Prehistoric Cultural History

Paleoindian Period

Prior to 2007 no Paleoindian artifacts or occupation had been documented on the South Unit. However, a few Late Paleoindian sites were documented during the Anthro Mountain Burn Survey in the summer of 2007. A Cody Knife and several large lanceolate points were found at these sites. The sites are located in the upper elevation sagebrush steppe and may be similar to the upper elevation Late Paleoindian sites Pitblado (2003) documented near Gunnison, Colorado. Sites tend to occur near the edge of ridges overlooking springs. The site occurrence and distribution needs to be reevaluated at the close of the field season and conclusion of this particular survey project. Spangler (2002) notes only a few surface finds of Paleoindian artifacts in the Uinta Basin and no stratified or buried Paleoindian sites have been excavated. Spangler (2002:207) seems to suggest that there may be little difference between Early Archaic and Paleoindian manifestations in the region. "Likewise, Simms (1988) has argued that Paleoindian and Archaic Lifeways were relatively the same and differences noted in the archaeological record reflect nothing more than distinct regional adaptations." Spangler (2002:224) further notes that most Paleoindian points have been found along major tributaries of the Green River, which seems to support the hypothesis that in the Colorado Plateau these people exploited major river tributaries. Since there are no major tributaries on the South Unit, the recently discovered Paleoindian evidence seems to challenge this hypothesis. Another concern once thought to have had a role in the recovery of early artifacts is the active geologic processes at work on the South Unit. If Paleoindians entered the South Unit along any of the stream corridors, it was thought that their occupational deposits might be deeply buried and would not be discovered except under exceptional or fortuitous circumstances. Fortunately the recently discovered sites occur on ridge tops with limited deposition.

Archaic Period

Spangler (2002:228) argues that, "in the Uinta Basin region, subsistence strategies and settlement patterns remained relatively constant throughout the entire Archaic chronological sequence." This is certainly not the case in the Uinta Mountain foothills where there are significant changes in both settlement patterns and subsistence strategies between the Early and Late Archaic periods. Early Archaic occupations are marked by warm season pithouse occupations with storage pits. An array of animals were hunted using Northern Side-notch projectile points with a slight preference for medium to large game. A variety of plant resources were used, but no evidence of seed storage or consumption has been found. Perhaps after a brief hiatus people returned to the foothills. Between 4100 to 2000 years ago the people constructed slab-lined basins during very brief visits. These "dutch ovens" were used to roast a variety of tubers, plants, cactus pads, meat and later even seeds. Small, highly mobile, family groups typify foothill occupation during this period. The end of the Late Archaic is marked by a weather event and all of the occupations between 2500 to 2000 years ago in the Uintas were rockshelter occupations. In this terminal Archaic period a variety of plant and animal resources were exploited. The first evidence of seed consumption is uncovered and storage pits become important again (Johnson and Loosle 2002). Because the South Unit is an upper elevation area it may have some similarities to the Uinta Mountains and we expect it to be exploited differently through time because of climatic or cultural factors.

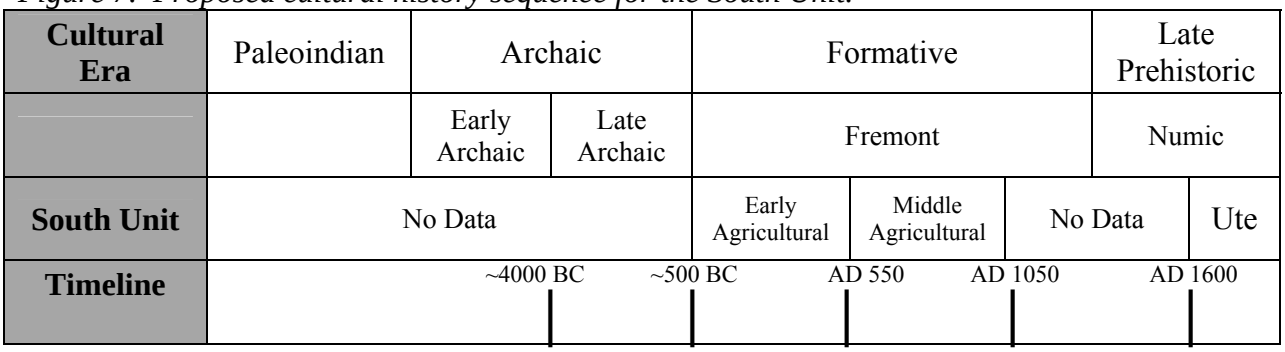
Spangler (2002:228) also quotes Reed and Metcalf's (1999) summary of northwestern Colorado to argue that the Archaic lifeway continued from the Late Paleoindian period until European trade goods and horses arrived. It is unreasonable to suggest, as Spangler does, that this continuity is relevant for the Uinta Basin. The advent of domesticates transformed nearly all aspects of people's lives during what is called the Fremont period. Even in the realm that should contain the most similarities between the Archaic and Fremont periods, hunting, there were profound changes. New technologies (the bow and arrow) were introduced which affected strategies and techniques. Fremont hunters also became logistical, focusing on large game and with stored foods could travel farther than Archaic hunters (Loosle 2005a).

In short, we expect differences in the archaeological record between the Early and Late Archaic and Fremont periods of the South Unit. "Predictably, the Archaic period in the Uinta Basin and Tavaputs Plateau region is characterized by adaptation to specific regional and subregional environments, in particular the exploitation of faunal and floral resources in preferred local ecotones" (Spangler 2002:228). Spangler's characterization is warranted because, as will be outlined later, there are significant differences between the Fremont use of upland resources of the Uinta Mountains and South Unit.

