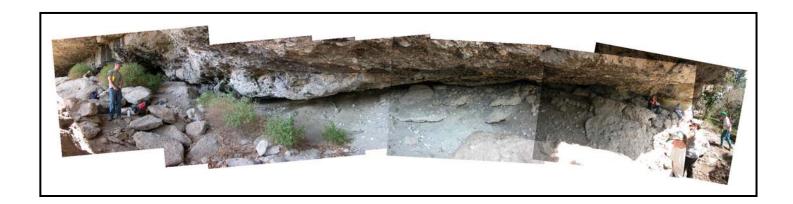


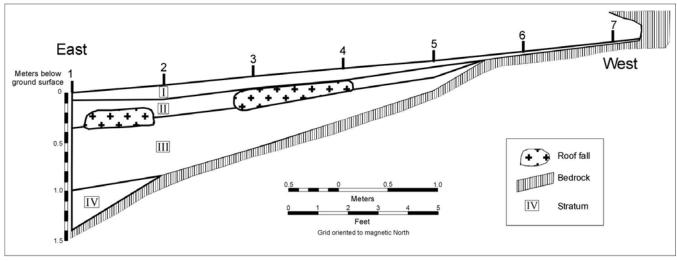
Figure 5b. Approximate 180 degree panorama of the "Lower Shelter" in Franktown Cave. The bush at the far left is the same as the bush on the far right in Figure 5a.

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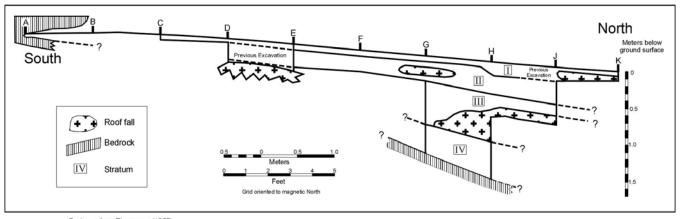
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Stratigraphic profile of line G, Thompson's Excavation Grid



Redrawn from Thompson (1957)

Stratigraphic profile of line 1, Thompson's Excavation Grid



Redrawn from Thompson (1957)

Figure 6. Representative stratigraphic profiles of sediments in Franktown Cave. Redrawn from Thompson (1957).

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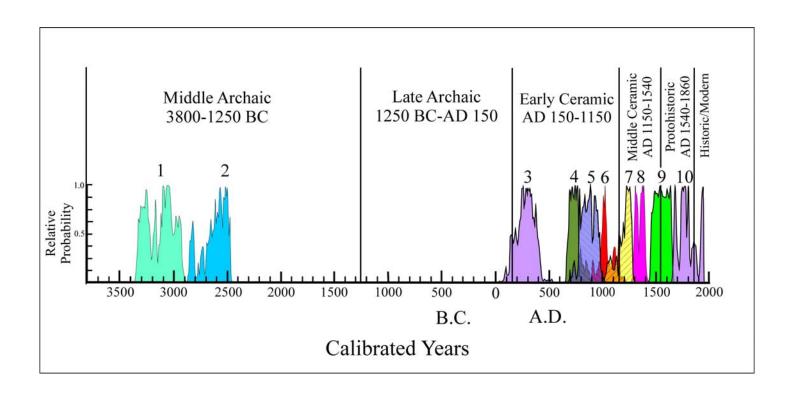


Figure 7. Summed probability distribution curves for calibrated radiocarbon dates of components 1 through 10 at Franktown Cave. All bracket dates represent the 2-sigma ranges for the summed probabilities for all component dates. Component 1 (10 AMS dates, 3350-2880 B.C.); Component 2 (two AMS dates, 2870-2470 B.C.); Component 3 (1 standard radiocarbon date, A.D. 130-420); Component 4 (three AMS dates, A.D. 660-880); Component 5 (one AMS date, A.D. 780-980); Component 6 (five AMS dates, A.D. 890-1170); Component 7 (five AMS and one standard radiocarbon date, A.D. 1035-1290); Component 8 (one AMS date, A.D. 1280-1400); Component 9 (two AMS dates, AD 1450-1650); Component 10 (one AMS date, A.D. 1660-1950). See text for descriptions of artifacts dated by AMS and context of standard radiometric dates.

