

h Bands were once one, the Kawarahki, and that they arrived in the Historic nee heartland in the Loup and Platte river drainage from the south, differentiated into the three Historic bands after, or at least as, they arrived. Several lines of evidence suggest that the Kawarahki may, prior to their northward movement to the te River valley, have been people whose material culture archaeologists call the at Bend aspect. Of course, the Great Bend aspect is generally regarded as Wichita. a Pawnee and Wichita, though, are names for closely related peoples of the eighth century to the present, while both the Central Plains tradition and the Great d aspect are archaeological cultures of earlier times. As Barth (1969: 38) has ited out, culture need not be constrained by ethnic boundaries, indicating, of rse, that cultures and ethnic groups are not necessarily synonymous. The prob- here is that when we talk of the Central Plains tradition we are talking about a ure, but when we talk about the Pawnee we are talking about an ethnic group or ety, and it is difficult to make the equation. The problem is further complicated he extensive culture change and flux in ethnic group configuration on the Plains he Protohistoric period. Inasmuch as the Great Bend aspect is at best only par- y derived from the Central Plains tradition, and the Initial Coalescent variant is est derived from only a part of the Central Plains tradition, an ancestor- endant relation between the Central Plains tradition and the Pawnee cannot be nolithic; nor can an ancestor-descendant relation between the Central Plains tra- on and the Great Bend aspect be monolithic; nor can the Great Bend-Wichita ation be monolithic. Certainly, therefore, a Central Plains tradition-Pawnee ation cannot be monolithic either. Identifying all of these cultures and ethnic ups as Northern Caddoan, however, seems warranted.

## 8. The Late Prehistoric on the High Plains of Western Kansas: High Plains Upper Republican and Dismal River

Laura L. Scheiber

Late Prehistory in western Kansas (approximately A.D. 1000–1750) is represented by at least two distinct archaeological signatures: the High Plains Upper Republican and the Dismal River cultural complexes. The gradual intensification of horticulture and more settled lifeways characterized this period on much of the Plains. Native peoples differentially acted and reacted to these changes, spending some of their time as foragers and some as farmers. One of the challenges for the archaeologist is to recognize the differences and fluidity between foraging and farming ways of life and to realize that the same people may have been involved in both practices. On the Plains, the term Late Prehistory refers to the approximately 800 years before active European settlement, or from the pre-contact era about 1,000 years ago through the Late Prehistoric/Protohistoric transition about 250 years ago. In the archaeological literature, the two periods that fall within these 750 years are sometimes referred to as Middle Ceramic and Late Ceramic. I will provide a brief overview of major archaeological topics for each of these periods, including typology and history of investigations, site distributions, recent investigations, chronology, subsistence, trade and contact, and settlement patterns. In the final section, I will summarize the similarities and differences between these periods and suggest some avenues for future research.

Western Kansas is part of the High Plains, which are on the western edge of the Central Plains and extend from the Pine Ridge escarpment at the South Dakota/Nebraska border to the Llano Estacado in the Texas Panhandle (Fenneman 1931; Mandel, chapter 2, this volume). Wide expanses of short-grass plains, occasionally bisected by stream and river riparian zones, characterize the area (J. H. Gunnerson 1987). Although professional archaeological research on the High Plains of Kansas has been limited (McLean 1996), the Upper Republican and Dismal River cultures have also been studied in adjoining states.

## HIGH PLAINS UPPER REPUBLICAN

## Typology and History of Investigations

The Upper Republican phase of the Central Plains tradition (A.D. 1000–1350/1400) is documented at localities such as the Medicine Creek area of south-central Nebraska (Grange 1980; Kivett 1949; Roper 1996a; Roper, chapter 7, this volume; W. R. Wedel 1933a) and the Solomon River area of north-central Kansas (Blakeslee 1999; Krause 1970; Lippincott 1978) (Figure 8.1). Most Upper Republican archaeological sites are small farming hamlets with many earthlodge traces, although it is unclear how many of these semisubterranean houses were simultaneously occupied (Geisel 1999). Houses of the Central Plains tradition are typically square to rectangular with extended entry passages and four central roof-support posts around a central fire hearth, with subfloor storage pits and several associated extramural features or middens (Steinacher and Carlson 1998). Typical material culture includes globular cord-marked pottery vessels, triangular side-notched and unnotched projectile points and preforms; bifacial knives and choppers, scrapers, flake tools, celts, sandstone abraders, hammerstones, bison scapula hoes and knives, bone tools and ornaments,