Early Archaic

"Sites with stratified Early Archaic deposits are rare in the Uinta Basin, and no chronometic data have been reported from the Tavaputs Plateau" (Spangler 2002:235). Spangler (2002:238) expects the Archaic people to have a blending of Great Basin and Southwestern traits, with more Great Basin influence because of their northern location. The Early Archaic occupations in the region are focused in the Uinta Mountains, Clay Basin and Yampa Basin in the northeast corner of the region (Spangler 2002:242-246). "Residential base camps in the upper montane and subalpine zones would have formed the loci of summer occupation with several base camps occupied sequentially through residential moves. Seasonal base camps were located within easy access to a variety of resources, and logistical trips to the house site for stockpiling of resources were probably common" (Spangler 2002:243). Severe drought conditions characterize much of the Early Archaic period, so we might expect some evidence of occupation in the upper elevations of the South Unit during this period. However, the limited amount of water during the modern era was probably greatly exacerbated during the dry Early Archaic and may have been a critical limiting factor. So it is not entirely surprising that limited evidence for this period has been documented. The paucity of evidence from the Uinta Basin seems to suggest limited overall activity in the region (Spangler 2002:244). Spangler (2002:250) places the Pinto and even Elko Series points within the Early Archaic period. However, these point types have a wide range. We (Johnson and Loosle 2002:271) argue that Pinto points were common in the Uinta Mountains 7000 to 3500 years ago, Northern Side-notches 8000 to 3500 years ago and Elko Series 3700 – 800 years ago. None of these point types are exclusive to the Early Archaic period, so the occurrence of a few Pinto, Elko and other Archaic points on the South Unit is not particularly convincing of early human occupation. Discovery and excavation of stratified sites in the South Unit with Early Archaic levels are needed. The 2007 Anthro Moutain Burn survey documented at least one Northern Side-notch suggesting that upper elevations may have also been favored by some Early Archaic hunters.

Figure 7. Proposed cultural history sequence for the South Unit.



Late Archaic

Too often in the archaeological literature authors propose phases and temporal sequences based on the most tenuous reasons. Divisions in cultural sequences should be based on definitive changes in the material record that reflect alterations in subsistence strategies or adaptive lifeways. These changes may have been influenced or precipitated by climatic changes, increased populations, new technologies, or population movements. Spangler (2002:252) falls into this conundrum when he proposes a Middle Archaic although the proposed, "Middle Archaic Period in the Uinta Basin does not represent a shift in adaptive lifeways. Rather, the Middle Archaic is delineated primarily by (1) an increase in human populations…, and (2) the appearance of distinctive McKean Complex projectile points." Spangler (2002:255) laments the amount of data from the Uinta Basin for this period, "The Middle Archaic remains poorly understood, and any temporal sequences applied to this region must be speculative." He also outlines the Middle Archaic from 3000 to 500 B.C. (Spangler 2002:255). This reasoning brings the Middle Archaic to the beginning of the Formative period, which also does not make sense. Spangler (2002:256) outlines the various cultural sequences that have been proposed for the region, with the caveat that none of them seems to work well. However, we strongly agree with two of Spangler's conclusions, none of the available sequences seems to work very well for the Uinta Basin and without additional data any cultural sequence is rather speculative.

Use of a Middle Archaic designator is not warranted with the currently available information. Instead, we propose a single Late Archaic phase that extends from ~4000 B.C. to ~500 B.C. This is similar to what we proposed for the Uinta Mountains (Johnson and Loosle 2002:13). Some significant climatic conditions occurred during this time and appear to have encouraged adaptations in the people's lifeways. Schmitt and Madsen (2005:238) note the period from 6000 - 4500 BP at Camels Back Cave was "the driest and most harsh environmental conditions to occur in the cave vicinity during its ~12,000 year depositional history." With the amelioration of climatic conditions and a return to cooler wetter conditions many locales, especially the South Unit, would have experienced enhanced productivity beneficial to humans. Aikens and Madsen (1986:157) argue that in the latter part of the Black Rock Phase (4000 B.C. – A.D. 500) "there was an apparent broadening of settlement patterns with a growing emphasis on the exploitation of upland zones." Regionally there appears to be increased emphasis in upland use after 4600 BP, which represents a change in adaptive lifeways. The first radiocarbon date from the South Unit is 4120 Cal BP and dates become common after 2800 Cal BP. After a possible hiatus, people return to the Uinta Mountains ~4600 Cal BP (Johnson and Loosle

2002:294). At Cedar Siding Shelter just southwest of the Tavaputs the first occupation begins ~4100 BP (Martin et al. 1983:95). Even at Sudden Shelter, in central Utah, after a brief hiatus people returned to the site in 4600 BP (Jennings et al. 1980:202).

