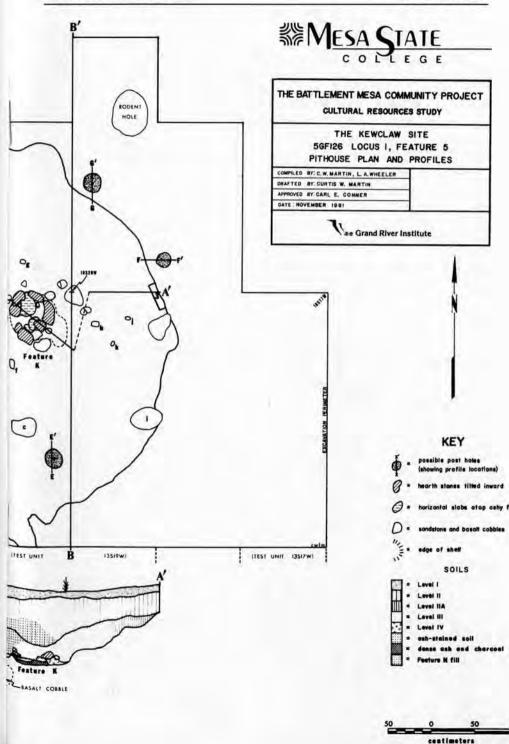
# JOURNAL OF THE WESTERN SLOPE

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# JOURNAL OF THE WESTERN SLOPE

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# ARCHAEOLOGICAL INVESTIGATIONS AT BATTLEMENT MESA

#### by Carl Conner and Danni Langdon

Carl Conner, a professional archaeologist, has worked in the field of cultural resources throughout Colorado and Eastern Utah for 14 years. He is director of the Grand River Institute, an archaeological, paleontological, historical, and environmental consulting organization established in 1978. His present research is based on Late Archaic and Post-Fremont occupation of West Central Colorado.

Danni Langdon has worked in environmental and archaeological assessment for 10 years. She has coordinated cultural resource and historical studies throughout the Colorado Plateau and has collaborated with Carl Conner on numerous reports. Her interests include paleo-environmental change and historic land use.

#### INTRODUCTION

In the spring of 1981, Grand River Institute (GRI) of Grand Junction was requested by Exxon to conduct a program of archaeological testing and evaluation of prehistoric sites within the proposed development area of the Battlement Mesa Community. (Historic sites were also recorded and evaluated, but this article is restricted to a discussion of the results of the archaeological testing.) A two-phase project was proposed. Under Phase I, final field determinations of eligibility to the National Register of Historic Places (NRHP) were to be made through a program of mapping, surface collecting, and subsurface testing. Phase II was to involve the development and execution of mitigation plans for sites determined eligible to the NRHP by the Keeper of the Register. Eighteen sites were tested under Phase I; four were included in the NRHP and were excavated under mitigation plans reviewed and accepted by the Colorado Preservation Office of the State Historical Society. The investigations were guided by a framework of research questions that were drawn from the known cultural background. Questions posed for the evaluative phase of the study focused on site integrity and temporal affiliation. Primary concerns of the mitigation phase were the development of a cultural chronology and the reconstruction of the paleoenvironmental conditions, which focused on when did people live there, and under what conditions.

#### CULTURAL BACKGROUND

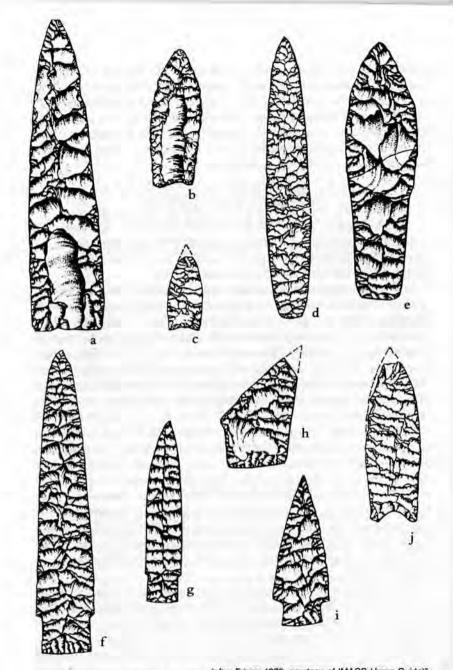
Archaeological finds indicate human occupation has occurred regionally on Battlement Mesa for nearly 13,000 years. Evidence of the Paleo-Indian Tradition, the Archaic Tradition, the Fremont (Formative) Culture, and the Historic Utes has been found.

The oldest evidence of human occupation is provided by surface finds of diagnostic artifacts – in this case, projectile points – of the Big Game Hunters, or the Paleo-Indian Tradition. Characterized by lanceolate- and leaf-shaped, bifacially flaked, fluted and unfluted projectile points, and the hunting of now-extinct Pleistocene megafauna, this Tradition existed on the short-grass plains during the late Pleistocene/early Holocene times, ca [about] 9300-6000 B.C. (Examples of projectile points from the Paleo-Indian Tradition are shown in Figure 1.)

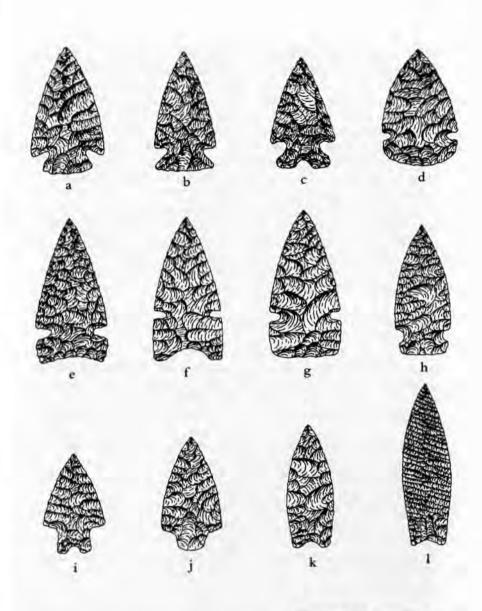
It is generally accepted that the Paleo-Indians lived a nomadic existence, traveling in small bands and relying upon big game hunting and trapping for their subsistence.<sup>1</sup> Their relationship to the Desert Archaic groups that inhabited the Great Basin during the same time is poorly understood, but it is clear from finds at Danger Cave in western Utah that they could have been living in the same areas at approximately the same time. In any case, the extinction of the megafauna at the beginning of the Holocene period marks the end of the Paleo-Indian Tradition and the inception of the Western Archaic or Desert Culture.

The Archaic groups were dependent upon the hunting of small game and the gathering of a wide variety of plant materials. Their tool kits reflect the difference in their subsistence pattern from that of the big-game hunters in that there is an abundance of milling stones, finetwilled basketry and netting, bone awls, and small- to medium-sized corner-notched projectile points. (Examples of projectile points from the Archaic Tradition are shown in Figure 2.)

The earliest studies of Archaic groups determined that the Archaic lifeway was based on simple hunting and the gathering of a wide variety



(after Frison 1978, courtesy of IMACS Users Guide)<sup>2</sup> Figure 1. Examples of PaleoIndian Tradition projectile points (12,000 - 7,500 B.P.): a, Clovis-Anzick; b, Folsom; c, Midland Unfluted; d, Agate Basin; e, Hell Gap; f, Scottsbluff I; g, Eden; h, Cody Knife; i, Scottsbluff II; j, Allen.