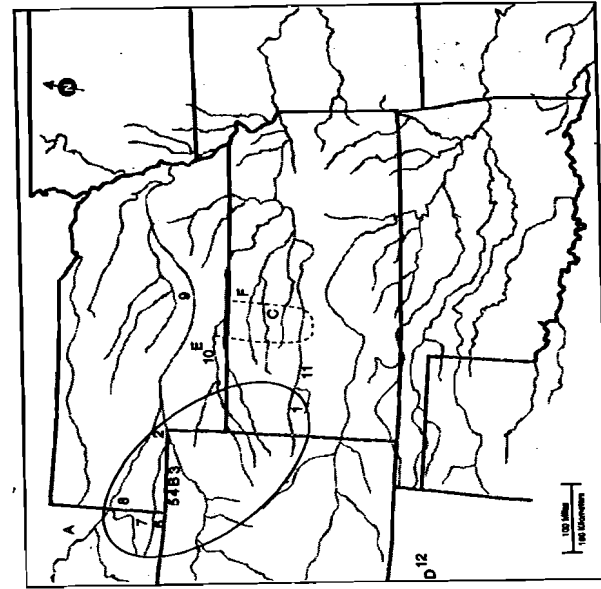


Figure 8.1. High Plains Upper Republican site distribution. 1. Coal-Oil Canyon (14LO201); 2. Ash Hollow Cave (25GDa); 3. Donovan (5LO204); 4. Peavy (5LO1); 5. Biggs (5WL27); 6. Seven Mile Point (48LA304); 7. Gurney Peak Butte (48LA302) and Gurney Peak Bench (48LA305); 8. Signal Butte (25SF1); 9. Hulme (25HL28); 10. Mowry Bluff (25FT35); 11. Pottorff (14LA1); 12. Northern Rio Grande Pueblos. A. Harville Uplift; B. Flatop Butte; C. Smoky Hill Jasper (several locations within dotted line); D. Jemez Mountains obsidian sources; E. Medicine Creek locality; F. Solomon River locality. Solid line indicates the approximate distribution of High Plains Upper Republican sites.

shell beads and ornaments, and spindle whorls for use in spinning thread (Bozell and Ludwickson 1998a; Logan 1996a) (see also Figures 7.3 to 7.6).

Related sites to the west of this "core" area have been known since the 1930s (E. H. Bell and Cape 1936; Champe 1946; Strong 1935). These sites contain material culture similar to that of the Upper Republican sites to the east, including distinctive cord-marked pottery, triangular side-notched projectile points, beveled-edge knives, tubular bone beads, and bone and shell ornaments. Yet these western sites lack evidence of houses and horticulture, which are criteria used to define the Upper Republican phase (and Central Plains tradition in general) in the traditionally defined core areas.

These western sites are known more for what they lack (houses, hoes, and corn) than for what they possess. Many archaeologists include High Plains sites in their discussions of the Upper Republican phase, calling these people either local populations, an unnamed subphase within Upper Republican, or simply "High Plains Upper Republican" (Logan 1996a; Roper 1990, 2002b). However, ceramic sherds and vessels in both areas share identical forms, construction techniques, and styles (W. R. Wood 1971). Comparisons of ceramics from several sites on the High Plains and Central Plains reveal that variations in mean number of design elements per rim and rim type (collared or flared) do not vary according to geography (Midgett and Reher 1996; Reher 1973).

Two issues are relevant for this discussion: (1) How do we classify the sites located in western Kansas and in the adjoining areas to the west? (2) What is their relationship to the Central Plains tradition sites of eastern and central Kansas? Our understanding of the relationships among the village groups composing the Central Plains tradition (e.g., Upper Republican, Smoky Hill, Nebraska, Itskari) who lived at approximately the same time was originally based on location and differences in the ceramic assemblages found in the various areas, where "each is a regional adaptation to available resources of the Central Plains-tradition pattern" (Bozell and Ludwickson 1998a: 131). Besides some variation in architecture and ceramic styles, the main differences seem to be based on the river valley or valleys in which the material culture is found. Certainly people from these villages interacted with one another, although whether they conceived of themselves as loosely related or ethnically distinct is unknown. The sites on the High Plains, however, are neither well contained in space, nor is the material culture clearly distinct from that found at contemporaneous Kansas and Nebraska villages. Although these western cousins present problems for a neatly ordered typological framework, they are nonetheless essential for gaining a more complete picture of Upper Republican (and Central Plains tradition) lifeways.

## Site Distribution

High Plains Upper Republican sites are distributed over a wide area in northeastern Colorado (Reher et al. 1994; Scheiber 2001; J. J. Wood 1967; W. R. Wood 1971), southeastern Wyoming (Reher 1973; Reher and Scheiber 1999), western Kansas (Bowman

1960; McLean 1996), and southwestern Nebraska (Bell and Cape 1936; Champe 1946; Strong 1935). To date, more than 50 sites have been documented (Scheiber 1997). Some of the better-known or more recently investigated sites include Signal Butte (25SF1) (Strong 1935), Ash Hollow Cave (25GD2) (Champe 1946), Gurney Peak Butte and Bench (48LA302/305) (Reher 1973; Reher and Scheiber 1999), Donovan (5LO204) (Reher et al. 1994; Scheiber 2001), and Coal-Oil Canyon (14LO1/401) (Bowman 1960; McLean 1996). Most of these sites are located along bluffs and rock outcrops with views of the surrounding areas (Eighmy 1994). Some of these butte-top sites, especially those in southeastern Wyoming, have limited access and may have been preferred for their defensive advantages (Reher 1973). The sites in southeastern Wyoming are located more than 400 km (250 miles) from the hamlets at Medicine Creek, whereas the sites in western Kansas are much closer to the farming communities, approximately 160 km (100 miles) from the Solomon River area.

