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A Prehistoric Bighorn Sheep Drive Complex, Clan Alpine Mountains, Central Nevada

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OVER the past decade a variety of previously unknown upland prehistoric hunting complexes and habitation areas have been documented in the Great Basin. These discoveries have greatly expanded notions of aboriginal land-use patterns, forcing some re-assessment of the utility of regional ethnographic models in characterizing earlier populations. In essence, some of the most extreme environmental zones in the Great Basin, heretofore dismissed as the territories of itinerant hunters, are manifesting surprising levels of archaeological complexity and variability. Given its recent documentation, it would be presumptuous to suggest that this variability has been fully identified, much less explained. Perhaps not unexpected, therefore, is the discovery of a unique hunting feature complex, the Mt. Augusta site (26CH1383), in the higher reaches of the Clan Alpine Mountains of central Nevada. Differing from the rock walls and blinds more commonly reported, the Mt. Augusta site consists of an expansive array of rock cairns and associated flaked stone tool scatter.

This paper summarizes the results of an initial field program at the Mt. Augusta site and an adjacent midden deposit, site 26CH369. Chronological and functional inferences are offered which suggest that the former represents a bighorn sheep drive facility of some antiquity. The paper concludes with a more detailed discussion of relevant ethnographic and archaeological analogs, focusing on the possibility that the facility may have incorporated the use of nets to procure bighorn.

NATURAL AND CULTURAL SETTING

The study area is located on the southwest margin of Cherry Valley, an upland basin (2,135-2,590 m.) in the Clan Alpine Mountains (Fig. 1). The Clan Alpine Mountains trend north from their southern terminus near Westgate on U.S. Highway 50 in Churchill County and eventually intersect the New Pass and Augusta mountains to the north. They are bounded to the east by Edwards Creek Valley and to the west by Dixie Valley. The western margin of the range, including Cherry Valley, is underlain by Tertiary volcanic materials uplifted by recent block faulting. Cherry Valley is a relatively restricted basin (5 km.^{2}) fronting the west scarp of Mt. Augusta, which rises to an elevation of 3,038 m. Except for several isolated stands of aspen, the basin is virtually treeless, dominated by sagebrush and wet meadows. Pinyon-Juniper Woodland predominates on the steeper slopes of the Clan Alpine Mountains, but in a belt below Cherry Valley. The valley is relatively well-watered by numerous springs and several perennial creeks. Average mean precipitation is in excess of 35 cm.; expansive snow fields persist into summer on the higher, north-facing slopes.

The Mt. Augusta site is located on a relatively flat alluvial outwash fan at the mouth of a canyon that drains the west side of Mt. Augusta. A tributary of Cherry Creek flows through this canyon, exiting onto the outwash fan where down-cutting has created a steep-