(courtesy of IMACS Users Guide)3

Figure 2. Examples of Archaic Tradition projectile points: a, Elko Corner-notched; b, Elko Side-notched; c, Elko Eared; d, Rocker Side-notched; e, Northern Side-notched; f, San Rafael Side-notched; g, Sudden Side-notched; h, Hawken Side-notched; i, Pinto Shouldered; j, Gypsum; k, McKean Lanceolate; l, Humboldt concave-base A.

of resources secured by small bands in seasonally determined circuitous rounds. More recent finds suggest that this explanation was based on assumptions that the biota and its distribution remained relatively stable and that human response to the environment remained fairly constant. It was also based on information from the excavation of rockshelter sites only. It has since been learned that surface and pithouse structures were present in the Great Basin and the Central Rocky Mountains from as early as 5000 B.C., and that, at various times, ecological niches in these areas provided conditions stable enough for a sedentary or semi-sedentary lifestyle to be pursued.<sup>4</sup>

Evidence of structures in open campsites comes from sites recorded near Granby, Gunnison, Kremmling, Dotsero, and De Beque. At relatively high altitudes in Colorado, what are apparently pole and mud structures were found in the Curecanti National Forest near Gunnison and the Windy Gap site near Granby. Radiocarbon dates of ca 4980-5270 B.C. and ca 1810-3590 B.C. from the Curecanti sites compare with Windy Gap's dates of ca 6500 B.C., ca 2740 B.C., and ca 2280 B.C.<sup>5</sup> The oldest pithouse was found at the Yarmony Site and dated 5180 B.C.<sup>6</sup>

Closer to Battlement Mesa are the Dotsero and Sisyphus Rockshelter sites, both of which contained structural remains possibly associated with the Late Archaic. The Colorado Department of Highways found low-walled (10-40 cm) surface structures and a burial site, 5EA128, near Dotsero. The four surface structures were made of loosely stacked basalt and were arranged in a line. Nothing was recorded within the structures; however, a burial found in an adjacent crevice yielded a radiocarbon date of ca 1180 B.C., two large cornernotched points (knives), the remains of a bird and a dog, and beads and an awl made from rabbit bones.<sup>7</sup>

The Sisyphus Rockshelter, located just north of the Colorado River and east of the town of De Beque, produced the ruins of a structural feature of Late Archaic origin dating ca 550 B.C.<sup>9</sup> Uncovered were a sandstone slab-lined oblong floor and three stone foundation walls. It is assumed that this was a habitation structure, and its presence implies at least a semi-sedentary lifestyle.

The evidence of Archaic structural finds in the region strengthens the argument for continuity between the Late Archaic and Fremont (Formative) Culture. There are many questions that remain unanswered concerning the Fremont occupation of this region, but it is generally agreed that various horticulturalist groups — possibly of diverse origins and speaking different languages but sharing similar material traits and subsistence strategies — occupied Utah and western Colorado between about A.D. 500-1300.<sup>9</sup> These people were contemporaneous with the Anasazi and adopted many of their traits, yet remained distinct in several characteristics.

In west central Colorado, the Fremont apparently retained many Archaic subsistence strategies by relying more on the gathering of wild plants and having less dependence on the domesticated ones – corn, beans, and squash. Maize horticulture was practiced throughout the area, however, as indicated by excavations in east central Utah and on Glade Park in west central Colorado. Archaeologists R.H. Lister and H.W. Dick documented the presence of "Fremont-Basketmakers" as they uncovered unbaked, molded clay figurines and evidence of corn horticulture at rock shelter sites on Glade Park.<sup>10</sup> Clifton M. Wignall obtained from the Gore Site a C-14 date of ca A.D. 870 for collapsed drylaid stone foundation walls and Rose Spring Corner-notched points.<sup>11</sup> These and other Glade Park sites are known for their splendid Fremont rock art of the Classic Sieber Canyon style.

Fremont ceramics are occasionally found in west central Colorado, often in association with Anasazi types. Turner Grey pottery was identified at site 5GF656 near De Beque. Southwest pottery types – including decorated Puebloan wares and several corrugated wares – recovered from the Mesa/Collbran area have been comparatively dated between A.D. 1000-1300;<sup>12</sup> groups I and II of the analysis were not assigned a cultural affiliation but, from the descriptions given, may very possibly be Fremont.

The demise of the Fremont Culture is roughly coincident with the drought of A.D. 1275-1300 and the influx of people from the Southwest into the Great Basin and Colorado Plateau. The newcomers are referred to as the Numic Speakers (Shoshonean) of the Uto-Aztecan language phylum.13 Linguists are fairly certain that the Numic Speakers were in southwestern Colorado by A.D. 1300; their appearance in the Fremont territory ca A.D. 1200 is indicated by finds of Shoshone pottery mixed with the upper strata of Fremont artifacts in numerous cave sites in Utah.14 Evidence of their early cultural material is scant and precludes a precise description of their lifeway. Pottery is the main chronological indicator of early Shoshonean-Ute sites; it is a crude ware made with a coarse temper of crushed rock and fired at low temperatures. A brownware ascribed to the Ute of the Uncompangre Plateau dates between A.D. 1550 and 1881.15 Also diagnostic of the Ute in western Colorado are small tri-notched points or side-notched points having a concave base, called Desert Side-notched, and narrow unnotched points, referred to as Cottonwood Triangular. Metal points

were a recent addition to the projectile types. Campsites that the Utes occupied within the past 100-150 years often have remains of small teepees or frameworks for skin coverings, and wickiups, small brushor bark-covered structures. Ute rock art adorns many canyon walls in the area.

#### CULTURAL CHRONOLOGY FOR BATTLEMENT MESA

Artifacts, features, and ancillary (C-14, floral and faunal) specimens from Battlement Mesa were analyzed to define a cultural/chronological sequence for the area and to allow inferences to be made concerning cultural continuity, intra- and inter-site relationships, site function, and technological practices of the site's occupants.

Through the analysis of temporally diagnostic artifacts (projectile points and ceramics) and C-14 data, a cultural chronology was developed for the past 3000 years – one consistent with the known cultural sequence. The earliest period of occupation at Battlement Mesa falls within the Late Archaic period. Subsequent Late Archaic, Fremont (Formative), and Protohistoric/Historic Ute occupations of the Mesa are likewise substantiated. The significant radiocarbon data, diagnostic artifacts, and features recovered during the study are summarized in Figure 3.

Twenty-two radiocarbon dates were obtained from seven of the sites tested at Battlement Mesa. These dates were converted to A.D./B.C. dates by using a conversion table based on a dendochronological calibration scale published in *American Antiquity*.<sup>16</sup> The dates were tested statistically to determine contemporaneity and then averaged according to methods published by Long and Rippeteau.<sup>17</sup>

The tested and averaged dates from site 5GF126 provided evidence that, by about 2900 years ago, the technology to construct a pithouse was well developed locally. It is posited that the group that occupied this site's pithouse used it as a base or residential camp near a vital resource – a spring which flows from a nearby gulch. Its use yearround or seasonally during the colder months could not be established, nor could the degree of seditariness of its occupants; however, a level of permanence beyond a single season's occupation is inferred from the tool manufacturing specialization and possible plant domestication (or at least manipulation) in evidence at the site.