#### Sites in Kansas

Located in the middle of the High Plains, Upper Republican sites in western Kansas lie between the better-known village sites and the clusters of identified High Plains campsites to the west. The best documented is the site of Coal-Oil Canyon. This site is strategically located at the eastern and southern edge of the High Plains Upper Republican landscape and, as such, plays an important role in understanding interactions between east and west as well as north and south. Coal-Oil Canyon lies along a tributary of the Smoky Hill River in Logan County, Kansas, 80 km (50 miles) farther west than the site of Pottorff (14LA1), which has the westernmost earthlodge feature in Kansas known to date (W. R. Wedel 1959; Witty 1978). The Kansas Anthropological Association (KAA) excavated the Coal-Oil campsite between 1955 and 1960 (Bowman 1960). Under the direction of Peter Bowman (Bowman 1960), KAA placed test excavations in almost 20 different areas around the canyon. A recently published history of investigations and artifact analysis summarizes and clarifies the earlier work (Bowman 1996; McLean 1996).

Although the site spans several time periods, occupations dating to the Middle Ceramic or Upper Republican are the best represented. No radiocarbon dates have been obtained. More than 2,000 ceramic sherds, representing more than 40 vessels, were recovered (Roper 1996b), along with more than 600 arrowpoint fragments and other diagnostic lithic materials (Bowman 1960). Large quantities of bison bone were also present, but following the standard field methods of the day, much of it was immediately discarded. No evidence of house foundations was uncovered. Although the material culture inventory is fairly similar to that found at other High Plains Upper Republican sites, especially in terms of lithics and faunal remains, the number of ceramic vessels is much higher, resembling counts of pots recovered from village sites (Blakeslee 1999; Kivett and Metcalf 1997; Reher 1973; Reher and Scheiber 1996). Perhaps these vessels were cached at the site for future visits by Upper Repu-

lican travelers. A majority of the analyzed pottery sherds from Coal-Oil campsite are chemically similar to ceramics found at sites to the north in Nebraska and to the west in Colorado, although it is likely that most pots at the site were made of local clays (Roper et al. 2004).

#### Recent Investigations

Currently, archaeologists from the High Plains Archaeology project are actively researching several High Plains Upper Republican sites, focusing their attention on southeastern Wyoming and northeastern Colorado (Reher 1989; Scheiber 1997). The most extensive work has been conducted at the Donovan site, a multiple occupation processing/hunting camp located in the South Platte River drainage of northeastern Colorado. Containing at least 11 stratified Upper Republican cultural levels or occupations, this site was occupied and reoccupied for at least 200 years by several generations of Upper Republican peoples (Reher et al. 1994; Reher and Scheiber 1996). Numerous stone tools, small side-notched projectile points, ceramic sherds, bone beads and ornaments, and heavy densities of stone debitage and bone fragments have been recovered, using modern archaeological recovery techniques. Absolute dates from the Donovan site suggest that the earliest occupation probably occurred in the decades shortly after A.D. 1000, and the last occupation probably occurred 200 to 300 years later (between A.D. 1240 and 1380) (Scheiber and Reher 2000).

Of the more than 16,000 artifacts that have been point-plotted, more than half are butchered bison bone fragments (Scheiber 2001). The faunal assemblages from the first and last levels provide evidence for intensive bone disarticulation and processing of at least ten bison at this site, which is located away from the kill locale. Although separated by time and generations, the methods of butchery and discard and the spatial organization of activities changed little between the two occupations. Despite these redundancies in the practice of animal processing, the kinds of activities undertaken narrowed by the last Upper Republican occupation. The families who first occupied the Donovan site practiced a range of domestic activities in addition to marrow and bone grease extraction, including cooking, tool maintenance, and hide preparation. The last occupants instead focused more specifically on pemmican production (Scheiber 2001, 2005). The presence of fewer than expected scapulae and metapodials (bone elements made into agricultural and hide-scraping tools in eastern sites) may indicate exchange or transport to eastern village sites.

#### Temporal Framework and Absolute Dates

As currently understood, the florescence of the Upper Republican phase in the Central Plains occurred between A.D. 1000 and 1250, followed by a less intense occupation lasting until the mid- to late-1300s (Blakeslee 1999; Ludwickson and Bozell 2000). One of the difficulties in defining and discussing this time period on the High

Plains is a paucity of good chronometric dates, although this is slowly changing (Scheiber 2001; Scheiber and Reher 2000; W. R. Wood 1967).