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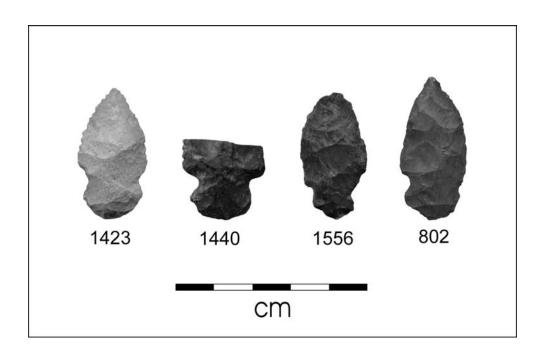


Figure 8. Early Archaic projectile points from Franktown Cave.

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Figure 9. Examples of perishable artifacts from Middle Archaic period Component 1 (3350-2880 B.C.) A-C, Sandals; D-F, coiled basket fragments; G, coiled strip of rabbit fur from a possible rabbit fur robe.

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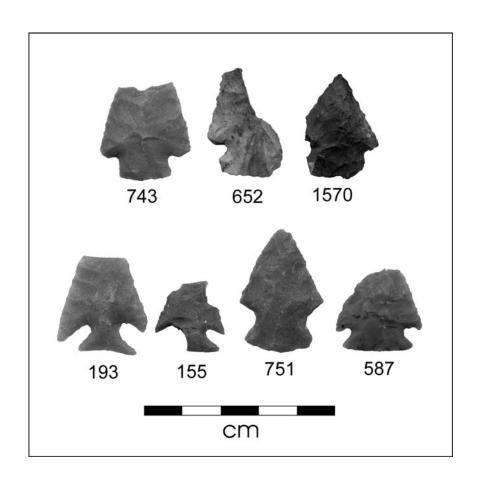


Figure 10. Late Archaic projectile points from Franktown Cave, possibly associated with Component 3 (A.D. 130-420).

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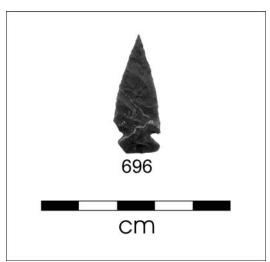


Figure 11. Artifacts from Early Ceramic period Component 4 (A.D. 670-870). (A.) Fragment of coiled basket, AMS dated to 1267 ± 31 B.P.; (B.) Small corner-notched projectile point.

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Figure 12. Reconstructed rim sherd from Early Ceramic period Component 4 (A.D. 660-880), AMS dated to 1253 ± 36 B.P. Exterior surface is on the left.

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Figure 13. Early Ceramic period reconstructed ceramic vessel from Franktown Cave. A sherd from this pot has an AMS date of 1253 ± 36 B.P., and is associated with Component 5 (A.D. 660-880).

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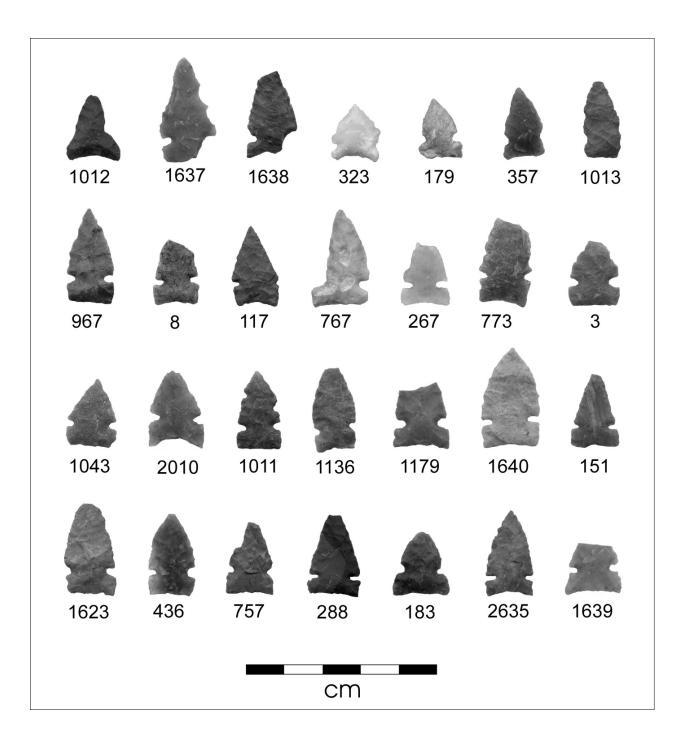