The pithouse excavated at 5GF126 had a roughly circular floor 4 meters in diameter, a central hearth, and walls that rose abruptly 30-60 cm. The variation in wall height compensated for the slope of the ground surface which declined to the west. The walls showed

AD/BC C-14 Date Diagnostic Feature 1900-1800etal point 1700-1600-Desert S-N Cottonwood Tri 1500-1400-Brownware ceranic 1300-Uinta S-N 1200-Anasazi ceramics 5GF134 1100-1000-900-Clay on hearth 800-5GF129 700-50F134 Rose Spring C-N points 5GF128 600-Pithouse 500-5GF128 50F128 400-300-5**GF122** 200-100-5GF127 --0---100-200-300-400-500-5GF128 Slab-lined cooking pit 500-700- 5GF129 50F126 800-900-1000-5GF126 1100-1200-Pithouse 1300-1400-

Figure 3. Summary of the significant radiocarbon data, diagnostic artifacts, and features recovered during the Battlement Mesa study.

evidence of having been smoothed with water or mud glazed. Eight small, shallow holes around and within the pithouse and a single large hole at the center of the floor implied the presence of a superstructure, presumably constructed of wooden poles (see cover). The structure was probably covered with chokecherry brush (because the floor of the pithouse was covered with chokecherry pollen), then finished with a mud layer to seal it. The small size of the pithouse suggests it was the home of a nuclear family. Artifacts from the pithouse floor included a large corner-notched projectile point, three manos, a mano fragment, a metate, a metate fragment, an awl-like utilized bone, two choppers, a basalt slab, and a utilized cobble. Just above the floor were two smaller, corner-notched points, one of which is very similar to the later Rose Spring Cornernotched type. This point meets the statistical requirements to be classified as an arrowhead, which is significant because the bow and arrow were believed to have been introduced to the area at a much later time (although excavators at a cave in western Idaho reported arrow points with dart points as early as ca 1680 B.C.)<sup>18</sup>

Technological sophistication at 5GF126 is seen not only in the contemporaneous use of the bow and arrow and the atlatl (spear-thrower), but also in the grinding of a small mano into a rectangular block with convex sides. This artifact demonstrates particular skill and may indicate craft specialization. It was found among other manos of lesser workmanship and may have been acquired from the surplus production of someone within the group but outside the family that occupied the pithouse. The location of other loaf-shaped manos in the Battlement Mesa area – one at Locus II of the same site and two others in a local collection – suggests that the occupants of the pithouse were not isolated but were part of a group or band that inhabited the area.

Two small chunks of what is apparently gilsonite were found in the fill of the pithouse, and additional small fragments were recovered from the flotation samples of the pithouse hearth. The material is not native to the area and presumably was imported from northwest Colorado. Gilsonite was used by the later Fremont peoples to waterproof baskets and to haft tools.<sup>19</sup>

An overturned metate was found next to the hearth in the pithouse. A pollen sample taken from the metate contained evidence of Indian ricegrass, groundcherry, hackberry, and cactus. The ricegrass pollen was notably large, suggesting possible human manipulation of this plant (seeds and pollen enlarge over time during the domestication process). Ricegrass is well suited for such manipulation (as are goosefoot and pigweed) because it grows well in poor or disturbed ground and its large grains are easily harvested.

For a pre-agricultural sedentary group to survive in an area, the climate must be favorable and there must be an even distribution of periodic floral food resources. If food resources are not obtainable within a 10-km radius, then the group must migrate or establish temporary resource procurement camps to obtain those resources.<sup>20</sup> Within a 10-km radius of the Battlement Mesa sites is a 4000 foot variation in elevation which spans three environmental zones: the Upper Sonoran, Transitional, and Montane. Most of the land is within the Upper Sonoran zone, below 6500 feet, and supports sagebrush-grassland, pinyon-juniper, and riparian vegetation communities. The Transitional zone lies between 6500 feet and 8200 feet and contains the mountain shrub community. This grades into the Montane zone, which supports aspen-spruce and mountain meadow vegetation communities. Mountain shrub communities also can be found in isolated pockets along creeks, gullies, and springs at lower elevations. Thus, given favorable climatic conditions, the remnant terraces of the Colorado River at Battlement Mesa could have provided the basic resource requirements for territorial permanence.

It is apparent that 5GF126 functioned as a base camp. It is located in the most productive of the three environmental zones. The diverse plant communities within the zone - including the riparian to the north, the sagebrush-grasslands surrounding and on the bench below. the pinyon-juniper to the east and south, and the dense berry-producing shrub community to the east (Morrisania Mesa) - would have provided a wide range of seasonal and year-round resources. The necessity of gathering forays outside the catchment area would have been minimized for a small group. The ecological niche at Battlement Mesa which allowed territorial permanence ca 1100 B.C. was not an isolated phenomenon. There is a 25-mile stretch along the Colorado River. roughly between De Beque and New Castle, where nearly identical environmental conditions prevail, and there are other areas along the Colorado and Eagle Rivers which would have provided similar economic opportunities. Prehistoric migrations up and down these river valleys probably occurred in response to fluctuations in the climate.

Some traits of the Late Archaic occupation seem to have carried over to the succeeding Fremont (Formative) occupation at Battlement Mesa. A projectile point having a base that closely resembles the point found in the pithouse – but which is longer and narrower – was found at site 5GF128. Dated to ca A.D.  $485 \pm 65$ , this point appears to be a transitional point between that found in the pithouse at 5GF126 and the Rose Spring Corner-notched points found at 5GF134.

Pithouse construction and use also persisted into the Fremont period (Formative). The exact form of a structure built into the early Fremont (Formative) occupation of site 5GF134 (ca A.D.  $690 \pm 75$ ) could not be determined because of extensive erosional damage, but it appears to have been subrectangular. If so, this may be an indication of increased sedentariness; J.E. Rafferty<sup>21</sup> noted that a change in house shape from circular to rectangular is a corollary of a more settled lifestyle. The only artifact which could be directly assigned to the floor of the Fremont (Formative) structure was an overturned metate fragment. A pollen wash of this metate indicated that it was used exclusively for the processing of medicinal plants.

Site 5GF134 was reoccupied ca A.D. 1100, but no structures were associated with this later occupation. The Rose Spring Corner-notch point was still in use, however. Feature #21, dating A.D.  $1125 \pm 80$ , consisted of an irregularly shaped concentration of charcoal and ash overlain by a 1-3-cm-thick clay layer which appeared to have been poured over the top. Other evidence of possible ceramic fabrication comes from 5GF128 where a ball of yellowish-tan clay was found at the bottom of a basin-shaped ash-stain that dated at A.D. 485  $\pm$  65. (This period corresponds to the Western Anasazi Basketmaker III, A.D. 400-700, when a plain grayware ceramic type, Lino Gray, was being produced.) The artifact appears to have been a sphere of clay which was somewhat flattened (6.7 cm x 5.8 cm x 2.7 cm) while still in a semi-moist state; firing caused deep cracks to form in the surface.

Shared characteristics of all Late Archaic and Fremont (Formative) hearths found, regardless of temporal affiliation, were the basin shape and the occurence of basalt cobbles and fragments in the fill. In addition, about half of the hearths were associated with metates or metate fragments. However, three hearth characteristics appear to be temporally associated. First, there is a higher incidence of manos and other groundstone fragments in the fill from hearths dating to the Fremont period. An example of this occurred at 5GF128, where a hearth was used on two separate occasions. The remains of the earlier use - which had been removed by the later occupants - dated A.D. 360 and were devoid of groundstone. The fill in the hearth from subsequent use dated A.D. 610 and contained a mano. Second, there is a high number of burnt and unburnt bone fragments in the Fremont (Formative) period hearths. And, third, only in hearths dating to the Archaic are slabs present either as linings or as cooking surfaces. While none of these characteristics occurs in every hearth attributable to a specific period, none occurs outside the period(s) mentioned.

Evidence of trade during this Fremont (Formative) occupation of 5GF128 was an olivella shell bead fragment. Shell was also found at 5GF129, associated with a C-14 date of AD.  $805 \pm 90$ , and at 5GF126I, where it was found in association with a Desert Side-notched point (early Ute).

A definitively Fremont occupation of 5GF133 (Locus I, datums 4-8) was evidenced by the presence of Uinta Side-notched points (points commonly found in Uinta Fremont sites in northeast Utah and dating ca A.D. 800-1200) and associated ceramics. The ceramics were analyzed to be Kayenta Anasazi wares: Tusayan Black-on-White and Tusayan Corrugated, dating A.D. 1225-1300 and A.D. 1100-1300, respectively. The Rose Spring Corner-notch point was absent. The inference here is that a new group may have moved into the area, one which had originated in northeastern Utah but had economic ties to the Kayenta Anasazi of northern Arizona. An emphasis on biface tool production at this locus of 5GF133 and the low frequency of groundstone artifacts suggest that this Late Fremont group's purpose in being at Battlement Mesa probably centered on the hunting of large game.