Dates obtained from several High Plains sites, such as Donovan, Peavy (5LO1), and Biggs (5WL27) in northeastern Colorado and Seven Mile Point (48LA304) in southeastern Wyoming, suggest that the High Plains Upper Republican phase of the western area lasted from the first decades of the A.D. 1000s until well into the 1300s, which means that the High Plains were first occupied as early as the hamlets at Solomon River in Kansas and at Medicine Creek in Nebraska. After utilizing resources on the High Plains and potentially living there for years, these Upper Republican groups left the region at the same time as the villages in the east were abandoned.

#### Subsistence and Diet

Hunting in the High Plains primarily focused on bison, although deer, rabbit, and pronghorn were also commonly procured (W. B. Butler 1997). This pattern differs from the more diverse animal taxa recovered on the Central Plains, at least in terms of specimen frequencies (number of identified specimens) if not diet diversity (Bozell 1991, 1995; M. E. Brown 1981; Falk 1969; Koch 2004; Scheiber and McCabe 2003; Turnmire 1996; Watson 1996). Faunal remains from the hamlet sites include large and small mammals, amphibians, fish, and reptiles. Upper Republican groups have been characterized as broad-spectrum hunter-gatherers who also practiced horticulture, or as subsistence generalists who farmed and hunted in different areas depending on resource zones (Blakeslee 1999; Bozell 1991, 1995; Roper 1990), not unlike Fremont peoples who occupied the Great Basin in Utah during roughly the same time (Kelly 1997; Madsen and Simms 1998).

The importance of bison hunting, especially long-distance hunting, once emphasized by archaeologists (W. R. Wedel 1986: 123–126; W. R. Wood 1971: 80–81), has been minimized recently in favor of a consideration of more localized hunting strategies (Bozell and Ludwickson 1998a: 132). At many of these eastern sites, bison account for only a small part of the faunal assemblage (Blakeslee 1999). However, all of these faunal remains were recovered from village sites. Larger bison bones may have been left behind at primary butchering areas (Koch, Nelson, and Bozell 1999). The many bison scapula farming implements in Central Plains sites may have originated from local hunting (in which case we lack evidence for these locations), from trade with western High Plains groups, or from hunting expeditions on the High Plains by Central Plains residents (Bozell and Ludwickson 1998b: 557). The actual number of bison locally available to farming hamlets and the consequent travel distance to obtain these bison resources, however, is unknown.

Given the environmental limitations, horticulture on the western High Plains is unlikely. The characterization of High Plains residents as nonhorticultural is based on a lack of recovered cultivated macrobotanical remains as well as the absence of plant processing and gardening tools such as the bison scapula hoes commonly

found in the eastern sites. If scapulae (either unfinished or as formal hoes) were being traded or brought back to the east, their numbers should be lower than expected in the assemblages of the western sites, which they are.

#### Evidence for Contact and Trade

Trading networks have been documented throughout all of the Central Plains tradition phases, both between the Central Plains villages and to more remote areas such as the southern Plains and the American Bottom (Bozell and Ludwickson 1998b; Logan 1996a; Logan and Ritterbush 1994). The presence of exotic goods and artifact styles at these sites usually indicates exchange. For instance, nonlocal resources in assemblages of Upper Republican sites at Medicine Creek may reflect interaction with the Texas panhandle (lithics), the Midwest (freshwater snails), the Southwest (malachite and turquoise), and the Southeast (conch shells) (Logan 1996a; Roper 1988: 531; W. R. Wedel 1986: 111). Turquoise and malachite at Medicine Creek house sites are evidence of trade between Upper Republican people and the Southwest pueblos, perhaps via Antelope Creek phase peoples (a possible Caddoan group) on the Southern Plains (Brosowski and Bevitt, chapter 11, this volume; Roper 1988).

Archaeologists also acknowledge that some villagers of the Central Plains tradition may have moved to new areas to take advantage of trading contacts. Nebraska phase groups moved along the Missouri River after A.D. 1250, possibly to "interdict the export of bison products to, and the import of status symbols from, the Mississippian-period Cahokia site in Illinois by Initial Middle Missouri tradition and Mill Creek people via the Missouri River" (Bozell and Ludwickson 1998b: 557). It seems reasonable to suggest that if the people of the Central Plains were moving to different areas to take advantage of various trading opportunities, they may have also expanded into the western area for the same reason.

Evidence for trade and contact between the western High Plains and other areas is primarily based on material sourcing of lithics and ceramic clays. For instance, the Donovan site lithic assemblage contains small quantities of Smoky Hill jasper (also known as Republican River jasper), a brown-yellow-red jasper that outcrops in numerous locations within north-central Kansas and south-central Nebraska (Holen 1991; Reher et al. 1994; W. R. Wedel 1986). Additionally, some of the ceramics recovered from the Donovan site are made of clays from the Medicine Creek area (Cobry and Roper 2002; Roper et al. 2004). More widespread trading networks are suggested by obsidian found at the Gurney Peak site in southeastern Wyoming. Several flakes came from one of the Valles Caldera obsidian sources located in the Jemez Mountain area of north-central New Mexico, a distance of approximately 640 km (400 miles) (Glascock, Kunselman, and Wolfman 1999; Scheiber and Reher 2000).