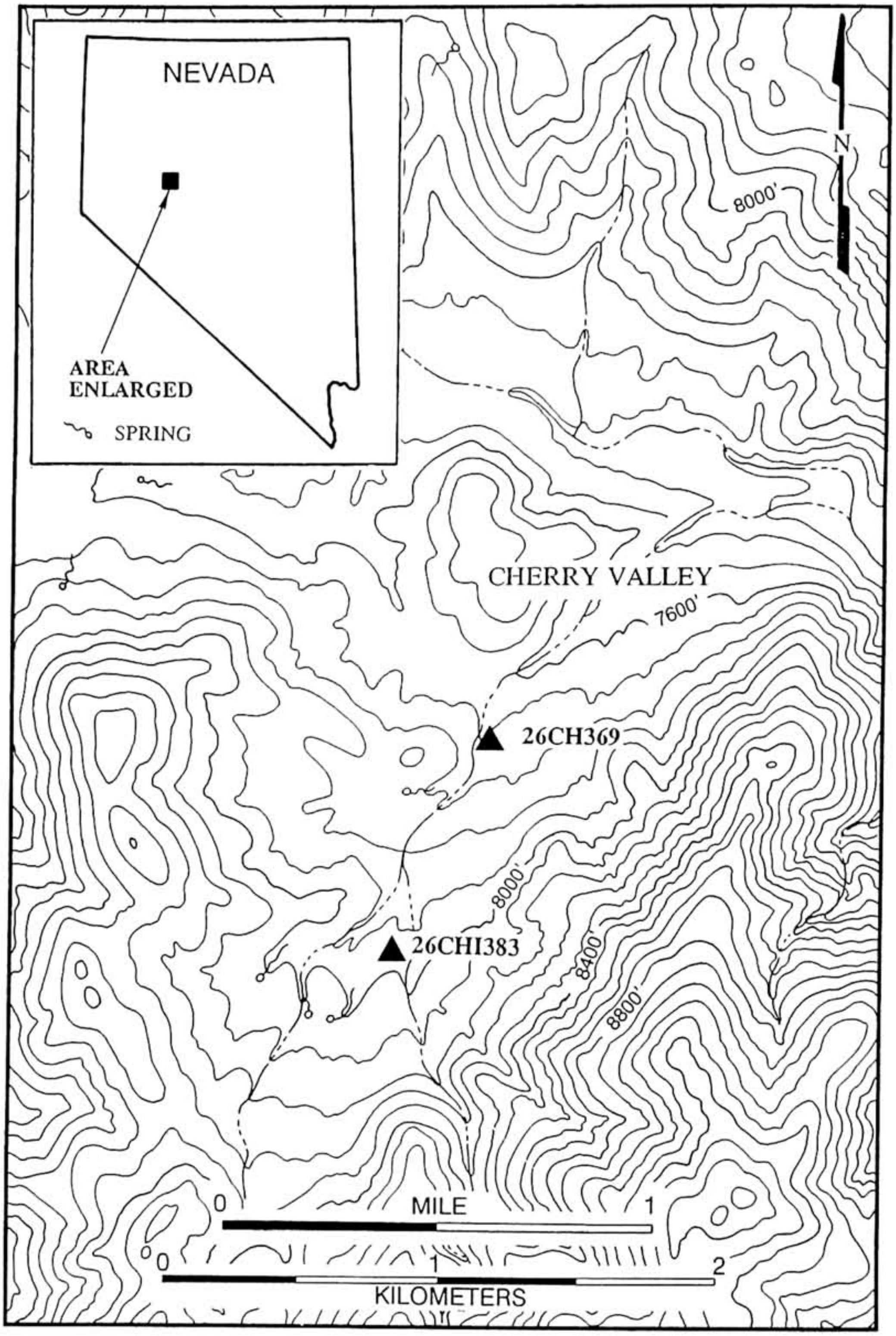

Fig. 1. Location of the Mt. Augusta (26CH1383) and 26CH369 sites.

sided (5-8 m.) drainage bordering the east margin of the site (Figs. 2 and 3). The outwash fan, consisting of andesitic and rhyolitic rock debris capped with more recently deposited sands and silts, rises gently from northwest to southeast. As with the rest of Cherry Valley, vegetation is predominately sagebrush (both big [*Artemisia tridentata*] and dwarf [*A. arbuscula*]), with lesser amounts of snowberry (*Symphoricarpos* sp.), the latter confined mostly to the area of the prehistoric rock features. Despite intensive cattle grazing, a luxuriant cover of grasses and wildflowers blankets the site in spring and early summer.

The Clan Alpine Mountains are situated in territory traditionally occupied by the Northern Paiute (Steward 1938). Previous archaeological research in upland areas of the Clan Alpine Mountains has been limited to surveys of ridges on and adjacent to Mt. Augusta and bottomlands within Cherry Valley (McGuire 1988). Settlement activity, in the form of a variety of flaked stone concentrations, cultural deposits, and feature complexes, appears to have been wholly confined to Cherry Valley. With the exception of several isolated rock features and tools, high-altitude zones (greater than 2,600 m.) evince little prehistoric activity. This settlement dichotomy perhaps owes much to the unique environmental characteristics of the valley, i.e., protected bottomlands and well-watered meadows fronting steep-sided scarps. This constellation of water, forage, and cover may have sustained a relatively large resident population of desert bighorn sheep (*Ovis canadensis*) and, as a consequence, increased aboriginal use.[1]

THE MT. AUGUSTA SITE

The Mt. Augusta site consists of 125 rock cairns dispersed across the 500-meter length of the outwash feature (Fig. 2). As a group, these occupy a narrow strip of the outwash adjacent to the canyon entrance, widening to 150 m. in the northwest site area. They occur as amorphous clusters, distinct linear arrays, and in seemingly isolated contexts. A low-density flaked stone tool and debitage scatter is associated with the features. Projectile points and bifaces, as well as formed and casual flake tools, were observed throughout the site, but debitage was more discontinuous, several concentrations occurring in the northwest area.

The rock features can be generally characterized as circular aggregations of locally available andesite cobbles, although dense accumulations of sagebrush and snowberry on many cairns precludes more detailed morphological characterization.[2] This limitation aside, the features range from one to four meters in diameter, although most are between two and three meters. They generally do not exceed a height of 30 to 50 cm.; however, alluviation and other pedologic processes have acted to obscure their original height. This is apparent in a cross-sectional view of an excavated feature (Fig. 4), in which a significant portion of the rock has been overwhelmed by "A" Horizon soil development.

Several aspects of feature configuration and structure are noteworthy and provide a basis for behavioral inferences enumerated elsewhere in this paper. First, as a group they are comprised of clusters and arrays generally conforming to the northwest-southeast topographic orientation of adjacent drainages and the elevated outwash fan. Second, a number of arrays exhibit a surprising degree of uniformity in feature spacing, generally ranging between 10 and 15 meters (e.g., note features adjacent to the northern portion of dirt road on Fig. 2; see also Fig. 5). Third, rock forming some of the features appears to have been purposefully placed around a central axis that either lacks rock material or contains reduced numbers of cobbles (Fig. 6). The effect is suggestive of a post-hole and, indeed, in the aforementioned excavated feature, this zone of cleared rock extended well below the surface (Fig. 7). The implications of this,