Site 5GF133 (Locus I, datums 1-3, and Locus II) also had the greatest concentration of Protohistoric/Historic Ute artifacts, although several other sites contained artifactual evidence of Ute reuse of localities that had been occupied by earlier groups. In fact, Ute artifacts had the widest spatial distribution at Battlement Mesa. Only in sites occupied by the Utes were there found earlier points that had been reworked or utilized, and obsidian flakes. Ute occupation of the area was indicated by small side-notched, basal-notched points (Desert Side-notched), and in one case a small corner-notched, basal-notched type, a metal arrowhead, and Uncompahgre Brownware ceramics. Interestingly, large basalt boulders having up to three grinding surfaces were found only in direct association with diagnostic Ute artifacts. The exact dates of the Ute occupation of the region are not known, but typological comparison of diagnostic artifacts yields a temporal assignment of A.D. 1450-1880.

#### PALEOCLIMATE AND SETTLEMENT PATTERNS

Paleoenvironmental and radiocarbon data derived from the excavations at Battlement Mesa and other sites in the region were compared with similar data from sites in the Four Corners area. These comparisons were made to demonstrate that the sophisticated environmental models constructed for the Colorado Plateau may apply as well to the Battlement Mesa area and that the same environmental variables affected the latter's prehistoric occupation. This is not to say that the nuances of the environmental trends for the Plateau apply, but that the broader cycles apparently do. It is recognized, of course, that the prehistoric occupation of an area was not based exclusively on environmental variation but on social and economic factors of the cultural groups present.<sup>22</sup>

Investigations of prehistoric cultures and geoclimatic and bioclimatic conditions on the Colorado Plateau indicate that cultural and demographic change coincided with environmental fluctuations.<sup>23</sup> Using information gathered from Black Mesa, Mesa Verde, Navajo

Reservoir, and Canyon de Chelly, R.C. Euler et al. concluded that prehistoric Puebloan populations moved to higher elevations or down along major drainages during dry periods. In wetter times, these people moved into the canyonlands and other low areas, where surface water supplies are normally scant during dry times.<sup>24</sup>

Fluctuations in effective moisture vary and are cyclic. Minor fluctuations, although they have little effect on the vertical displacement of less sensitive floral communities or species such as juniper, greasewood, saltbush, and sagebrush, greatly affect both the number and variety of grasses and forbs that are available. An increase in effective moisture would have caused an expansion of the grasslands and an increase in the carrying capacity of the valleys for early man and the large game he hunted. O'Connell<sup>25</sup> stated that grass seeds were probably the most important summer food resource for prehistoric collectors and may have provided a basis for the development of semisedentary or sedentary lifestyles during extended moist periods or times of reliable summer precipitation.

Dry periods of long duration generally result in the upward vertical displacement of montane vegetation and pinyon pine forestation; in the valleys, greasewood-saltbush communities spread and encroach upon sagebrush-floral communites. Extreme shifts in vegetation show up in the pollen record. One of the best indicators of such changes is the contrasting pollen counts of pinyon and juniper: warmer, drier periods are marked by increased juniper pollen, while cooler, moister periods are represented by a higher percentage of pine pollen.<sup>26</sup>

The radiocarbon dates from Battlement Mesa indicate continual occupation of the area from the Late Archaic into the Formative periods (ca 1100 B.C. to A.D. 1100). This C-14 information was examined against existing paleo-environmental models and was compared with C-14 data obtained from sites located in the surrounding area – the Sisyphus and De Beque Rockshelters. In general, there is a tendency for the dates of occupation of the open campsites to correspond with wetter periods, while occupation of the rockshelters seems to have occurred during drier episodes. This pattern is fairly consistent throughout the 2200-year period for which we have information and may reflect a perpetual subsistence strategy that was based on seed gathering.

The seed-bearing forbs and grasses on which the prehistoric people of Battlement Mesa are thought to have depended crosscut several environmental zones (between 4500 feet and 9000 feet) in this area and are very sensitive to effective moisture. During wet periods, the availability of this narrow range of plant foods at lower elevations in the summer may have obviated seasonal migration. Drier episodes would have required the hunter-gatherer to be seasonally migratory – to exploit the higher elevations for seeds in the summer and the lower elevations (where the food gathering period is extended) in late fall to early spring. Natural shelters, such as rockshelters, would have better served a transient people during drier times. Extremely dry periods would have pushed the migratory cycle into higher elevations altogether (above 7000 feet) and may even have allowed territorial permanence there. Thus, times of greatest movement of populations probably occurred during transitional, moderately dry episodes.

A wet, cool period is recorded for the occupation of the earliestdated site at Battlement Mesa, the pithouse at 5GF126 (ca 1095 B.C.). Often referred to as the Neoglacial, this 1000-year (ca 1600-600 B.C.) period was wet enough to register significant rises in Great Basin lake levels. Neither the De Beque nor Sisyphus Rockshelter yielded evidence of occupation during this time; both had been occupied ca 1600 B.C., but there is no indication of reoccupation of either site during the Neoglacial (Figure 4).

A gap in the C-14 record of the Battlement Mesa area is coincident with an extremely dry period ca 500-200 B.C. - a time represented in the geomorphic record by the accumulation of windblown silts. After ca 550 B.C., there was a rapid decline in effective moisture, and low moisture levels continued for about 300 years. No radiocarbon dates are recorded from the Battlement Mesa sites or from the De Beque or Sisyphus Rockshelters for this temporal period. Apparently, severe drought drove the semi-sedentary aboriginal groups into high mountain valleys where they may have shared technological developments with other groups. Population pressures on the limited environmental niches may have resulted in reductions in populations and/or the adoption of increased exploitation of domestic plants. This is supported by evidence that, after 200 B.C., there is "a rapid increase in the number of dated cultural events for the southern Colorado Plateau coincident with the probable inception of maize farming."27 Clearly, the technology of pithouse construction predates the advent of corn horticulture on the Plateau. The combination of the two phenomena may have resulted in the development of the Formative Stage on the Colorado Plateau.

The Sisyphus Rockshelter yielded C-14 dates that indicate occupation between 200 B.C. and A.D. 100 - a period of 300 years which is represented regionally by a fairly stable, dry climatic episode.<sup>28</sup> There are no corresponding C-14 dates from Battlement Mesa.

Another wet, cool episode apparently occurred regionally ca A.D. 400-750. A pine pollen increase is registered for this time in sites from northwestern Colorado.<sup>29</sup> Again, open campsites were occupied at Battlement Mesa, and the Sisyphus Rockshelter was apparently abandoned. It is during this episode that a second pit structure at Battlement Mesa was occupied, at site 5GF134. The structure was built ca A.D. 690, which is coeval with the peak of this wet cycle. The presence of this second structure may demonstrate continuity between the Late Archaic and Formative periods in similarity of response to like environmental conditions.

A comparatively dry episode occurred between ca A.D. 750 and 950. Radiocarbon dates bracketing this period were obtained from Sisyphus, although none were associated with the extremely arid period ca A.D. 850-900. A brief time of increased moisture ca A.D. 800 finds a Battlement Mesa open campsite (5GF129) occupied.

A second occupation of site 5GF134 occurred during a warmer, wet episode, ca A.D. 1100. No direct evidence of a permanent shelter was found, but the purpose of reoccupying the site appears to have been the same as that of the first occupation — the hunting and gathering of wild resources. The youngest Fremont presence recorded in the Battlement Mesa study area was at 5GF133 and is comparatively dated from a Tusayan Black-on-White ceramic sherd made in the Tsegi area of northern Arizona at ca A.D. 1225-1300. This occupation occurs after a minor drought of about 50 years, and during a relatively moist episode.