Figure 14. Small side-notched projectile points from Franktown Cave. points of this type are associated with the terminal Early Ceramic, Middle Ceramic and Protohistoric period occupations.

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Figure 15. Rim sherd associated with Middle Ceramic period Component 5 (A.D. 780-980). This sherd has an AMS date of 1164 ± 48 B.P. Exterior surface is on the left.

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Figure 16. A complete moccasin (left) and a fragment of a buffalo hide legging associated with the Terminal Early Ceramic period Component 6 (A.D. 890-1170). The moccasin is AMS dated to 996 ± 30 B.P., and the legging is AMS dated 926 ± 30 .

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Figure 17. Rim sherds associated with Middle Ceramic period Component 6 (A.D. 890-1160). The sherd at top has an AMS date of 1009 ± 36 B.P., and the bottom sherd has an AMS date of 1068 ± 49 B.P. Exterior surface is on the left.

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Figure 18. Rim sherd associated with Middle Ceramic period Component 6 (A.D. 890-1160). This sherd has an AMS date of 1020 ± 48 B.P. Exterior surface is on the left.

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Figure 19. A hoop game piece or "dreamcatcher" associated with Middle Ceramic period Component 7 (A.D. 1035-1290). Wood from the twig was dated 798 ± 30 B.P. by AMS.

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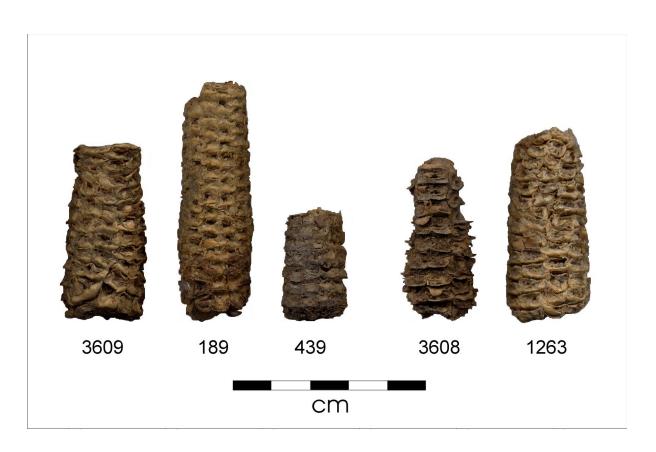


Figure 20. Five of the six corn cobs from Franktown Cave. Catalog #'s 3609, 189, 439 and 3653 (not pictured) are associated with Component 7 (A.D. 1035-1290), and 3608 and 1263 are associated with Component 9 (A.D. 1450-1650).

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Figure 21. Undated Rim sherds stylistically associated with the Middle Ceramic components at Franktown Cave. Exterior surface is on the left.

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Figure 22. Dismal River rim sherd from Component 8. This sherd has an AMS date of 643+-48, two-sigma range of AD 1280-1400.