The majority of Late Archaic radiocarbon dates from the Uinta Basin and South Unit come from rockshelter sites. Deluge and Thorne Shelters bear some similarities to South Unit rockshelters. However, Late Archaic sites on the periphery of the Uinta Basin (Douglas Creek, Yampa Basin, and Uinta Mountains) have much more data and may reflect a different lifeway. Evidence of residential pit structures and slab-lined basins in neighboring areas contrast sharply with the paucity of architecture during this period in the Uinta Basin and South Unit. Basin shaped pits and hearths are the only Late Archaic features identified so far on the South Unit. The preference for rockshelter excavations is partially a bias on the part of researchers. However, it is interesting that no radiocarbon dates before 4120 B.C. have come from South Unit shelters, unlike many caves in southern and western Utah. This seems to suggest the landscape was used differently, perhaps rockshelters were not occupied by previous groups, increasing populations forced the inhabitants to change their migration patterns and expand into new areas, new technologies permitted use of different resources or areas, inhabitants stayed longer in sites leaving more evidence of their stay, or climatic changes enhanced the resources availability in a locale. It is important to emphasize the South Unit rockshelters do not represent the entire seasonal round of the Late Archaic, as Aikens (1970:187) noted for Hogup Cave:

> …it is necessary that at all times the aboriginal users of Hogup Cave operated within a regional setting and that the cave was only one of a number of settlements that might have been occupied in the course of a seasonal round. The whereabouts of its sometime occupants during the portions of their economic cycles when they were not at the cave is unknown. It is important to recognize, therefore, that each of the cultural units defined represent only part of the total cultural system to which it is referable and that the units cannot by themselves be regarded as typical of the whole culture of the periods that each represents.

Excavations at some South Unit sites provide preliminary data on the Late Archaic Period. Unfortunately, some significant problems have limited the available data on Late Archaic occupations. First the most recent excavations at 42Dc1859 and 42Dc1861 on Nutters Ridge have not been completely analyzed, nor reports completed. More importantly, subsequent habitation in rockshelters often obliterated or mixed earlier occupations. We have had difficulty identifying intact early features. The few Archaic era features that have been located tend to be in the bedrock or lower sections of fill. Because of subsequent site use, these pits and hearths are isolated and rarely can be associated with use surfaces and artifacts. As a result they provide a much more restricted understanding of this particular period's lifeways and activities.

Some things can be determined from these features. Late Archaic occupations in the region reflect warm season (summer through fall) brief stays in temporary camps. Subsistence consisted of a balanced collection of plants and fauna. At 42Dc316, there appears to have been an emphasis on hunting of medium to large mammals (Stertz and Loosle 2006:9). An increased emphasis on large game appears to be a regional pattern. In the Late Archaic of the Great Basin, "for the first time these large prey constituted a primary food resource at Camels Back Cave (Schmitt and Madsen 2005:235) and at Hogup Cave there was a trend for more big game with fewer rabbits between 1250 B.C. and A.D. 400 (Aikens 1970:191). The Archaic levels at Deluge Shelter also show the importance of antelope and deer hunting during this period (Leach 1967:97).

Maize pollen has been found in nearly all South Unit Late Archaic features. Continued reoccupation and rodent activity undoubtedly contaminated some features. However, pollen from a hearth dated to 390 Cal B.C. at 42Dc316 suggests early maize exploitation. "This is the earliest evidence of maize in northeastern Utah. However this should not be entirely surprising, possible early maize (180 BC) was found in Finch Draw north of the Uintas (Leavitt 2004:14) and in the Uinta Basin Talbot and Richens (1996) found heavy reliance on maize by A.D. 250 and evidence of irrigation ditches by A.D. 350. Because so little work has been conducted in the Uinta Basin proper, it is not surprising that the best evidence for early maize is coming from non-agricultural site locations" (Stertz and Loosle 2006:7).

Evidence of cheno-am, prickly pear and grass from the Late Archaic hearth at 42Dc316 indicates seed gathering was important. To the north, in the Uinta Mountains and southwestern Wyoming seed production for consumption and storage was an important Late Archaic development (Thompson and Pastor 1995:54, Leavitt 2004, Knoll and Loosle 2006:13). Leach (1967:97) noticed more plant use, seen in the first occurrence of manos and metates at the site, in Level 5 just before the Fremont occupation of the site. However in the Great Basin seed gathering, a characteristic of the Desert Archaic lifeway, was common throughout the Archaic period. Aikens (1970:188) characterizes the Desert Archaic by stating "various indicators suggest a broadly adapted way of life based on seed gathering and diversified small and large game hunting." In fact, for the 1250 B.C. to A.D. 400 period at Hogup, "clearly evident is a major decline in utilization of wild seed foods (Aikens 1970:191). This trend however, may be a localized event resultant from changing lake levels near the site. On the Colorado Plateau wild seed use was an important activity during the Archaic period at Cowboy Cave (Jennings 1980) and Sudden Shelter (Jennings et al. 1980). The authors note fluctuations in the relative importance of seeds and varying utilization of particular species during the long sequence of occupation at these sites. Without any precedents, it is not clear what trend or pattern the grass and cheno-am processing at Late Archaic South Unit sites represents.

Formative Era

Early Agricultural Period

Talbot and Richens (2004) provide the most reasoned and appropriate Formative era culture history for northeastern Utah and will be followed in this discussion. Geib (1996:54) has proposed the term Early Agricultural Period for the interval during which agriculture was practiced, but no ceramics were produced. In northeastern Utah this period was marked by significant technological, economical, and other cultural changes. This period marks the transition from a mobile hunter-gatherer lifeway to be replaced by more sedentary life reliant on horticulture with increased elaboration of material culture and importation of exotic goods. This process appears to be occurring in the rest of the state during the same time period. "The data in hand further imply that the process of transition to a Formative strategy was incremental with the various subsistence and material traits, including houses, accumulating between the 5th century B.C. and about A.D. 500" (Janetski 1990:13). This material culture manifestation was usually called Basketmaker by early archaeologists and the term is still often used by local avocationalists and museums. "The Basketmaker nomenclature common in early reports has generally been discarded by modern researchers in the Uinta Basin region. This is due in large part because the Basketmaker terminology inherently implies cultural migration from the Southwest, arguing against the *in situ* development of Later Archaic culture suggested by this

and other reports" (Spangler 2002:306). For this same reason, we have chosen to avoid the term Basketmaker as well.