Similarly, site assemblages in the east commonly contain nonlocal lithics from the High Plains, most notably purple-gray Flattop Chalcedony from the Flattop quarry in northeastern Colorado (Greiser 1983; Hoard et al. 1992; Hoard et al. 1993;

Miller 1991). Average assemblages usually contain no more than 2 percent Flattop, although a few sites in both the Medicine Creek and Solomon River areas have produced much higher percentages of this nonlocal resource (closer to 20 percent) (Blakeslee 1999; Roper 1996a).

Bison scapula hoes and other bone tools may also have been imported from the west (Blakeslee 1999; Bozell 1995). The high frequency of bison scapula hoes in Central Plains sites could be evidence for nonlocal procurement strategies since the number of animals represented by scapula tools is much higher than other unmodified bison bone at various village sites (M. E. Brown 1982; Drass and Flynn 1990; Fishel 1999a; Gilbert 1969; P. C. Johnson 1972; Ludwickson 1978; White 1953; 1954: 258; J. J. Wood 1967: 184). For example, at the Hulme site (25HL28), an Upper Republican village in Central Nebraska, the number of individual bison counted when considering only unmodified bison bone is 1, whereas the number of individuals based on bison scapulae is 20 (Bozell 1991). Similarly, 86 percent of the bison bones from the Mowry Bluff site (25FT35) are tools and scapula fragments (Falk 1969). The bison must have been hunted and processed somewhere away from the villages, but these other sites have generally not been found (Bozell 1995).

Overall, ties between the Donovan area in northeastern Colorado and the Medicine Creek area seem to be stronger than those between Donovan and the Solomon River area. Perhaps future investigations will demonstrate a stronger connection between the western Kansas and south-central Colorado and Solomon River sites.

### Settlement Patterns

One of the central issues of High Plains Upper Republican sites is understanding why these people were on the High Plains. Beginning in the 1930s, archaeologists recognized Central Plains tradition pottery in the western area and presumed that these sites represented hunting parties from the east, similar to the activities of several historic tribes such as the Pawnee and the Arikara (Bell and Cape 1936; W. R. Wood, ed., 1969). Several early publications list these sites as evidence of long-distance hunting trips (Lehmer 1954b). Others countered that local resources were sufficient on the Central Plains for year-round residency and that the High Plains site assemblages were more extensive and incorporated too many local High Plains resources to be the result of hunting parties alone (Reher 1973; W. R. Wedel 1970c; W. R. Wood 1971, 1990).

If hunting parties created the sites on the High Plains, the recovered material should conform to the definition of a "hunting camp." However, Central Plains tradition hunting camps have not been found archaeologically. Instead, we have evidence of hunting camps from Protohistoric Pawnee (Lower Loup phase) archaeological sites in Kansas and Nebraska, as well as written descriptions of Pawnee hunting from the 1830s (Roper 1991b, 1992, 1994). Roper (1990, 2002b) and others (Bozell 1995; Steinacher and Carlson 1998) have demonstrated, though, that these models are probably not best applied to Late Prehistoric settlement strategies. This does not

mean that the High Plains Upper Republican sites are not hunting camps or that people at the High Plains sites were unrelated to those in the Central Plains, or even that the High Plains ceramics were necessarily locally produced. The important point to keep in mind is that Upper Republican subsistence and settlement strategies do not appear to conform to models based on a dual economy focused on corn and bison.

### High Plains Upper Republican Summary and Conclusions

In recent literature, the High Plains Upper Republican continues to await "proper classification" (Bozell 1995; Bozell and Ludwickson 1998a: 131). While the inhabitants were not likely to be simple hunting parties, neither were they just "local" populations. Not knowing how to classify these sites, archaeologists routinely cite the same debate. The mechanism by which the "Upper Republican culture" arrived in the western parts of Kansas and adjacent areas remains unexplored. Trade for acquiring buffalo meat and other products from peoples of the western fringe is occasionally mentioned, but an understanding of how the people in this vast area related to one another and to the people in the more constricted "core" area remains largely unknown.

Several ways of conceptualizing these groups have been proposed (Steinacher and Carlson 1998). I advocate that Upper Republican hunting parties from the east moved west as part of their seasonal movement, soon after intensification of horticultural practices and construction of the first earthlodges. After several years or generations, these hunting parties essentially moved onto the High Plains and recreated their identity there, possibly considering themselves a new people, what we recognize archaeologically as High Plains Upper Republican. Whether or not this scenario is correct, if it can ever really be teased apart, the High Plains Upper Republican people are more than mere satellites of a larger phenomenon. At the same time, neither were they totally independent of the activities occurring in the east. High Plains Upper Republican should be considered the western manifestation of the Central Plains tradition in an east-west continuum. The sites in western Kansas have strong potential for further elucidating these relationships.