Because the Ute occupation(s) of Battlement Mesa could not be pinned down temporally, our investigation of the interrelationship of paleoclimate and prehistoric site selection could not be continued. The correlation between the occupation of open camps during wetter episodes, rockshelters during moderately drier times, and abandonment of the lower elevations during the driest periods should be addressed by future studies. Sisyphus, although none was associated with the extremely arid period ca A.D. 850-900. A brief time of increased moisture ca A.D. 800 finds a Battlement Mesa open campsite (5GF129) occupied.

A second occupation of site 5GF134 occurred during a warmer, wet episode, ca A.D. 1100. No direct evidence of a permanent shelter was found, but the purpose of reoccupying the site appears to have been the same as that of the first occupation — the hunting and gathering of wild resources. The youngest Fremont presence recorded in the Battlement Mesa study area was at 5GF133 and is comparatively dated from a Tusayan Black-on-White ceramic sherd made in the Tsegi area of northern Arizona at ca A.D. 1225-1300. This occupation occurs after a minor drought of about 50 years, and during a relatively moist episode.

Because the Ute occupation(s) of Battlement Mesa could not be pinned down temporally, our investigation of the interrelationship of paleoclimate and prehistoric site selection could not be continued. The correlation between the occupation of open camps during wetter episodes, rockshelters during moderately drier times, and abandonment of the lower elevations during the driest periods should be addressed by future studies. <sup>1</sup>George C. Frison and Dennis J. Stanford, The Agate Basin Site, A Record of the PaleoIndian Occupation of the Northwestern High Plains (New York: Academic Press, 1982), p. 2.

<sup>2</sup>George C. Frison, Prehistoric Hunters of the High Plains (New York: Academic Press, 1978) pp. 180-190; Archaeological Center, Intermountain Antiquties Computer System User's Guide (Salt Lake City: University of Utah, 1988) p 440.4.

<sup>3</sup>Archaeological Center, Intermountain Antiquities Computer System User's Guide (Salt Lake City: University of Utah, 1988 p 440.1.

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<sup>10</sup>Robert H. Lister and Herbert W. Dick, "Archaeology of the Glade Park Area: A Progress report," Southwestern Lore XVII, pp. 69-93.

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<sup>17</sup>Austin Long and Bruce Rippeteau "Testing Contemporaneity and Averaging Radiocarbon Dates," *American Antiquity* XXXIX, 1974, pp. 205-215.

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<sup>20</sup>Donna Roper, "The Method and Theory of Site Catchment Analysis: A Review." In Advances in Archaeological Method and Theory, II, edited by Michael B. Schiffer. (New York: Academic Press, 1970) pp. 120-121

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# ENSTROM'S: MORE THAN JUST TOFFEE

by Shawn Lowe

Shawn Lowe graduated from Mesa State College in May of 1989 with a major in history. She plans to pursue a career in law.

Writers have kidded in articles that being an Enstrom's toffee sampler is the third "cushiest" job in Colorado, falling behind only a Coors beer taster and the presidency of a bankrupt airline.<sup>1</sup> Enstrom's World Famous Toffee prompts such praise because it is a distinctive confection that has been enjoyed by everyone from the average American to kings and queens all over the world.

As a young man, Chester K. "Chet" Enstrom, the founder of Enstrom Candies, moved to Colorado Springs from Illinois with his parents. His father died of tuberculosis in 1917, and the young Enstrom went to work to help support his family.<sup>2</sup> During the first year of high school he found employment at Gough Ice Cream Company where, for four years, he made ice cream during the summer and on weekends. At age eighteen Enstrom moved to another firm, Barthol's Confectionary, where he was in charge of the manufacture and sale of ice cream. In 1926, he attended Iowa State College for a ten day course on the art of ice cream manufacture.<sup>3</sup> During winters when business was slow in the ice cream shop, Enstrom helped in the attached candy factory. Candymaking sparked Enstrom's interest so much that he decided to make it his life's work.<sup>4</sup>

Enstrom started out washing pots and pans in the confection shop, and he began keeping a diary about the many different candies he observed being made.<sup>5</sup> Called "Chet's Little Black Book," the diary is still used at Enstrom's Candies today to help make their confections. By 1925, Enstrom was making candy as well as ice cream at Barthol's. During these Barthol years, a Greek salesman (whose name Enstrom



(Courtesy of the Enstrom family and The Daily Sentinel) The Enstrom Candy Company, next to the Velvet Ice Cream building. Photo taken about 1960.

cannot remember) gave Chet Enstrom an almond toffee recipe. The only advice provided with the recipe was to stir the toffee with a wooden paddle and to cool it on marble.<sup>6</sup>

In 1929, Enstrom and his wife Vernie moved to Grand Junction to open an ice cream plant with Harry Jones, a partner, originally from Larkspur, Colorado.<sup>7</sup> For thirty years the Jones-Enstrom Ice Cream Company produced Velvet Ice Cream on a wholesale basis for Western Slope and eastern Utah merchants. A favorite in the Velvet line was a toffee flavor made with the recipe provided by the Greek salesman.<sup>8</sup>

When Enstrom first tried the toffee, it tasted scorched, so he experimented with the recipe and the cooking process, paying special attention to temperature. Perfecting the process took twenty years. Enstrom's original intent was simply to improve the toffee to make the ice cream better, but, as he worked with it, he became more and more impressed with its potential as a quality confection.<sup>9</sup>

Enstrom began his work by creating a device that would allow exact temperature control. He set up a machine with a tube connected to a gas outlet and a nozzle to allow him to turn it on and off. The machine was a manifold connected to a cooker. Once he determined the ideal temperature, he set the valves to shut off automatically.<sup>10</sup> Enstrom discovered that heat was critical; too little caused the ingredients to separate; and too much produced a scorched taste, as has been mentioned.<sup>11</sup>

Enstrom also experimented with the ingredients of the recipe, and learned that the original recipe needed more butter. In 1957, he was appointed to the Colorado Board of Agriculture, the governing board of Colorado State University, which met in Fort Collins. During lunch breaks, Enstrom presented his toffee to food scientists at the university. Being a dairyman, he understood that real butter created a richer taste; however, he found it difficult to keep the toffee fresh because sunlight turned it rancid rapidly. The scientists advised him to refrigerate the toffee and to wrap it in dark wax paper to keep out the sunlight. Later, when the Enstroms planned the candy plant, they placed the windows specifically so that the sun would never shine directly on the toffee.<sup>12</sup> The design of the boxes in which the candy is packed is also specific to protect the freshness of the toffee.<sup>13</sup>

Another critical ingredient in the recipe was the nuts. The Enstroms eventually chose Blue Diamond Select Almonds because their uniform size allowed for consistency in cooking and created a special nutty flavor in the toffee. This ingredient was important and is the reason for the name of the confection, "almond toffee." Almonds, in addition to being cooked into the toffee, were sprinkled on top after it cooled.<sup>14</sup> Discoveries made during this tedious process of research were: if the ingredients were stirred too fast, the butter whipped out of the toffee,<sup>15</sup> and, if the almonds were added too late, they did not cook completely and their flavor did not permeate the confection.<sup>16</sup>

After perfecting the toffee-making process, the Enstroms worked to control each step precisely. "We set it to music after we got it all lined out," Enstrom said; "that way it didn't have to be timed by a stopwatch."<sup>17</sup> Next, Enstrom talked to Public Service employees, hoping to get advice on how to set up his homemade toffee machine electronically. They were impressed with his machine, and suggested he connect four different colored lightbulbs to a timer controlled by a magnetic valve. With this innovation, all four lights were on at the start of the candymaking, and each went off as its designated part of the process was complete. When the last light switched off, the toffee was ready to to be transferred to water-cooled tables.<sup>18</sup>

At this point, the Enstroms still owned the Jones-Enstrom Ice Cream Company, located on the corner of South Seventh Street and Ute Avenue in Grand Junction. Most of the experiments were done in the basement of Enstrom's home at the corner of Twelfth Street