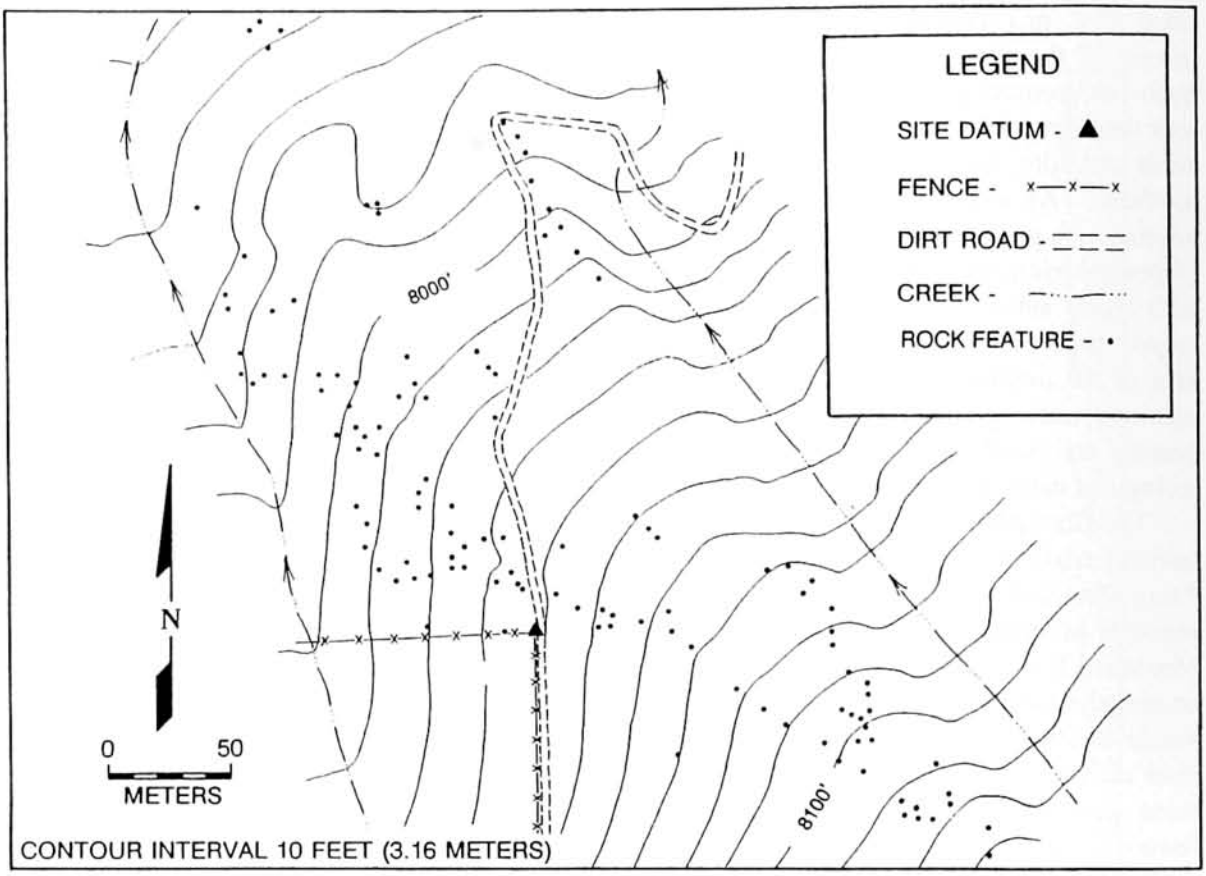

Fig. 2. Map of the Mt. Augusta site. A tributary of Cherry Creek flanks the east side of the site.

however, are tempered by the fact that only a small number of features clearly manifest this structure, and that no organic residues, staining, or other direct evidence of a post-hole were documented.

SITE 26CH369

Approximately 500 m. further north of the Mt. Augusta site along the same tributary is site 26CH369, a substantial cultural deposit situated on the low, first terrace of the creek (Fig. 1). Except for a small stand of aspen (*Populus tremuloides*) immediately north of the site and a stream-side fringe of willow (*Salix* sp.), vegetation is dominated by sagebrush. The tributary has been subject to catastrophic flooding, indicated by a cap of waterborne rock debris on the terrace. The stream is actively eroding cultural deposits forming the terrace, which extend more than a meter below the surface and contain a rich assemblage of flaked stone and artiodactyl bone. Dateable materials recovered from eroded terrace slump and from several column samples excavated into the terrace sidewall include an Elko series projectile point and bone suitable for radiocarbon assay. An uncorrected collagen date of 3,350 ± 90 years (Beta-32393) was obtained on a composite sample incorporating most of the bone recovered from the site.

DATING

The establishment of adequate chronometric controls on what amounts to 125 discrete rock concentrations is a daunting task. Further, the question of historic versus aboriginal design

Fig. 3. View of the Mt. Augusta site looking southeast. Vehicles are located in the north-central site area.

cannot be dismissed out of hand. Resolution of both issues is dependant primarily on a variety of contextual observations, some of which are more persuasive than others, but in their totality argue for a relatively ancient aboriginal construction.

With regard to a putative historic construction, there is some evidence for turn-of-the-century occupation of Cherry Valley, including earth works associated with stream diversions and irrigation. None of this activity is evident on or adjacent to the site and, with the exception of several fragments of rusted metal and a single tobacco can, no historic artifactual debris was observed at the site. This evidence in itself, however, does not dispel the possibility that the features represent an attempt by early settlers to clear the fan surface of rock debris, perhaps in anticipation of crop production.

A more substantive refutation of this scenario is provided by the pedologic structure of the features, as well as the development of certain shrubs and lichens. With regard to the former, many of the features have been nearly overwhelmed by alluviation on the fan surface; interstitial areas among the feature rock have filled in with sediments. This is evident in the section view of a feature (Fig. 4) where the original construction appears to lie on or just below the "A-B" Horizon contact. Approximately 30 cm. of sediments have accumulated above the contact, which, in turn, has provided a substrate for plant growth with the additional accumulation of organic matter.