### DISMAL RIVER

#### Typology and History of Investigations

The Dismal River aspect refers to a Late Ceramic or Protohistoric archaeological manifestation (A.D. 1675–1725) that incorporates a large area of northwestern Kansas, western Nebraska, eastern Colorado, and southeastern Wyoming. Sites that are characteristic of this period were first identified along the Dismal River in the Sand Hills of west-central Nebraska during the early 1930s (Strong 1932; 1935: 212–217). By 1935,aldo Wedel (1935b: 181) began calling this the "Dismal River culture." Investigators

from the University of Kansas, the University of Nebraska and Nebraska State Historical Society, and the Bureau of American Ethnology of the Smithsonian Institution excavated several Dismal River sites between 1898 and 1949. The most well-studied Dismal River sites are in Nebraska, and many of them were excavated under the auspices of the Works Project Administration (WPA) and the River Basin Survey (RBS) Projects.

Based on his excavations at White Cat Village (25HN37) in Harlan County, Nebraska, John Champe (1949) linked the Dismal River material culture with Protohistoric Athabascan-speaking Plains Apacheans, using both cartographic and ethnohistoric data. Although this correlation has been generally accepted for 50 years (J. H. Gunnerson 1960; Schlesier 1972), some continue to disagree (Opler 1971, 1982). The Gunnersons, especially James Gunnerson, have been the most influential synthesizers of this material and have published numerous articles and books on the subject (D.A. Gunnerson 1956; J. H. Gunnerson 1960, 1968, 1987; Gunnerson and Gunnerson 1971). Most of the published summaries of the Dismal River aspect are based on excavations at three sites: White Cat, Lovitt (25CH1), and the Scott County Pueblo or El Cuartelejo (14SC1). However, the degree to which these sites represent the norm in Dismal River lifeways or are unique situations is not currently known. Researchers should, therefore, be aware that many lists of traits draw heavily on only a few examples.

Dismal River sites are characterized by the presence of triangular, side-notched and un-notched projectile points (Figure 8.2) and distinctive gray-black pottery with smooth or stamped surfaces (Figure 8.3) (Champe 1949; J. H. Gunnerson 1960, 1968). The northern sites located in Nebraska are sometimes further assigned to the Stinking Water phase of the Dismal River aspect (A. T. Hill and Metcalf 1941), while the

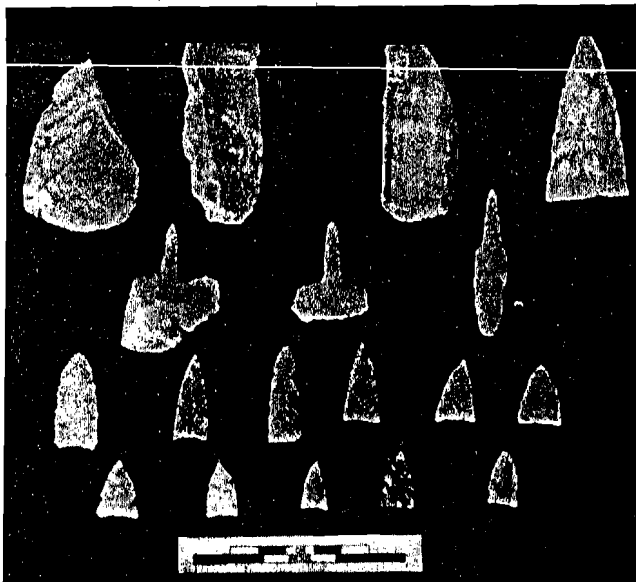


Figure 8.2. Stone tools from 14SC1 (El Cuartelejo, Scott County Pueblo). Top row: scrapers, alternately beveled knife at far right. Second row from top: drills. Third and fourth rows from top: projectile points. The dark projectile point in the bottom row is made of obsidian. (Courtesy of the Kansas State Historical Society)



Figure 8.3. Reconstructed Dismal River pottery vessel from 14SC1. Vessel height is 16 cm. (Courtesy of the Kansas State Historical Society)

Kansas sites are at times referred to as the Scott phase (W. R. Wedel 1959), based on differences in pottery styles. Likewise, the eastern portions of the culture area in Nebraska and Kansas are occasionally paired together as Eastern Dismal River and considered separate from the Western Dismal River sites in Wyoming and Colorado (Brunswig 1995), again based on differences in pottery. These differences probably relate to regional variation in production techniques and design styles but may not necessarily indicate separate groups.

Semi-permanent circular residences measuring 4.5 to 7.6 m (15 to 25 feet) in diameter with five main posts around a central hearth have been documented at several Dismal River sites (Champe 1949; J. H. Gunnerson 1968; A. T. Hill and Metcalf 1941). These structures may have been covered with poles, grass, and packed earth. Bell-shaped roasting or baking pits are also common, ranging from 1.5 to 2.4 m (5 to 8 feet) in diameter and 60 to 90 cm (2 to 3 feet) in depth (Champe 1949; A. T. Hill and Metcalf 1941; W. R. Wedel 1959).