(Courtesy of the Enstrom family and The Daily Sentinel) This set of colored lights on the manifold enabled Chet Enstrom to regulate the cooking of his toffee.

and Grand Avenue. Much of the toffee made there went into ice cream; other batches of candy became gifts to friends and relatives. One year the Enstroms made over 800 pounds of toffee for the Lions Club's Carnival.<sup>19</sup> In 1958, Harry Jones sold his share of the ice cream business to Vernie Enstrom and retired. Mrs. Enstrom worked in the laboratory, testing dairy products, until the Enstroms sold the business to the Clymer Dairy in 1960.<sup>20</sup>

The Enstroms planned to retire "and make a little candy," as Chet Enstrom was fond of saying. "We rented a little place across the alley [behind the ice cream plant] and thought we'd just make some candy during the holidays ... but it went so well that we decided that we should get an architect and design a plant and open it."<sup>21</sup>

In 1965, the ice cream building was torn down and replaced with a new, specially designed building, which has since been replaced with a new, modern facility. Once again the Enstroms were in business. In 1961, research was complete on the toffee; so Enstrom began to search for an electronic machine to replace his homemade one. The Savage Manufacturing Company of Chicago created an electronic machine designed to his specifications. This machine is still used today.<sup>22</sup>

In the early 1940s, Enstrom was appointed to the board of directors of the International Association of Ice Cream Manufacturers, an association of forty-eight directors from England, France, Canada and the United States. Enstrom served three two-year terms. This appointment provided Enstrom Candies with their first international customers. Enstrom wrote Association members letters asking them to try his toffee. It became internationally popular almost immediately. Enstrom said, "[I] didn't know when I was meeting them I would be soliciting their business."<sup>23</sup>

While Enstrom made candy, his wife ran the office and worked at the candy counter. Mrs. Enstrom said that the job was not difficult because in the early 1960s there were not many over-the-counter customers except during the Christmas rush. The Enstroms enjoyed owning a small business that supplied toffee and other confections world wide and locally.

In 1966, Enstrom was appointed to fill a vacancy in the state senate, which required frequent trips to Denver. This left Mrs. Enstrom to run the business herself. After a few months the Enstroms decided that the candy company was a little more than they wanted to own. Rather than sell the business or simply close it down, they asked their son Emil to join the company. Emil Enstrom had also been a dairyman, having worked for Beatrice Foods.<sup>24</sup>

Emil's wife, Mary, took over the office work, and Chet and Vernie Enstrom retired again. In 1970, Emil and Mary bought Enstrom Candies. In 1965 there were 750 customers from over 50 countries on the Enstrom mailing list. By 1988, the list had grown to over 53,000. Doug Simons, son-in-law of Emil and Mary Enstrom, and current president of Enstrom Candies, credits Emil and Mary's careful nurturing of the mail order business for the firm's rapid growth.<sup>25</sup> Because mail order was the primary kind of business, the Enstroms developed a system that easily accommodated the credit business.<sup>26</sup>

In 1979, Doug and Jamee Simons joined the company, providing Emil and Mary Enstrom with extra help in the growing business. Jamee, the Enstroms' daughter, was a registered nurse and Doug previously worked for Coors Porcelain. Like Emil and Mary Enstrom, neither of the Simonses knew anything about candymaking until they joined the business. Jamee Simons calls the candymaker an artist, not a cook,



(Courtesy of the Enstrom family and The Daily Sentinel) Chet Enstrom adds butter to the toffee mixture. This is a cooker that Enstrom bought in Montrose for \$80.

because making candy requires creativity. It truly is an art form that has been handed down through the generations.<sup>27</sup>

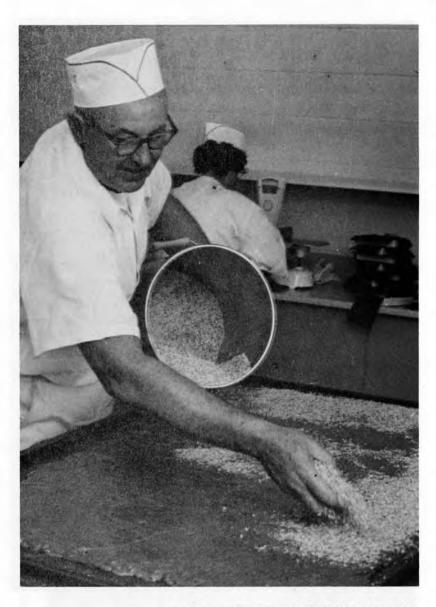


(Courtesy of the Enstrom family and The Daily Sentinei) Chet Enstrom adds almonds to the mixture.

Today, Enstrom Candies is a multi-million dollar business which the Grand Junction Chamber of Commerce has credited with helping put the city on the map. Eighty-five percent of all candy purchased



Chet and Vernie Enstrom pour the cooked toffee onto a water-cooled table.



(Courtesy of the Enstrom family and The Daily Sentinel) Chet Enstrom strews crushed almonds over the cooling toffee.

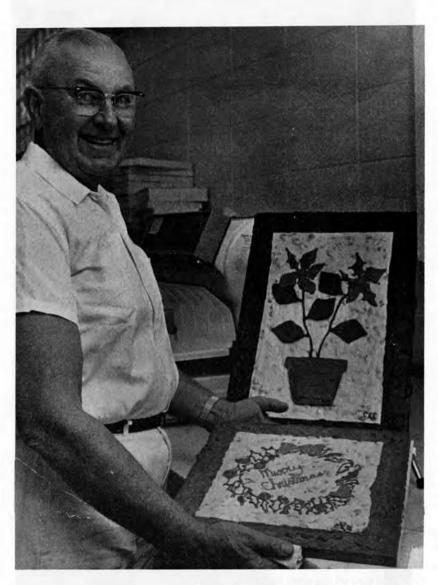
from the company has been sent outside the community via the mail order business.<sup>28</sup> The Enstroms take pride in their internationally popular product. For the one-hundredth Congress of the United States,



(Courtesy of the Enstrom family and The Daily Sentinel) Chet Enstrom flips the rapidly cooling toffee.



(Courtesy of the Enstrom Family and The Daily Sentinel) Chet Enstrom pours chocolate over the toffee before adding more almonds.



(Courtesy of the Enstrom family and The Daily Sentinel) Chet Enstrom displays two all-chocolate creations.

lobbyists distributed two-pound boxes containing a card saying "Welcome to the 100th Congress" to members of each House.<sup>29</sup>

"Enstrom's toffee was served at the Captain's table on the last voyage of the Queen Elizabeth...."<sup>30</sup> In 1988, the toffee was taken for the second time to Mount Everest by the spouse of an Enstrom employee. For Christmas of the same year, toffee went to the King and Queen of Sweden, as well as to other royalty. These and many other people have enjoyed Enstrom's toffee.<sup>31</sup>

In 1985, the Enstroms took a step in a new direction when Rick and Linda Enstrom, Emil and Mary's son and daughter-in-law, moved to Denver and opened a new retail store in the Tivoli Center. The Enstroms were unsure of how Denver would react to a chain, but according to Mary Enstrom the experiment was so successful that they plan to open more stores along the Front Range.<sup>32</sup>

Those involved in Enstrom's World Famous Toffee have explanations for the success of the company. Emil Enstrom commented: "We never planned to become world famous; we just wanted to make the best toffee anyone ever tasted, and we wanted to have fun doing it. So, I guess we've concentrated on the little things, and success has naturally followed."<sup>33</sup> Doug Simons explained: "We're not polluting, we're not tearing up the ground to get out ingredients, and we're making an outstanding product – a unique product – and backing it with the best, most personal, service possible."<sup>34</sup> 17he Denver Post, 9 February 1988. The article "Head of Defunct Airline Plays Vital Role" intends to prove that the president of Frontier Airlines really is more important than an Enstrom's toffee sampler.