Many of the features have a gently mounded appearance and are topped with a rich growth of snowberry or sagebrush. It is difficult to estimate the rate of alluviation except to note that

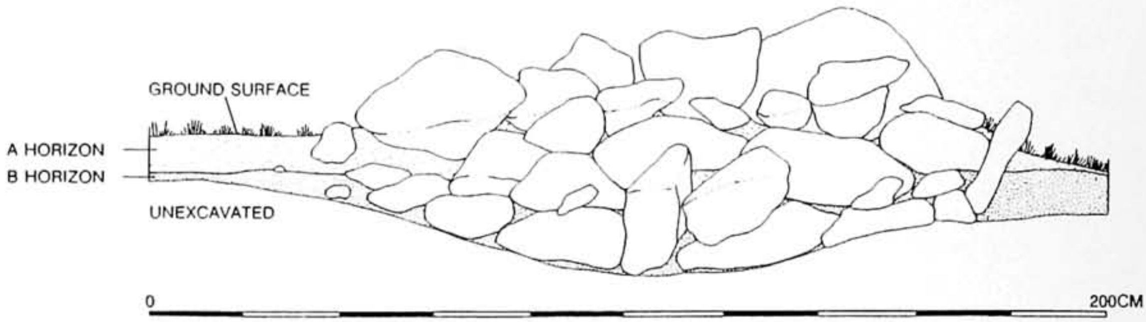

Fig. 4. Profile view of excavated rock feature showing soil horizons.

a greater time frame than that provided by the historic period (less than 125 years) would probably have been necessary. Other observations suggestive of some antiquity include the expansive lichen growth on the upper surfaces of many feature rocks, and the existence of mature sagebrush among many features.

But the most persuasive argument for prehistoric construction is the associated artifact scatter documented at the site. The assemblage has a characteristic "hunting" composition, i.e., relatively large numbers of bifaces, formed and casual flake tools, and projectile points, many of which are in a broken or exhausted condition. Thus far systematic collection has been limited to stylistically diagnostic projectile points, of which 16 have been recovered (Fig. 8). The points, categorized in accordance with the Monitor Valley typology (Thomas 1981), include one Gatecliff series (Fig. 8n); four Large Side-notched variants (Fig. 8l, m, o, and p); five Elko series (Fig. 8g-k); three Humboldt series (Fig. 8c-d, f); one Humboldt Basal-notched variant (Fig. 8e); and two Rosegate series (Fig. 8a-b) specimens.

With regard to the temporal distribution of the point assemblage, several observations are in order. First, although time-marker frequencies provide at best only a gross indication of occupational intensity, it would appear that the site sustained its greatest use between 3,000 B.C. and A.D. 700, coterminous with the Gatecliff, Elko, and Humboldt series time frames.

Although there has been some suggestion that Humboldt Basal-notched points represent distinctive knife forms prevalent between A.D. 700 and 1350 (Bettinger 1978), more recent evidence suggests that they, too, typically predate A.D. 700 (Basgall and McGuire 1988:357). Additionally, if one is willing to accept both the typological and chronological veracity of Northern Side-notched variants (Gruhn 1961; O'Connell 1971, 1975; Heizer and Hester 1978), as opposed to the more generic formulation subsumed under "Large Side-notched" by Thomas (1981), the initial use of the site may have been as early as 4,500 B.C. In either case, the time frame is consistent with the radiocarbon date of 3,350 $\pm$ 90 radiocarbon years B.P. obtained from the adjacent midden at site 26CH369.

Second, these same data suggest that the feature complex may have been used over a wide expanse of time; the current configuration may represent a series of constructions, reconstructions, and/or improvements. Third, some level of site visitation occurred relatively late in time, although the small number of associated

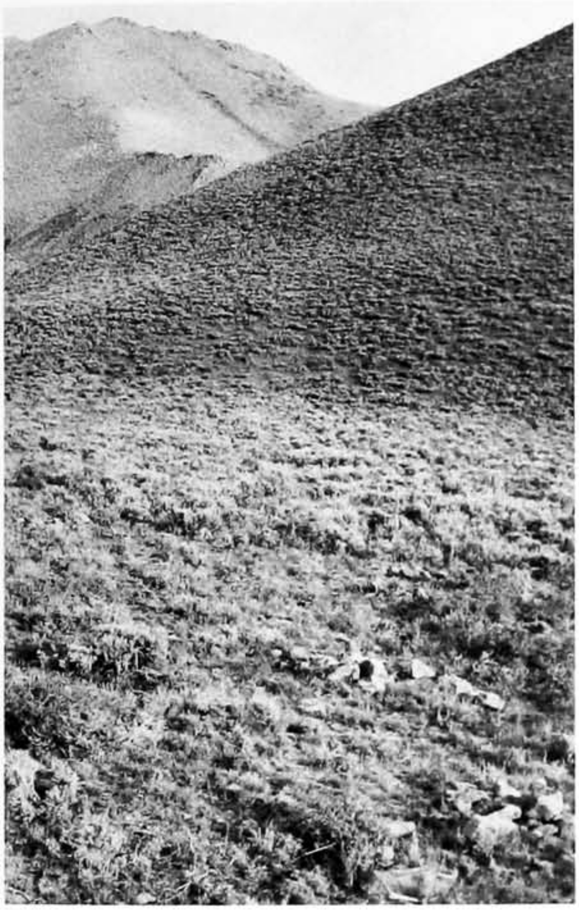

Fig. 5. View of rock feature cluster in south-central site area.

time-markers (i.e., Rosegate points) would suggest that such occupations were more sporadic.