#### Site Distribution

Dismal River sites extend from the Sand Hills of west-central Nebraska to just south of the Smoky Hill River of west-central Kansas, and from the Goshen Hole in southeastern Wyoming to the Republican River in south-central Nebraska (Figure 8.4). Sites have been identified along the Dismal River in Hooker County, Nebraska (Strong 1935), Stinking Water Creek (a tributary of Frenchman's Creek) in Chase County, Nebraska (J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941), Medicine Creek in Frontier County, Nebraska (W. R. Wedel 1935b: 180–182), Prairie Dog Creek (near Harlan County Reservoir) in Harlan County, Nebraska (Champe 1949), and Ladder Creek (a tributary of the Smoky Hill River) in Scott County, Kansas (W. R.

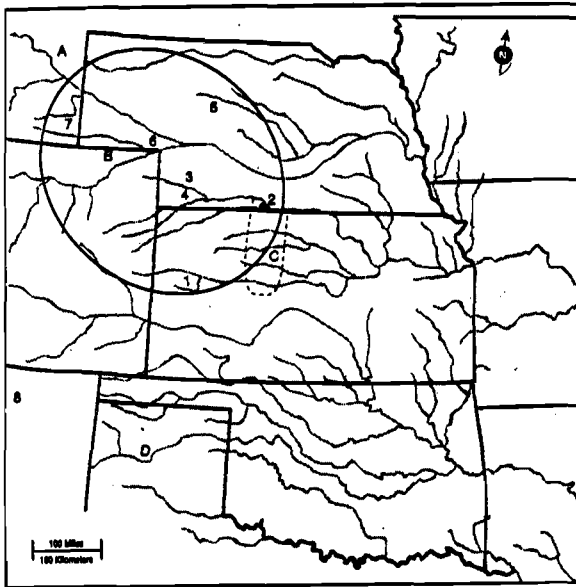


Figure 8.4. Dismal River site distribution. 1. El Cuartelejo (Scott County Pueblo, 14SC1); 2. White Cat Village (25HN37); 3. Lovitt (25CH1); 4. Nichols (25DN1); 5. Humphreys/Matthews (25HO21); 6. Ash Hollow Cave (25GD2); 7. Petsch Springs (48LA303); 8. Northern Rio Grande Pueblos. A. Hartville Uplift; B. Flattop Butte; C. Smoky Hill jasper (several locations within dotted line); D. Alibates Quarry. Solid line indicates the approximate distribution of Dismal River sites.

Wedel 1959; Witty 1983b). Farther west are sites in Ash Hollow of Garden County, Nebraska (Champe 1946), and along Horse Creek and Lodgepole Creek in Laramie County, Wyoming (Reher 1973). Other sites are not well documented but are found scattered between these concentrations and also farther south and east into Colorado (Brunswig 1995; J. H. Gunnerson 1960).

#### Sites in Kansas

The most well-known Dismal River site in Kansas is the Scott County Pueblo (14SC1) located in the Ladder Creek valley, south of the Smoky Hill River. The site is one of the identified locations of El Cuartelejo, a set of villages described in early Spanish accounts associated with the Cuartelejo Apache (see D. A. Gunnerson 1956; A. B. Thomas 1935). Known to local European and Euro-American settlers as early as the 1880s (Williston 1899), this large site consists of a seven-room pueblo structure and associated Dismal River middens. Many additional concentrations of Dismal River archaeological deposits have also been identified throughout the valley (Witty 1983b).

Investigators have conducted a number of archaeological excavations both around and within the Scott County Pueblo structure, often referred to as El Cuartelejo. S. W. Williston and Handel T. Martin, geologists from the University of Kansas, exposed the walls of the pueblo and excavated within the structure in 1898

and 1899 (H. T. Martin 1909; Williston 1899; Williston and Martin 1900). In addition to thousands of artifacts, they uncovered several slab-lined fireplaces, a small oven, and an adobe grinding trough (measuring more than 60 by 90 cm [2 by 3 feet]). Small postholes in most rooms suggest ladders for ceiling entrances into the rooms (Witty 1983b). Under the auspices of the Smithsonian Institution, Waldo Wedel returned to the site in 1939 but focused on the refuse pits and middens located around the stone building (W. R. Wedel 1940, 1959). In his excavations, Wedel recovered almost 4,000 ceramic sherds (W. R. Wedel 1959: 441). He writes that the site "middens yielded potsherds and artifacts of stone, bone, and horn, as well as rare objects of copper, iron, and glass. Charred maize, and squash or gourd rinds indicate horticulture, but quantities of animal bones suggest that subsistence was mainly through hunting" (W. R. Wedel 1940: 83).