<sup>2</sup>Interview with Chet and Vernie Enstrom, Grand Junction, Colorado, 5 September 1988.

<sup>3</sup>/ce Cream Review, April 1926. Copy in possession of Chet Enstrom.

<sup>4</sup>Enstrom Interview, 5 September 1988.

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7/ce Cream Manufacturer's Newsletter, 24 January 1953.

<sup>9</sup>The Daily Sentinel, 25 March 1979, Westworld, pp. 8-10. Hereafter referred to as Westworld.

<sup>9</sup>Interview with Chet and Vernie Enstrom, Grand Junction, Colorado, 27 October 1988.

<sup>10</sup>Interview with Chet and Vernie Enstrom, Grand Junction, Colorado, 2 January 1989.

<sup>11</sup>Interview with Chet and Vernie Enstrom, Grand Junction, Colorado, 10 May 1988; and Westworld.

<sup>12</sup>Enstrom Interview, 2 January 1989. <sup>13</sup>Interview with Jamee Simons,

Grand Junction, Colorado, 24 August 1988.

<sup>14</sup>Enstrom Interview, 2 January 1989; and Simons Interview, 24 August 1988. <sup>15</sup>Ibid.

16/bid.

<sup>17</sup>*Ibid.* Vernie would often sit for hours with a stopwatch and time the process while Chet made adjustments. <sup>18</sup>Enstrom Interview, 27 October 1988.

19Westworld.

<sup>20</sup>Enstrom Interview, 27 October 1988.

<sup>21</sup>Interview with Chet Enstrom, Grand Junction, Colorado, 5 August 1978. Oral History by Justine Nelson, in possession of Museum of Western Colorado.

<sup>22</sup>Enstrom Interview, 27 October 1988.

<sup>23</sup>Enstrom Interview, 2 January 1989. <sup>24</sup>Interview with Emil Enstrom, Grand

Junction, Colorado, 15 May 1988. <sup>25</sup>Ibid.

<sup>26</sup>Interview with Doug Simons, Grand Junction, Colorado, 6 December 1988.

<sup>27</sup>Simons Interview, 24 August 1988. <sup>28</sup>Advertising Brochure, Enstrom

Candies, Grand Junction, Colorado, 1983 (copy in possession of the author); and Simons Interview, 24 August 1988.

<sup>29</sup>Simons Interview, 6 December 1988.

<sup>30</sup>Rocky Mountain News, 11 December 1978.

<sup>31</sup>Simons Interview, 6 December 1988.

<sup>32</sup>Press Information Packet, Enstrom Candies, Grand Junction, Colorado (copy in possession of the author).

<sup>33</sup>Advertising Brochure, Enstrom Candies, Grand Junction, Colorado, Christmas 1986 (copy in possession of the author).

<sup>34</sup>Press Information Packet.

# LETTER TO THE EDITOR

### Dear Editor:

Re: Development of Grand Junction and the Colorado River Valley to Palisade from 1881 to 1931 – Part 2. Journal of the Western Slope, Volume 3, No. 4.

As I mentioned to you on one of Dave Fishell's recent field trips, there is an error in Mary Rait's manuscript. On page 54, a sentence in the third paragraph states, "Paradox Valley contains lead in great quantities and almost inexhaustible beds of salt and commercial potash".

She must have been thinking of uranium and vanadium when she wrote lead. To my knowledge there are no economic occurrences of lead in the Paradox Valley area. Some lead minerals have been identified in the Cashin mine northwest of Bedrock, but these are very minor. Paradox Valley does contain a very significant portion of the Uravan mineral vanadium. Also, additional drilling has indicated that the economic beds of potash occur farther to the northwest in the central part of the Paradox Basin.

I will be glad to furnish references to document the above statements. Enclosed is a copy of an article on the Paradox Basin I prepared for the Geological Society of America's Rocky Mountain Field Guide.

Sincerely,

Bill Clementh

William L. Chenoweth

EDITOR'S NOTE: Readers wishing to read the article mentioned above, see: William A. Chenoweth, "Paradox Valley, Colorado: A Collapsed Salt Anticline," in *Centennial Field Guide: Rocky Mountain Section of the Geological Society of America*, edited by Stanley S. Beus, II, 339-342. Boulder, CO: Geological Society of America at Boulder.

# ARCHAEOLOGICAL INVESTIGATIONS AT BATTLEMENT MESA

#### by Carl Conner and Danni Langdon

Carl Conner, a professional archaeologist, has worked in the field of cultural resources throughout Colorado and Eastern Utah for 14 years. He is director of the Grand River Institute, an archaeological, paleontological, historical, and environmental consulting organization established in 1978. His present research is based on Late Archaic and Post-Fremont occupation of West Central Colorado.

Danni Langdon has worked in environmental and archaeological assessment for 10 years. She has coordinated cultural resource and historical studies throughout the Colorado Plateau and has collaborated with Carl Conner on numerous reports. Her interests include paleo-environmental change and historic land use.

#### INTRODUCTION

In the spring of 1981, Grand River Institute (GRI) of Grand Junction was requested by Exxon to conduct a program of archaeological testing and evaluation of prehistoric sites within the proposed development area of the Battlement Mesa Community. (Historic sites were also recorded and evaluated, but this article is restricted to a discussion of the results of the archaeological testing.) A two-phase project was proposed. Under Phase I, final field determinations of eligibility to the National Register of Historic Places (NRHP) were to be made through a program of mapping, surface collecting, and subsurface testing. Phase II was to involve the development and execution of mitigation plans for sites determined eligible to the NRHP by the Keeper of the Register. Eighteen sites were tested under Phase I; four were included in the NRHP and were excavated under mitigation plans reviewed and accepted by the Colorado Preservation Office of the State Historical Society. The investigations were guided by a framework of research questions that were drawn from the known cultural background. Questions posed for the evaluative phase of the study focused on site integrity and temporal affiliation. Primary concerns of the mitigation phase were the development of a cultural chronology and the reconstruction of the paleoenvironmental conditions, which focused on when did people live there, and under what conditions.

#### CULTURAL BACKGROUND

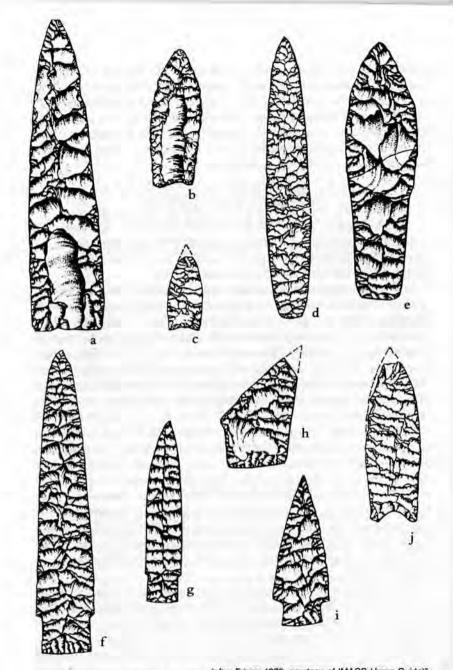
Archaeological finds indicate human occupation has occurred regionally on Battlement Mesa for nearly 13,000 years. Evidence of the Paleo-Indian Tradition, the Archaic Tradition, the Fremont (Formative) Culture, and the Historic Utes has been found.

The oldest evidence of human occupation is provided by surface finds of diagnostic artifacts – in this case, projectile points – of the Big Game Hunters, or the Paleo-Indian Tradition. Characterized by lanceolate- and leaf-shaped, bifacially flaked, fluted and unfluted projectile points, and the hunting of now-extinct Pleistocene megafauna, this Tradition existed on the short-grass plains during the late Pleistocene/early Holocene times, ca [about] 9300-6000 B.C. (Examples of projectile points from the Paleo-Indian Tradition are shown in Figure 1.)