WHY BIGHORN SHEEP

The most direct evidence for bighorn sheep procurement at the Mt. Augusta site is manifest in the faunal assemblage from site 26CH369. Ninety-seven faunal elements were recovered from eroded terrace slump and excavated column samples in the terrace sidewall; 12 specimens showed evidence of burning. With the exception of 37 nonidentifiable fragments and one small carnivore element, the remaining 59 specimens are large mammal (artiodactyl-size) bones and bone fragments. Specific identifications were obtained on six of these specimens; they are bighorn sheep represented by four vertebra, a proximal right ulna fragment, and a right mandible fragment. An additional 13 long bone fragments were identified that appear to be bighorn sheep. Contextual association with the Mt. Augusta site cannot be definitively established, but if nothing else, evidence from the midden demonstrates that there was a viable bighorn population being exploited in Cherry Valley at a time roughly contemporaneous with the construction and use of the Mt. Augusta site.

This evidence is corroborated by a variety of more indirect biogeographical data, together with related ethnographic and archaeological information (Pendleton and Thomas 1983; Thomas 1983:40-48). The Mt. Augusta site appears to be ideally suited to take advantage of seasonal herd movements from high-altitude summer ranges to winter ranges at lower elevations. The site is situated at the outfall of Cherry Creek where it exits the precipitous watershed of Mt. Augusta into the restricted basin of Cherry Valley. In turn, Cherry Valley, with its numerous streams, seeps, wet meadows, and adjacent escape terrain, constitutes productive bighorn habitat (Rick Brigham, personal communication 1991). Early snows on Mt. Augusta would have had the effect of initially forcing herds into more protected basins, such as Cherry Valley, and as winter progressed, to perhaps even lower areas in the Clan Alpine Mountains and adjoining valleys. With high-altitude ridges snowbound and inaccessible, winter was a time of dense bighorn populations (Thomas 1983:44). Hunting facilities associated with an "intercept" strategy (Thomas 1983:41-42 [after Binford 1978]) could effectively be placed at intermediate elevations, such as Cherry Valley, to take advantage of increasing densities of game following migration routes to lower elevations at this time. Bighorn could be taken during other seasons or at different eleva-

Fig. 6. Unexcavated rock feature. Note lack of rock debris at the central axis point of feature.

tions, but the efficacy of elaborate driving facilities would be greatly diminished (Thomas 1983:42-45).

Conversely, Cherry Valley is not productive pronghorn (*Antilocapra americana*) habitat. The basin occupies only five square kilometers and is surrounded on all sides by steep, pinyon-choked canyons that descend to Dixie and Edwards Creek valleys. This lack of contiguous access to more extensive foraging areas, coupled with other factors, such as heavy snow accumulations and a want of certain dietary staples (e.g., forbs), argues for a diminution or absence of herds (Rick Brigham, personal communication 1991).

THE SEARCH FOR APPROPRIATE ANALOGS

Several problems are confronted in an attempt to enumerate regional archaeological signatures for driving facilities associated with bighorn. In contrast to a more robust literature for pronghorn procurement, regional ethnographic references are both limited and conflicting as to the role of communal bighorn hunting strategies and associated facilities.

Steward (1941) argued that bighorn were procured much more effectively by small hunting parties using stalking or ambushing strategies, and that enclosures, traps, nets, and snares were ineffective. In contrast, Muir (1894:320-322) specifically mentioned the use of a high-walled corral or pound, guiding wing walls, and "dummy hunters" to channel bighorn. More recent treatment of bighorn exploitation is provided in Thomas' discussion (1983: 40-48) of "Mid-range Theory" and Great Basin proto-historic procurement strategies that, along with ethnographic information, brings to bear the aforementioned biogeographical data. It is still the case, however, that no species-specific bighorn drive locations and associated facilities

Fig. 7. Excavated rock feature. Lack of rock debris at the central axis point extends well below the surface.

have been identified. This is especially all the more surprising when one considers that bighorn may have been the most important large mammal resource for Great Basin groups (Thomas 1983). Although recent archaeological studies have identified a number of rock alignments and features in upland settings that may very well be associated with bighorn (Pendleton and Thomas 1983:32), most are described only in generic terms, i.e., for use in large game or artiodactyl procurement.[3]

This lack of resolution no doubt reflects the fact that few high-altitude rock alignments or features are associated with the kinds of direct evidence (e.g., bone) that would clarify the target species. It may also, however, belie a much more variable structure of bighorn procurement than that described in regional ethnographic literature. For example, the recovery of an 8,800-year-old bighorn sheep hunting net in north-central Wyoming provides an entirely new dimension to procurement facilities, organization, and tactics (Frison et al. 1986). A wider review of aboriginal game-driving strategies and facilities may therefore provide for a more detailed assessment of procurement variability, and perhaps the elucidation of more fine-grained archaeological signatures.