The ending date of this period is generally agreed upon and represents the time when ceramic use became widespread. In the Uinta Mountains the earliest Uinta grayware pottery dates to about A.D. 550 (Johnson and Loosle 2002:276). Spangler (2002:292) also places the incorporation of ceramics into the material cultural record at A.D. 550 in the Uinta Basin. So the fully Formative or Middle Agricultural Period begins at A.D. 550.

The beginning of the Early Agricultural period is not as definitive because the introduction of other technologies is not as uniform or well defined. Talbot and Richens (2004:110) begin this period at A.D. 1, but note a significant increase in population started around 500 B.C. The discrepancies in the material culture record possibly illustrate the gradual accumulation of new technologies to the local lifeway. Because pithouses were built during the Early and Late Archaic periods in adjacent regions, they may not be particularly representative of the introduction of a Formative lifeway as Janetski suggests. More representative of this new way of life was the introduction of the bow and arrow (particularly Rose Springs style points), maize, storage features, and even processing of seeds, particularly for northeastern Utah heavy cheno-am processing. However, because of potential Colorado Plateau or Great Basin influence seed processing may not be as indicative of a change in lifeway on the Tavaputs. It seems probable that during this early period some groups were committed horticulturalists, while other neighboring groups were mostly dependent on wild resource exploitation.

Several early maize dates have come from the periphery of the Uinta Basin and are probably reflective of the paucity of formal excavation that has been conducted at residential and village sites in the Uinta Basin proper. At Steinaker Gap Talbot and Richens (1996:82) recovered burials dated to A.D. 249 and 244. These individuals consumed a diet of at least 60 percent C4 plants, probably 50 percent of which was maize (Coltrain 1996:119-120). This demonstrates an early emphasis on maize and what we would expect in a farming tradition. Tucker (1986:241) had postulated an early Fremont occupation between A.D. 235 and 600 based on material recovered from structures at 42Un1476, the Cocklebur Wash Site. Truesdale and Hill (1990:10) start the Fremont period in Dinosaur National Monument at A.D. 100. The recent recovery of a "possible" maize fragment from a storage pit dating to 180 B.C. in Finch Draw (Leavitt 2004), north of the Uintas, suggests the prospect that even earlier evidence of maize may come from the area. Maize pollen from 42Dc316 (South Unit) that appears to date to Cal B.C. 390 (Stertz and Loosle 2006:4) reinforces this possibility. Although old wood may be a factor in the 42Dc316 date, several pre A.D. 400 maize dates from the region (Spangler 2002:300, 307) suggest that maize cultivation was widespread by at least A.D. 100. The intensive use of Cheno-am seeds is also reported from several sites between A.D. 100 and 300 in the region (Spangler 2002:289, 295) and South Unit.

The adoption of the bow and arrow in northeastern Utah also appears to have occurred well before A.D. 500. Bull Creek Rockshelter in northwestern Colorado had Rose Springs points in levels dated between 636 and 167 B.C. (Spangler 2002:299). Johnson and Loosle (2002:271) report Rose Springs points were common in the Uinta Mountains by A.D. 250. Spangler (2002:301, 305) argues bow and arrow technology appears by 50 B.C. in northeastern Utah and was widespread by A.D. 200.

Storage features were ubiquitous during the Fremont era and were an important cultural element of farming. However, a few Archaic period storage pits indicate this practice was not exclusive to farmers. "The utilization of storage facilities has significant implications for

settlement patterns and subsistence strategies" (Spangler 2002:311). This strategy implies long range planning and revisits to sites. There are not many storage features dated to this transitional period. The earliest date for storage from Nine Mile Canyon is A.D. 341 (Spangler 2002:301). North of the Uinta Mountains at Finch Draw, a number of dates from 2400 to 1800 B.P. came from storage pits (Leavitt 2004). As more data becomes available undoubtedly more early evidence of technological changes in this dramatic period will be discovered. As the examples just listed demonstrate, a number of innovations occurred sometime after 500 B.C., generally by A.D. 100 and before A.D. 550, ultimately resulting in a full-blown Formative society.

The adoption of particular technologies is also used to address another critical question in Fremont archaeology. Does the Fremont manifestation represent an *in situ* development or population migration? "The gradual accretion of horticulture, architecture and the bow and arrow to the traditional Archaic lifeway collectively implies that a transition to a Formative lifeway was an *in situ* process occurring over several centuries, perhaps involving larger populations" (Spangler 2002:278). Johnson and Loosle (2002:291-293) reached a similar conclusion using data from the Uinta Mountains that also showed an accumulation of traits through time and not any sudden replacement of multiple elements. In addition, we noted the continuity of some cultural features between the Archaic and Fremont periods. Knoll and Loosle (2006) argue local hunter – gatherer groups in a boundary situation near the Uinta Mountains adopted agriculture while maintaining some of their own unique adaptations and characteristics.

Other authors have reached a different conclusion, however. Talbot and Richens (1996:197) and Coltrain (1996:122) argue that farming groups migrated from the south into the Uinta Basin to explain the arrival of agriculture before the adoption of ceramics. This hypothesis is based primarily on the apparent sudden adoption of agriculture. They argue there is no evidence for a transition period of experimentation and growing familiarity with domesticates or their antecedents in the region. Farming is difficult in northeastern Utah and could not have been done on a casual basis (Coltrain 1996, also see Wills 1988). The Uinta Basin is at the northern extreme of maize production and agriculture has always been a tenuous proposition. The Knoll and Loosle model and discussion focused on the Uinta Mountains; sites there probably represent a separate group and they did not address the adoption of agriculture in the Uinta Basin. Whether the Uinta Basin Fremont represents an *in situ* development, migration, or combination of factors remains unresolved. Early dates from South Unit sites suggest data to help address this question might be available there.