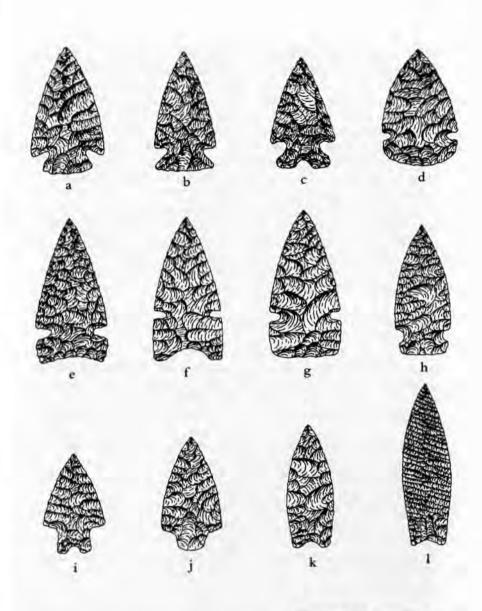
It is generally accepted that the Paleo-Indians lived a nomadic existence, traveling in small bands and relying upon big game hunting and trapping for their subsistence.<sup>1</sup> Their relationship to the Desert Archaic groups that inhabited the Great Basin during the same time is poorly understood, but it is clear from finds at Danger Cave in western Utah that they could have been living in the same areas at approximately the same time. In any case, the extinction of the megafauna at the beginning of the Holocene period marks the end of the Paleo-Indian Tradition and the inception of the Western Archaic or Desert Culture.

The Archaic groups were dependent upon the hunting of small game and the gathering of a wide variety of plant materials. Their tool kits reflect the difference in their subsistence pattern from that of the big-game hunters in that there is an abundance of milling stones, finetwilled basketry and netting, bone awls, and small- to medium-sized corner-notched projectile points. (Examples of projectile points from the Archaic Tradition are shown in Figure 2.)

The earliest studies of Archaic groups determined that the Archaic lifeway was based on simple hunting and the gathering of a wide variety



(after Frison 1978, courtesy of IMACS Users Guide)<sup>2</sup> Figure 1. Examples of PaleoIndian Tradition projectile points (12,000 - 7,500 B.P.): a, Clovis-Anzick; b, Folsom; c, Midland Unfluted; d, Agate Basin; e, Hell Gap; f, Scottsbluff I; g, Eden; h, Cody Knife; i, Scottsbluff II; j, Allen.



(courtesy of IMACS Users Guide)3

Figure 2. Examples of Archaic Tradition projectile points: a, Elko Corner-notched; b, Elko Side-notched; c, Elko Eared; d, Rocker Side-notched; e, Northern Side-notched; f, San Rafael Side-notched; g, Sudden Side-notched; h, Hawken Side-notched; i, Pinto Shouldered; j, Gypsum; k, McKean Lanceolate; l, Humboldt concave-base A.

of resources secured by small bands in seasonally determined circuitous rounds. More recent finds suggest that this explanation was based on assumptions that the biota and its distribution remained relatively stable and that human response to the environment remained fairly constant. It was also based on information from the excavation of rockshelter sites only. It has since been learned that surface and pithouse structures were present in the Great Basin and the Central Rocky Mountains from as early as 5000 B.C., and that, at various times, ecological niches in these areas provided conditions stable enough for a sedentary or semi-sedentary lifestyle to be pursued.<sup>4</sup>

Evidence of structures in open campsites comes from sites recorded near Granby, Gunnison, Kremmling, Dotsero, and De Beque. At relatively high altitudes in Colorado, what are apparently pole and mud structures were found in the Curecanti National Forest near Gunnison and the Windy Gap site near Granby. Radiocarbon dates of ca 4980-5270 B.C. and ca 1810-3590 B.C. from the Curecanti sites compare with Windy Gap's dates of ca 6500 B.C., ca 2740 B.C., and ca 2280 B.C.<sup>5</sup> The oldest pithouse was found at the Yarmony Site and dated 5180 B.C.<sup>6</sup>

Closer to Battlement Mesa are the Dotsero and Sisyphus Rockshelter sites, both of which contained structural remains possibly associated with the Late Archaic. The Colorado Department of Highways found low-walled (10-40 cm) surface structures and a burial site, 5EA128, near Dotsero. The four surface structures were made of loosely stacked basalt and were arranged in a line. Nothing was recorded within the structures; however, a burial found in an adjacent crevice yielded a radiocarbon date of ca 1180 B.C., two large cornernotched points (knives), the remains of a bird and a dog, and beads and an awl made from rabbit bones.<sup>7</sup>

The Sisyphus Rockshelter, located just north of the Colorado River and east of the town of De Beque, produced the ruins of a structural feature of Late Archaic origin dating ca 550 B.C.<sup>9</sup> Uncovered were a sandstone slab-lined oblong floor and three stone foundation walls. It is assumed that this was a habitation structure, and its presence implies at least a semi-sedentary lifestyle.

The evidence of Archaic structural finds in the region strengthens the argument for continuity between the Late Archaic and Fremont (Formative) Culture. There are many questions that remain unanswered concerning the Fremont occupation of this region, but it is generally agreed that various horticulturalist groups — possibly of diverse origins and speaking different languages but sharing similar material traits and subsistence strategies — occupied Utah and western Colorado between about A.D. 500-1300.<sup>9</sup> These people were contemporaneous with the Anasazi and adopted many of their traits, yet remained distinct in several characteristics.

In west central Colorado, the Fremont apparently retained many Archaic subsistence strategies by relying more on the gathering of wild plants and having less dependence on the domesticated ones – corn, beans, and squash. Maize horticulture was practiced throughout the area, however, as indicated by excavations in east central Utah and on Glade Park in west central Colorado. Archaeologists R.H. Lister and H.W. Dick documented the presence of "Fremont-Basketmakers" as they uncovered unbaked, molded clay figurines and evidence of corn horticulture at rock shelter sites on Glade Park.<sup>10</sup> Clifton M. Wignall obtained from the Gore Site a C-14 date of ca A.D. 870 for collapsed drylaid stone foundation walls and Rose Spring Corner-notched points.<sup>11</sup> These and other Glade Park sites are known for their splendid Fremont rock art of the Classic Sieber Canyon style.

Fremont ceramics are occasionally found in west central Colorado, often in association with Anasazi types. Turner Grey pottery was identified at site 5GF656 near De Beque. Southwest pottery types – including decorated Puebloan wares and several corrugated wares – recovered from the Mesa/Collbran area have been comparatively dated between A.D. 1000-1300;<sup>12</sup> groups I and II of the analysis were not assigned a cultural affiliation but, from the descriptions given, may very possibly be Fremont.

The demise of the Fremont Culture is roughly coincident with the drought of A.D. 1275-1300 and the influx of people from the Southwest into the Great Basin and Colorado Plateau. The newcomers are referred to as the Numic Speakers (Shoshonean) of the Uto-Aztecan language phylum.13 Linguists are fairly certain that the Numic Speakers were in southwestern Colorado by A.D. 1300; their appearance in the Fremont territory ca A.D. 1200 is indicated by finds of Shoshone pottery mixed with the upper strata of Fremont artifacts in numerous cave sites in Utah.14 Evidence of their early cultural material is scant and precludes a precise description of their lifeway. Pottery is the main chronological indicator of early Shoshonean-Ute sites; it is a crude ware made with a coarse temper of crushed rock and fired at low temperatures. A brownware ascribed to the Ute of the Uncompangre Plateau dates between A.D. 1550 and 1881.15 Also diagnostic of the Ute in western Colorado are small tri-notched points or side-notched points having a concave base, called Desert Side-notched, and narrow unnotched points, referred to as Cottonwood Triangular. Metal points

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