Anell's (1969) compendium of North American aboriginal game-driving practices describes the gamut of strategies, technologies, and facilities associated with major game taxa. Although exhaustive in specifics, what comes clear in virtually all contexts is the flexibility of both tactics and materials to the situation at hand. Anell (1969:98) proposed three main categories of large game-driving methods based on the degree of technical and tactical refinement. First, there are ring drives and drives against firing lines, the former entailing the use of beaters and hunters to surround, then concentrate game by constricting the ring, the latter involving the use of beaters to move game against a firing line of hunters. Beyond a requisite number of able-bodied participants, no special contrivances are required. The second category involves the use of specific topographic or other natural features and phenomena. Anell included the use of fire, thin ice, cliffs, canyons, and other features to channel, as well as trap, game. The third category included drives against a variety of facilities (e.g., snares, pitfalls, nets, pounds, and snare corrals) that function as traps themselves.

Anell (1969:98) noted that the fence, or artificial runway, can be used in conjunction with all three strategies.

> It may for instance replace a natural runway in the shape of narrow passes, bridges of land, or canyons, in drives against a chain of hunters, it may be found in connection with water and cliff drives, and it is almost invariably used in drives towards traps and pounds.

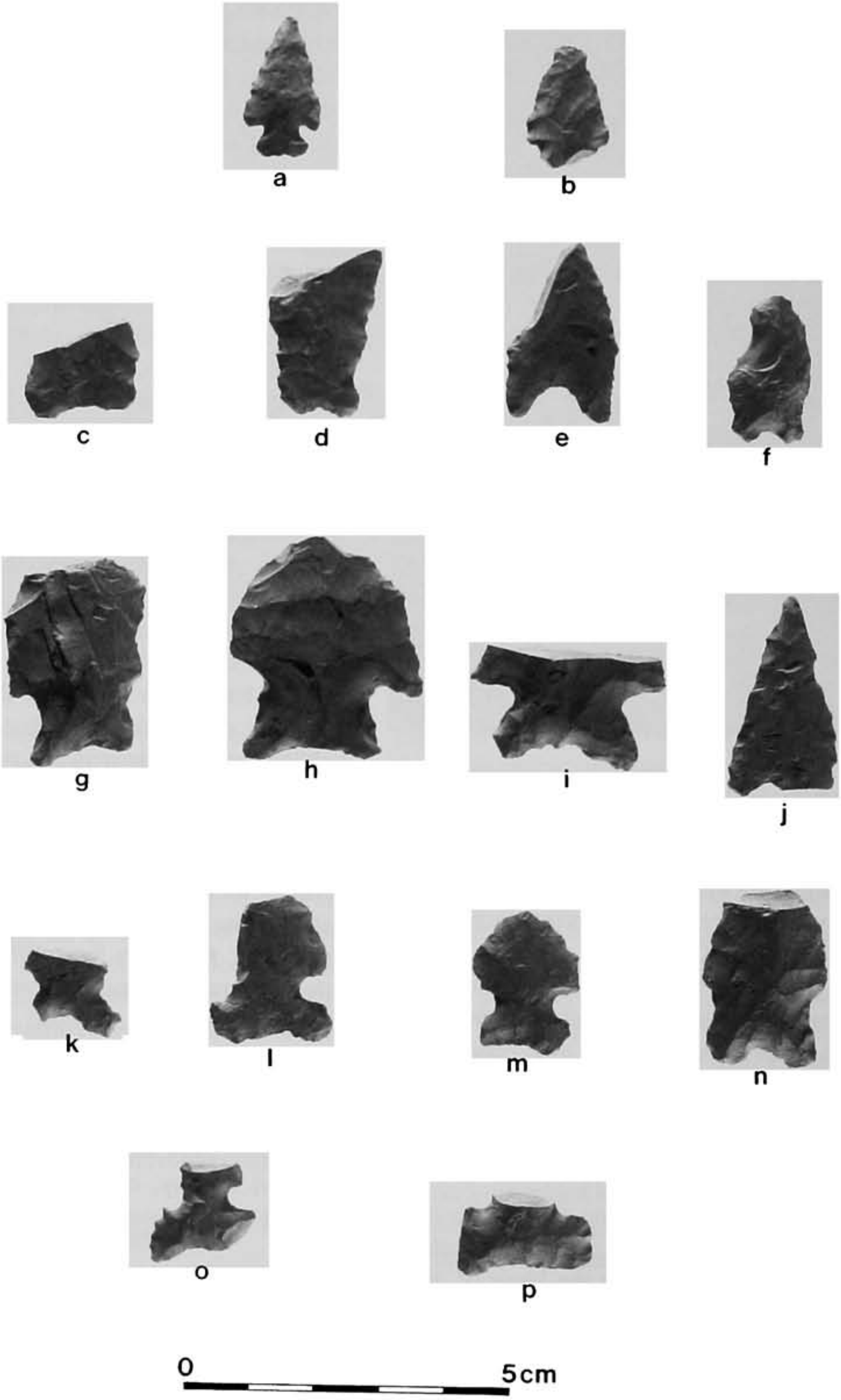

Fig. 8. Projectile points recovered from the Mt. Augusta site.