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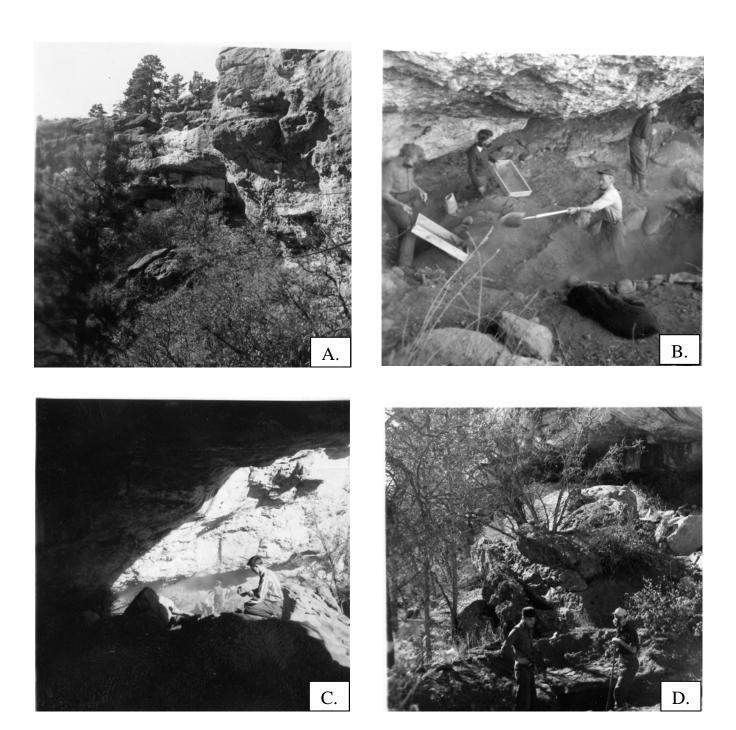


Figure 23. Photographs of the November, 1949 fieldwork at Franktown Cave. (A.) View of the shelter looking southwest. (B.) Excavation of Stratitest (ST) I. View of the site looking north. (D.) Excavation of a test unit in the midden at the front of the shelter. Looking southwest.

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Figure 24. Photographs of the 1956 fieldwork at Franktown Cave. Upper photo: View of the interior of the shelter with the crew, looking south. Part of the excavation grid (with wooden stakes) is visible on the right side of the photo. Bottom row: Demonstration of technique used to remove roof fall.

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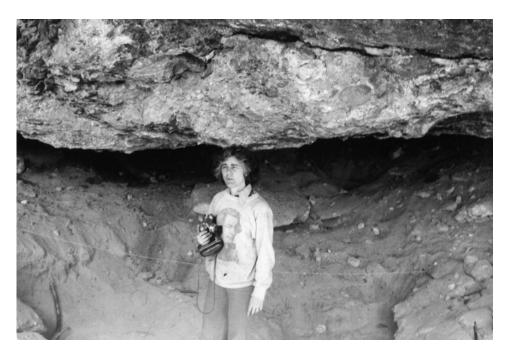


Figure 25. Photographs of the 1976 fieldwork at Franktown Cave. (A.) View of the interior of the shelter with the crew, looking south. (B.) Sarah Nelson in foreground with old excavation unit in background.

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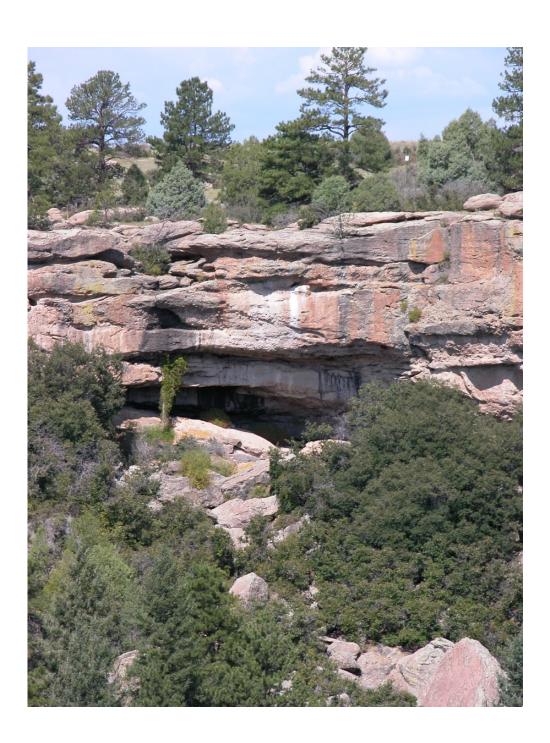


Figure 26. Photograph of the "upper shelter" of Franktown Cave looking west from across the valley of Willow Creek (2004).