Middle Agricultural Period

In northeastern Utah the period between A.D. 550 and 1050 is marked by a classic Fremont florescence. All aspects of an agricultural society are present in the region. These characteristics include, pithouse architecture, trough shaped metates and two handed manos, large bell-shaped storage pits, elaborate rock art, elaboration in personal ornamentation, dramatic increase in exotic goods including marine shell, abundant maize, pumpkin and even bean remains, water diversion features, and a large increase in the population (Talbot and Richens 2004:111). This period is the most studied and well documented of the prehistoric eras in the region. It is also the most well represented on the South Unit. Instead of summarizing the literature for this period, this review will address several key issues for this period as they apply to the South Unit record.

Considerable ink has been devoted to defining the Fremont (see recent review Talbot and Richens 2004:84-88). Madsen and Simms (1998: 322-323) provide the most useful definition,

when they state: "we do think that farming 'defines' the Fremont archaeological complex. It does so, however only in the sense that farming changes the behavior of everyone, farmers and foragers alike, who live within the matrix of farming communities." Janetski (2002) was probably thinking similarly when he referred to the Fremont as a "sphere of influence." The Fremont, then, are those groups associated with farming, either through actual participation in horticulture or through exchange and other social ties to farming communities (Johnson and Loosle 2002). Since farming defined the Fremont, we need to understand the yearly round of the people incorporating a mixed economy strategy. When modern inhabitants of Vernal go to the mountains during their annual fall hunting rituals, these hunting camps are not considered part of a separate cultural group living in the mountains. Just as modern people create sites where they live, work, recreate, and travel, prehistoric people were not tied to a single residential site during the entire year. Task groups would have been an important aspect of a logistical or collector strategy employed by farmers. Instead of a site specific model building approach, a more balanced landscape approach to Fremont occupation needs to be adopted. Just as was argued for the Late Archaic section earlier. Spangler (2002:335) takes the Formative era dates from the Uinta Basin and divides them into dates from Foraging/Mobility sites and those from Residential/Sedentary sites. The ratio for the dates from these two types of occupations is nearly identical during the peak of the Fremont era of A.D. 700 to 800 and stays the same through a precipitous decline around A.D. 1050 and even through the near abandonment of A.D. 1200 to 1600. This pattern strongly implies these radiocarbon dates represent the same population practicing a mixed economy. If the dates represented different populations or farmers adopting a foraging lifestyle, we would expect dates from foraging sites to increase when dates at farming sites decreased.

Madsen and Simms (1998) proposed a continuum from highly mobile hunter-gatherers to year round sedentism for the Fremont. They even go so far as to suggest that individuals or groups might "switch" their strategy yearly depending on climatic conditions and available resources. No evidence for the forager Fremont has been uncovered and few researchers accept the notion that switching could occur on an annual or even frequent basis.

Talbot and Richens (2004) suggest incorporating a southwestern model which considers strong and weak patterning as outlined by Tainter and Plog (1994) into the study of the Fremont. "The relevance of strong and weak patterns to northern Colorado Plateau/eastern Great Basin researchers as expressed in behavioral perspective (Madsen and Simms 1998; Simms 1994a, 1994b) is that they help to clarify decision-making strategies in various contexts and to see prehistory as more fluid, or less bounded" (Talbot and Richens 2004:89). Talbot and Richens (2004:89-91) argue "the entire agricultural period in the Uinta Basin would lean toward the weak side of the spectrum." They propose three groups of Fremont with different strategies: Villagers, Farmsteaders and Hunter-Gatherers. Villagers were "most residentially stable" with considerable physical investment in their settlements. Although they were not exclusively sedentary as "various task groups probably exploiting different resources within a local catchment area throughout the year, and with occasional longer distance forays for specific resources" were part of this pattern. The Villagers' strategy was most common during the Middle and perhaps Late Agricultural Periods, whereas the Farmsteaders' Strategy was the most widespread during all time periods. "The earliest and thereafter most common Fremont farming sites consisted of nuclear or extended families in small farmsteads or hamlets of one to three pithouses." This strategy was more flexible in social hierarchy and residency. "Mobile hunter-gatherers may have been seasonally resident in farmer catchment zones." They would have

formed relationships with farmers to "improve risk management" and been the most resilient of the strategies. "Traditional research interests have at times leaned toward the high visibility sites, although perhaps more so in the greater Southwest than in the Fremont region. This generalization has changed somewhat in the past two decades with cultural resource management providing greater opportunities to examine previously undersampled site types, often in undersampled regions" (Talbot and Richens 2004:89). Located between two Fremont core areas, the South Unit is an ideal area to study Fremont mobility and seasonal rounds.

A detailed review of Fremont adaptations in the Uinta Mountains found a logistical strategy was employed by the Fremont north of the Uinta Basin (Johnson and Loosle 2002). Once the farmers had gathered their annual harvest of domestics each fall they traveled into the uplands to gather key wild resources. They only stayed at an upland site location for a brief period of time to gather one or two key resources, probably for storage, before moving to another resource patch. At one site medium to large sized herbivores were processed, at another toolstone was reduced, while cheno-ams were gathered at another. The upland occupants were clearly tethered to lowland locations as evidenced by the presence of maize, ceramics and other artifacts (Loosle and Johnson 2003). Annual fall forays into the uplands to gather a few abundant reliable resources helped buffer or augment cultigens produced in the lowlands. The annual pattern mixing collection of wild and domesticate resources was so successful that it allowed these Fremont groups to persist long after the demise of the Fremont in the larger, more agricultural dependent villages in the Uinta Basin and the rest of Utah.