Further, Anell observed that "the choice of materials [for fences] is highly dependant on what materials are available, and this naturally also influences the size and shape of the construction" (1969:113). Cairns, stone rows, wooden stakes, cairns and stakes, stakes with streamers affixed, mounds of earth, brush, boughs, rope, nets, ice, blankets, and wooden lattice, are all mentioned. To illustrate the point further, Anell described (1969:115) several examples from the Great Plains where a variety of materials were used in the same runway, with concomitant differences in solidity from beginning to end. It is therefore not surprising that in several of the few documented prehistoric bighorn sheep drive runways (Frison 1978:Fig. 6) the construction is an informal melange of boughs and rock—whatever worked. Anell noted similar variability in both runway numbers (one versus two converging lines), length (long versus short), and configuration (straight versus curved); choices seem to be mitigated by local topographic features, prey species, and the number of available hunters.

The purpose here is not to construct a formal typology of driving strategies and facilities, but it is clear that Anell's descriptions have broad implications for both the behaviors and archaeological signatures associated with game driving strategies. Significantly, Anell clearly distinguished between traps and fences, the former providing perhaps the most unambiguous indicator of facility complexity and sophistication. In contrast, the fence is a device that can be constructed within the context of all three driving strategies and therefore not necessarily an indicator of hunting complexity or organization. There are prehistoric fences associated with highly formalized traps (Frison 1978:258-267; Wilke 1986) and those that lack such features (Pendleton and Thomas 1983). The latter may conform to Anell's first or second driving methods, while the former is clearly an example of the third strategy. Finally, there is every reason to suspect that fence and trap construction were highly variable in design and materials; the range of prehistoric fence and trap types in high altitude areas of the Great Basin is probably greater than presently documented.

DISCUSSION

The foregoing discussion suggests that the issue of variability is minimized to some extent by viewing many high-altitude rock feature complexes as primarily a measure of large mammal procurement and the high labor and organizational costs associated therewith.[4] The strategic and organizational requisites of trap, as opposed to fence, construction are very different, although in many cases this distinction remains unelaborated.

In the present circumstance, it is tempting to view the entire feature complex at the Mt. Augusta site in a conventional sense, i.e., as a rough, V-shaped array of cairn fences concentrating bighorn as they move to the higher elevation toward the mouth of a large canyon. Significantly, however, there is no good evidence of a trap (e.g., deadfall, pound, blinds, etc.) at the apex of the "V." Even if such a feature were made of perishable materials, one would expect a concentration of hunting implements (i.e., projectiles, cutting tools, etc.) in this area. Instead, such tools appear to be evenly distributed along the length of the features. Noteworthy also is the formality of the linear arrays: regularly spaced cairns, as opposed to the assortment of materials noted at bighorn fences in the Rocky Mountains (Frison 1978:258-267).

Perhaps a clue to the function of the features is indicated by the post-hole-like depressions in several examples. Specifically, the rock concentrations may have anchored wooden uprights. The cairns and uprights together may have functioned as "dummy hunters" similar to those observed by Muir (1894: 320-322; see also Anell 1969; Benedict 1985, 1990) or as anchors for brush barriers (Sutton and Wilke 1988:18), in either case passively channeling game to a choke point at the mouth of the canyon. Again, however, the concentration of hunting implements among the features, as well as the lack of an identifiable trap, belies these scenarios.

A more intriguing possibility is that the features anchored wooden uprights that, in turn, formed the vertical supports for a linear system of nets. That nets were used by a number of North American groups for procuring artiodactyls is well-documented (see Anell 1969; Frison et al. 1986). Their late prehistoric use in the Great Basin for pronghorn procurement has also been suggested (Wilke 1986), as has their use in communal rabbit drives (Steward 1938; Aikens 1970). More specifically, cairn-supported wooden uprights have been documented at game drive facilities in high-altitude contexts in Colorado where Hutchinson (1990:65-66) inferred their use as either "sewels" (after Speiss 1979), prominent visual flags that prompt animals along a predetermined drive area, or as uprights for a linear array of net(s). With respect to the latter inference he cited the regularity of anchor intervals, generally about three meters apart.

But it is the recovery of a nearly 8,800-year-old large-mammal hunting net in Wyoming (Frison et al. 1986) that may have the most relevance. The net, when fully extended, was estimated to have been 50 to 65 m. long and 1.5 to 2.0 m. high and was most likely used to capture bighorn. Frison and his associates mentioned that such nets could be employed in areas frequented by large mammals, or that they could be driven into them. The ensnared animals "become disoriented, and while struggling to free themselves, are vulnerable to hunters stationed at the net" (Frison et al. 1986:354). Although not specifically addressed by Frison and his associates, such a net would require regular anchor points in open country. Cairns alone could not have been constructed high enough, while un-reinforced stakes may have lacked the necessary strength to contain a moving herd of bighorn; a combination of the two—upright posts supported at regular intervals by a rock foundation—may have been the solution. Where linear cairn alignments are most conspicuous (e.g., the north-central site area, Fig. 2) there is a certain uniformity in spacing ranging from 10 to 15 m. With regard to other potential archaeological manifestations a net-based hunting facility would constitute a trap in the sense used by Anell; animals could be captured and dispatched anywhere along its length. Hunting-related artifactual debris would therefore manifest an extensive, rather than aggregated, depositional structure.