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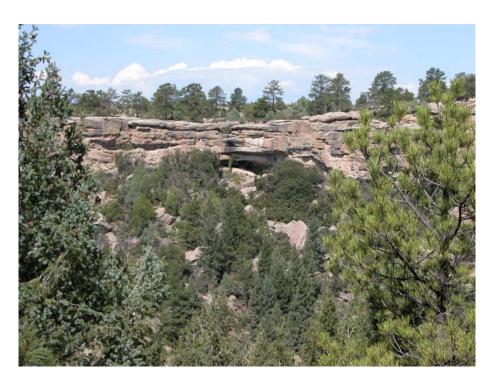




Figure 27. Top: view of the setting of Franktown Cave from the east side of the valley of Willow Creek. Bottom: View looking northeast toward the valley of Cherry Creek from the caprock directly above the site (2004).

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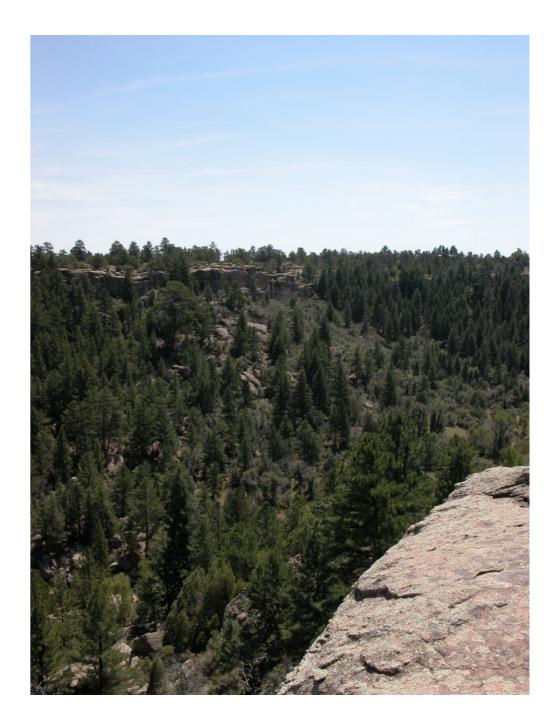


Figure 28. View looking southeast up the valley of Willow Creek from the caprock directly above the site (2004).

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Figure 29. Comparison of the 1956 crew photo in front of the "lower shelter" and the same view in 2004. Note the erosion of sediments in the foreground and to the left of the large rock that has occurred in 48 years.

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GEOGRAPHICAL DATA

Verbal Boundary Description

The boundary of the Franktown Cave site is defined by the extent of the overhang and the relatively flat area in front of the shelter, for a total of approximately .15 acres.

Boundary Justification

The site boundary is determined by the extent of the observed cultural material on the surface and all of the area under the overhang. The site boundary on the east side of the shelter extends to the shoulder of the slope where the edge drops off to the valley side.

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PHOTOGRAPH LOG

The following information is the same for all photographs.

Name of property: Franktown Cave

County and State: Douglas County, Colorado

Photographer: Kevin Gilmore Date: September 2004

Location of negative: University of Denver, Department of Anthropology

Photo

- 1 Site view of the setting of Franktown Cave from the east side of the valley of Willow Creek.
- 2 Exterior of lower shelter.
- 3 Interior of shelter; lower shelter from upper shelter.
- 4 Interior of shelter, lower shelter.

Official black and white site photographs are not included in this version of the NRHP form.