Because of its upland location, we hypothesized the South Unit would display the same logistical pattern as the Uinta Mountains during the Fremont period. Instead, the excavated sites to date have a markedly different pattern. 42Dc1424, the Anthro Mountain site, is an open site in sagebrush steppe near aspen groves at 8800 feet in elevation. Evidence of a prepared clay floor and storage cists suggest this was a residential site. Supporting this notion, a wide array of tools and a mix of floral and faunal resources were recovered at the site (Estes and Loosle 2004). The other sites that have been excavated are all rockshelters with brief occupations. Stays were short and the mix of cheno-ams, pinyon nuts, lagamorphs and other game all suggest limited gathering for immediate consumption. South Unit sites have the first unequivocal evidence from northeastern Utah that pinyon nuts were gathered for consumption. In at least two sites, two kinds of cheno-am seeds were gathered and processed together (Stertz and Loosle 2006, Loosle 2005b). While the Anthro Mountain site appears to represent a warm season residential site, the other sites appear to be typical forager sites. Does the South Unit occupation represent the long sought after evidence of a Fremont forager group?

The South Unit rockshelter temporary occupations could represent a highly mobile forager group. However, this may not be the best explanation. Like the Uinta Mountains, no personal ornamentation or exotic goods (e.g. shell) have been found at these sites. This suggests these were not their primary residential sites, nor were the people carrying their important personal possessions. We would expect more exotic goods and personal ornamentation with foragers who are carrying all of their possessions from residential encampment to residential encampment. The presence of maize and Uinta quartzite indicates the occupants were closely tied to the lowlands. The gathering of cheno-am and pinyon nuts suggests the rockshelter sites were occupied in the fall, like the Uinta Mountain sites, possibly after the harvest. The majority of prehistoric sites are in the eastern end of the South Unit. Adjacent to these ridges is the early historic route through Gate Canyon. Perhaps the sites represent a prehistoric travel route

between Nine Mile and the Uinta Basin. The brief stays and gathering resources for immediate consumption would both be characteristics of travelers.

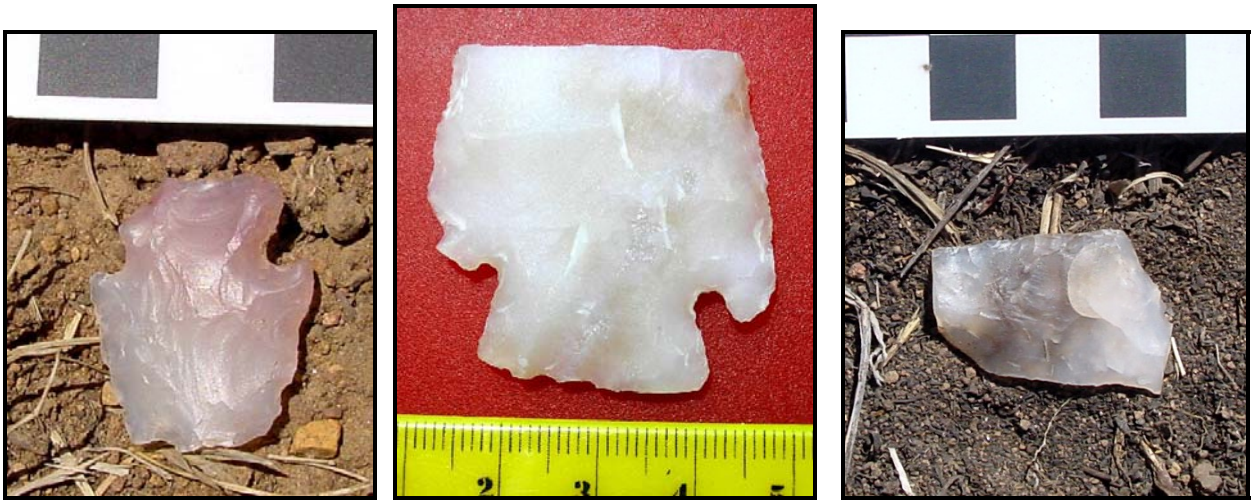
Another possibility is that people visited the area to gather medicines or to conduct ceremonies. For instance, in the High Uintas at the Chepeta Lake site, 42Dc823 (Johnson and Watkins 2002), seven hearths dating from 2140 B.C. to A.D. 1285 were uncovered. No structures were identified and very little cultural material was recovered at the site, only a few flakes and some groundstone. This site represents very short occupation by individuals processing local plants that had medicinal or ritual purposes. *Typha* (cattail), *Rhus* (poison ivy), *Sarcobatus* (greasewood) and *Ephedra* (Mormon tea) were economic species found at the site, and probably represent food or medicine that was brought from lower elevations (Johnson and Watkins 2002). However, no apparent plants with medicinal or ceremonial qualities have been recovered at South Unit sites. Ceremony remains another possibility for visits to the area. A number of unusual rock outlines or features along the South Unit's southern crest may mark vision quest locations. The spectacular view from the heights seems like an appropriate location for this type of activity. Perhaps the travelers were moving to these locations to participate in religious activities. During a vision quest, a support group (usually members of the individual's family) would accompany the person and set up camp near the vision quest location to wait for the initiate's return (Clifford Duncan, personal communication, 1996). The Anthro Mountain site is in a suitable location for such an encampment, however, it was a residential site occupied longer than would be expected for a vision quest.