From this perspective, the rock features at the Mt. Augusta site may lack a functional unity, and instead reflect a series of temporally disjunct constructions of linear net facilities. This would explain both the range of projectile point temporal types, and the more-or-less even distribution of points, bifaces, flake tools, and other hunting-related artifacts across the site area. Further, if the 65 m. length for the net reported by Frison et al. (1986) was in any sense typical for bighorn procurement, and if the 10 to 15 m. cairn spacing discernible in some arrays at the Mt. Augusta site reflects a standard support interval, the construction (or maintenance) of five to eight supports would have been enough to deploy a net. With the exception of the manufacture of the actual net, the construction of such facilities would not seem particularly labor-intensive.

The micro-topographic and tactical variables that make the Mt. Augusta site amenable for intercept hunting with nets are less well understood, although the canyon exit and steep-sided drainage on the east side of the site (Figs. 2 and 3) may have provided a necessary "change of pace" factor temporarily modifying the ability of a herd to flee (Thomas 1983:41). Given the propensity of bighorn to flee uphill, an organized drive probably would have taken advantage of the north to south increase in elevation of Cherry Valley, maneuvering the animals in a south/southwestern direction toward the drainage immediately east of the site (Fig. 1). Once within the drainage, herd movement presumably would have slowed as the animals were visually cut off from nearby escape terrain. With drivers closing in from both flanks and the rear, the immediate direction of flight would probably have focused on the five- to eight-meter scarp forming the west side of the drainage. Topping the scarp in both panic and confusion, unable to retreat, and suddenly bereft of cover on the exposed surface of the site, it is here that an array of net traps probably would have been most effective.

The possibility of widespread use of nets to capture bighorn and other large game argues for an additional level of variability with respect to the behavioral requisites associated with complex, highly visible upland hunting facilities. Many such facilities, especially those employing massive rock wall arrays, may indeed be categorized as "high-cost," requiring the kinds of labor output provided by groups manifesting minimal territorial and residential mobility (see Pendleton and Thomas 1983:30-31). In some cases, such as the current one where the use of nets is posited, the situation may be quite the opposite: nets may have been the preferred driving and capture method for more territorially extensive populations. Nets, after all, are easily transported, as well as fairly efficient to deploy and remove, important requisites for mobile populations. Nets represent fluid, as opposed to static, facilities, and may also have been used for encounter-, as well as more intercept-based large game procurement. The small number of supports (e.g., rock foundations) used in their deployment at the Mt. Augusta site may therefore more accurately be characterized as "low-cost" ancillary facilities, probably reaching a level of archaeological visibility only through recurring use of a particular locale for intercept-associated large game procurement.

At least with respect to the Mt. Augusta site, this mobility-net linkage provides for a more parsimonious reconciliation between the antiquity of the complex and certain aspects of diachronic land-use patterns identified for the Great Basin. Specifically, the Mt. Augusta site appears to have been most intensively used 3,000 years ago at a time when many Great Basin populations are thought to have practiced a more mobile, territorially extensive foraging strategy, at least in relation to more circumscribed land-use patterns identified for later prehistoric periods (Bettinger and Baumhoff 1982; Thomas 1982; Basgall and McGuire 1988; Bettinger 1989; Delacorte 1990). In sum, a net-based hunting technology may have provided an efficient, flexible means for earlier-dating populations to participate in game drives of large mammals.

CONCLUSION

The evidence at this point indicates that the Mt. Augusta site is of some antiquity, perhaps as old as 3,500-3,000 B.C., was probably used for procuring bighorn sheep, and manifests a type of feature complex that has not been previously described for the Great Basin. An analysis of feature configuration, structure, and associated artifactual content has been the focus of this paper with the argument being forwarded that the cairns at the Mt. Augusta site represent rock anchors for wooden uprights. These uprights were arrayed in such a fashion as to support a substantial length of net into which bighorn sheep were driven. Data marshalled in support of this hypothesis, however, must be considered both indirect and preliminary—indirect in the sense that no contextually associated net or wooden upright fragments were recovered (nor are they likely to be), and preliminary because comprehensive feature excavations and surface collections have only recently been initiated. At a minimum, however, we are still confronted with a new level of variability in prehistoric upland feature complexes in the Great Basin. Explanation of this variability may ultimately require searching farther afield for appropriate ethnographic analogs, taking into account longstanding prehistoric hunting practices observed elsewhere in the intermontane west, as well as reevaluating the role of hunting facilities in territorially extensive settlement-subsistence regimes.

NOTES

1. These favorable environmental conditions have also been recognized by the Nevada Department of Wildlife and the Bureau of Land Management (BLM); the Clan Alpine Mountains are the focus of a bighorn re-introduction program.

2. Cherry Valley is a BLM "Wilderness Study Area" with concomitant limitations on plant and ground surface alterations, notwithstanding the benefits of either for feature documentation.

3. A noteworthy exception includes the expansive array of low rock walls documented in the Table Mountain area of central Nevada. Based on their configuration and context, Thomas (1988:323-324) suggested a species-specific target: sage grouse.

4. Michael Delacorte (1985) addressed aspects of this same issue at the George T. Hunting Complex in Deep Springs Valley and suggested that (1) based on experimental data, the construction of blinds and other rock facilities need not be labor intensive, and (2) in certain contexts such facilities may reflect the efforts of individuals, as opposed to extended task groups or other, more complex, social units.

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