Travelers moving between the Uinta Basin and Nine Mile remain a plausible explanation for the rockshelter occupations. Why would individuals be moving between the two areas? Trade or exchange of goods is one possible explanation for the movement. To the north the route of Tiger chert from quarry sites in Wyoming can be traced to Fremont village sites in the Uinta Basin (Loosle 2000). However, the products and trade routes are not so clear in the South Unit and Nine Mile Canyon. Tiger chert, Uinta quartzite (Figure 6) and Uinta grayware ceramics, all from the Uinta Basin have been found on South Unit sites. Unfortunately, there are few items that appear to be traded to Nine Mile. "The paucity of artifacts of any kind in lower Nine Mile Canyon is remarkable, given the abundance of architectural sites" (Spangler 1993b:127). "It should also be noted the general scarcity of lithic debitage in lower Nine Mile Canyon and the virtual absence of any lithics representing non-local materials may complement this hypothesis. Virtually all lithic debitage is a brownish-black chert occurring abundantly in lower Nine Mile Canyon" (Spangler 1993b:153). "The abundant collection of post-Archaic projectile points is noteworthy only in the virtual absence of trade obsidian" (Spangler 1993a:364). There is some obsidian on the South Unit, but no sourcing has been conducted to identify its source.

One possible exchange item is pottery, however, Spangler also complains about the lack of ceramics in Nine Mile. "The most significant aspect of PRRA ceramics is the notable paucity of sherds at most sites" although his data shows 15.4% (71 of 462) of the sites contained ceramics (Spangler 1993a:334). "Ceramics recovered from the PRRA are predominately plain graywares, in particular Emery Gray and Uinta Gray wares, with smaller percentages of Great Salt Lake Gray, Sevier Gray, Ivie Creek Black-on-white"(Spangler 1993a:331). Emery gray is crushed basalt tempered and is generally considered a characteristic of the San Rafael Fremont. Uinta Gray represents less than 25% of pottery in PRRA (Spangler 1993a:332). Spangler also suggests much of the various ceramic types may be locally produced. The limited petrographic work that has been done on sherds from Nine Mile shows the black tempering agent is not basalt,

which suggests visual identification may be over representing the amount of non-local ceramics. "The lack of ceramics on sites and the apparent utilization of tempering materials far removed from the region suggest that pottery was an insignificant part of the local lifeway and that the ceramic tradition manifest here was incidental to contact with areas to the north and south" (Spangler 2002:390). Spangler (2002:388) notes the few "forager camps" where ceramics have been found on the Tavaputs Plateau. Ceramics occur at a handful of sites on the South Unit. All South Unit ceramics identified so far are Uinta Gray. However, sherds are not common enough to suggest the movement of any substantial amount of pottery as trade goods between the Uinta Basin and Nine Mile.

Figure 8. Examples of non-local material found on the South Unit.



Varieties of Chalcedony found on South Unit sites.

Uinta quartzite mano.

Uinta quartzite trough metate fragment.

Figure 8 continued… Tiger chert scraper.

The architecture and rock art of Nine Mile are markedly different from the Uinta Basin, but there is little evidence these were carried north. Unfortunately, there are few other distinctive Nine Mile cultural markers. "Most artifacts are amorphous when placed within a broader Southwestern context and all but the wooden shovels have been recorded in Fremont contexts throughout Utah…Remaining artifacts exhibit little more than a culture that exploited a variety of domesticated and wild resources; few artifacts reflect social, political or economic complexity." (Spangler 1993a:364) Two artifacts noted in Nine Mile that do not occur in the Uinta Basin are stone hoes of bituminous black slate and pipe bowls of gray slate (Spangler 1993a:325). Except for the a few Emery gray vessels in the Uinta Basin and a small amount of Uinta gray ceramics in Nine Mile, there is markedly little to suggest exchange between the Uinta Basin and Nine Mile. Except for ceremony and some economic resources, there seems to be little reason for farmers to be traveling into the South Unit.

Another issue that has some bearing on South Unit Fremont activity is the Nine Mile culture area. Spangler (2002:327) has argued for a unique and specific Fremont adaptation to the deep canyons of the Tavaputs Plateau. Aspects of this adaptation include abundant dry lain masonry structures, heavy canyon occupation only in optimal environmental conditions, complex and labor intensive storage features, a near absence of local ceramic tradition, and relative absence of cultural middens. He (2002:372) argues that "architectural styles, storage strategies, settlement patterns, ceramic types, rock art styles and cultural chronologies are all significantly different" between the Uinta Basin and Nine Mile. Although much closer to Nine Mile than the sites near Arcadia in the Uinta Basin, the South Unit seems much more closely aligned to the Uinta Basin culture area. Spangler (2002:373) also points out the strong Uinta Basin cultural signature at the Turner-Look site at the far south end of the Tavaputs. The abundance of Uinta grayware, Classic Vernal style rock art near the site, and quartzite are some of the elements he highlights.

Spangler (2002:375) suggests another difference between the Tavaputs Plateau Fremont and neighboring areas may be the construction of ceremonial structures. However, large suspected community structures occur in the Uinta Basin near Arcadia and on Brush Creek. So again, the difference for the Nine Mile structures may not be in purpose, but in architectural style (dry lain masonry) and location (high buttes). Except for hearths and a few storage pits no other Fremont architecture has been documented on the South Unit.

Spangler's (1993a:288) Tavaputs Plateau Adaptation is partially derived from differences in rock art styles as described by Schaafsma (1994). "The Classic Vernal Anthropomorph is characterized by a large trapezoidal body and a simple, large, round, rectangular, or bucket-shaped head" (Schaafsma 1994:15). Arms and legs are usually simple and hands are rarely depicted, although toes and feet are sometimes exaggerated in size. Headgear occurs on about half of the figures and consists of horns, rakes, or "helmets." Earrings, earbobs and facial designs are also common, especially the weeping eye motif. Necklaces are frequent and show either a string of beads or pendants, or something that resembles a yoke or collar. Other torso decoration or depictions of kilts, sashes or breech cloth can be found (Schaafsma 1994:15). Figures holding shields or bag like objects that many interpreted as a masks or severed heads are common as well. The Northern San Rafael Style is markedly different. "With a few exceptions, an interest in the creation of pleasing visual patterns predominate in the Classic Vernal Style is gone. Instead, large and small panels are crowded and busy, with a wealth of small solidly pecked figures which may be carelessly executed and ill-defined" (Schaafsma 1994:28). Spangler (2002:400) admits there is a great deal of variability in occurrence of rock art styles. Although most panels in Nine Mile appear to be San Rafael style, there are a few that are more characteristic of Classic Vernal style. The rock art on the South Unit is not particularly helpful in assigning cultural affiliation. Only a few panels have been discovered to date, over half of which are Ute. The large anthropomorph at 42Dc1245 seems typical Classic Vernal Style (Figure 9). However, the geometric and zoomorphic figures at 42Dc2278, another South Unit rock art panel, do not fit neatly into any recognized style (Clay Johnson, personal communication, 2007).

Although physically closer to Nine Mile Canyon, South Unit sites have dominate ties to the Uintah Basin. Numerous pieces of Uinta quartzite groundstone, even metates, and lithic material from north of the Uintas (Tiger chert, Sheep Creek quartzite) illustrate this connection. South Unit Fremont pottery is all Uinta gray, including a sherd from the Anthro Mountain site that has identical paste and temper to a sherd found near Flaming Gorge Dam over 70 km away (Estes and Loosle 2004). As noted earlier, Nine Mile Canyon does not have particularly distinctive cultural attributes or material culture, except for architecture and rock art. So it is not very clear how influence from Nine Mile would manifest on South Unit. The reasons why groups from the Uinta Basin controlled or dominated the material culture record needs to be examined and defined.

Late Agricultural Period

Talbot and Richens (2004:112-113) outline a late occupation that may involve movement of people away from the interior of the Uinta Basin and a possible light population of "non-farmers coresident in the Eastern Uinta Basin." They also note a slight increase in radiocarbon dates after A.D. 1300, which follows a precipitous decline in data during the A.D. 1050 -1300 period. A post A.D. 1300 (to 1600) Fremont occupation named the Texas Creek Overlook Tradition has been proposed for Northwestern Colorado (Reed and Metcalf 1999). This late Fremont occupation appears to be on the periphery of the Uinta Basin, after the more sedentary farmers in the Basin abandoned their villages. Individuals that practiced a mixed economy combining domestics with annual forays to gather wild resources were more resilient to climatic and cultural changes and were able to persist longer. Since no evidence of the northern logistical strategy has been found on the South Unit, it is not entirely surprising that evidence of a late

formative occupation is also missing from this area. Perhaps more sedentary farmers were visiting these uplands and the areas were abandoned concurrently.

Numic Era

Rhode and Madsen (1994:3) observed that "about the only thing linguistics, prehistorians and ethnohistorians widely agree upon is the historic distribution of Numic languages." Their origin, direction of movement, length of occupation, and relationship to previous archaeological cultures has been extensively debated (see Rhode and Madsen 1994, Spangler 2002 for reviews). Many archaeologists see a distinct cultural difference between the Fremont and Numic groups, while a handful of others argue for continuity. The Ute of course feel they have lived in the region forever and have no origin myths of migrations or travel from other areas. As in the Uinta Mountains to the north (Johnson and Loosle 2002), the South Unit contains surface evidence of a Numic occupation. However, no radiocarbon dates or excavated features can be ascribed to this period. Spangler (1993a:370) noted the same problem to the south (PRRA), "with the exception of the rock art, there is comparatively little evidence of an extensive Numic occupation of the region." Spangler (2002:404) also notes few dates in the Tavaputs and Uinta Basin and wonders, "it cannot be confidently stated whether this represents a significant post-Fremont population decline, a difficulty in identifying later foraging sites or sampling bias in sites selected for chronometric analysis." He (Spangler 2002:437) also notes that the few dates which have been found tend to come from isolated components and individual artifacts, not from stratified sites which would help us understand the "cultural continuity (or lack thereof)." There is not enough information to divide the period into any categories, although some have attempted divisions based on acquisition of the horse or other technologies or rock art styles. Some Ute rock art panels exist in the South Unit (Figure 10). The most obvious panels are those with mounted figures or wearing elaborate Plains headdresses. Keyser (1975) has suggested shield-bearing warriors are late and "between about A.D. 1626 and 1775, action scenes were added to rock art depictions, including warfare and hunting scenes" (Spangler 2002:437). A biological style that is realistic and fluid is the most recent Ute style. There is no clear support of Numic occupation before the reservation period. There is however, abundant evidence of historic activity. The historical data for the reservation period is discussed in the History section while the archaeological manifestation from the most recent Ute activity in the region is discussed in the Ethnohistorical Data Section.

Figure 9. Anthropomorph at 42Dc1245

Figure 10. Ute style rock art horse near 42Dc1608