James Gunnerson, then of Northern Illinois University, uncovered two Dismal River house floors less than a mile from the main part of the site in 1965 (J. H. Gunnerson 1968). In 1971, Thomas Witty, Jr., and the Kansas State Historical Society re-excavated the pueblo structure and adjacent area. At that time, the architecture was reconstructed as part of an interpretive display in the Scott County State Park (Witty 1971, 1983b). In addition to these formal projects, Scott County Pueblo has also been visited by local collectors throughout the years (Witty 1983b). All of the work at the site makes Scott County Pueblo the "most frequently excavated site in Kansas" (Reynolds 1996). More recently, reanalysis of the excavated materials from the Witty project was conducted at the University of Kansas, and the results were presented in a Plains Anthropological Conference symposium. Analysis of two large features (one with Dismal River pottery, no corn, and high quantities of bison bone, and the other with southwestern pottery, burnt corn, scapula hoes, and low quantities of bison bone) suggests different hunting strategies possibly corresponding with two distinct residents of the site (J. A. Jacobson 2004).

Several archaeologists have focused their attention on the interpretation of the pueblo architecture itself, believing it to be the remains of a structure built by refugees from the northern Rio Grande Pueblos of Picuris and/or Taos during the late seventeenth and early eighteenth centuries. These puebloan people would have traveled approximately 480 km (300 miles) north and east in order to reach modern-day Scott County. Documentary and artifactual evidence does not refute this assessment, although proving it has been difficult (W. R. Wedel 1986). Some material culture is diagnostic of the Southwest, but features and artifacts that are common and distinctive to Dismal River sites (e.g., stone, pottery, bones) compose most of the recorded materials (W. R. Wedel 1959; Witty 1983b). Figure 8.3 shows a variety of stone tools from the site, and Figure 8.4 shows a reconstructed Dismal River pottery vessel.

The site was probably occupied by both Dismal River peoples (who were more than likely Plains Apache) and one or more pueblo groups from the Rio Grande. As

one of the only Protohistoric archaeological sites on the High Plains with possible corroborating written documentation and as a site demonstrating evidence of daily contact between two or more identified groups on the Plains, this site provides a unique opportunity for unraveling some of the questions about Plains-Pueblo relationships.

### Chronology and Dating

Current evidence suggests that Dismal River people occupied the High Plains minimally between A.D. 1675 and 1725 (J. H. Gunnerson 1968; Logan 1996b; W. R. Wedel 1986), although Patricia J. O'Brien (1984a) widens this date range to A.D. 1525–1725. The more commonly cited A.D. 1675–1725 assessment is based on several criteria: tree ring dates obtained from charcoal from four sites in the late 1940s (Champe 1946; J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941: 205; Weakly 1946), the presence of a limited number of European-manufactured trade goods (Champe 1949; Strong 1935), cross-dating with Rio Grande ceramic sherds and pipe fragments (Witty 1983b), and the lack of horse bones, which presumably would be more common in later assemblages (J. H. Gunnerson 1960). Two recently reported AMS radiocarbon dates of macrobotanical remains from the Scott County Pueblo are starting to fill the gaps in knowledge (A.D. 1463–1638 and A.D. 1640–1949) (see Appendix).

The “end” date range of A.D. 1725–1750 seems to be relatively secure, primarily because of the sparsity of more European-introduced materials in site collections. The beginning date, however, could potentially be pushed back several decades or more if Dismal River is securely associated with Apachean people, who may have migrated through the High Plains as early as A.D. 1300–1400 (Palmer 1992). Additionally, it is still unclear if the entire geographic area was occupied at the same time, sequentially over time, or in different areas on a seasonal basis.

### Diet and Subsistence

People associated with the Dismal River aspect used a range of subsistence practices, from a mixed economy of hunting and farming in the east to more broad-based hunting and gathering strategies in the west. Several archaeologists have suggested that hunting and the gathering of wild plants actually dominated Dismal River subsistence strategies, while farming was an occasional enterprise (J. H. Gunnerson 1960; W. R. Wedel 1986). However, very few formal analyses of faunal remains or botanical remains have been conducted.

Dismal River groups primarily hunted bison, although other species have been identified, including pronghorn and deer, beaver, fox and dog, small mammals, fish, turtles, and birds (J. H. Gunnerson 1960; Jacobson 2004; A. T. Hill and Metcalf 1941). The presence of numerous scrapers, knives, and fleshers suggests that people spent a significant amount of time preparing bison hides (Champe 1949; J. H. Gunnerson

1960; W. R. Wedel 1986), in addition to drying and eating the meat. Edible wild plants recovered from Dismal River sites include wild plums, chokecherries, and black walnuts (J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941; W. R. Wedel 1959: 440).

These communities also practiced at least some horticulture, as shown by corn-cob fragments, charred corn (*Zea mays*) and squash (*Cucurbita pepo*), and scapula digging tools and hoes (Adair 1996; J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941: 196; H. T. Martin 1909; Williston 1899). Other cultigens such as watermelon (*Citrullus* spp.) appear for the first time in the archaeological record during this time, possibly coming from the southwest (see chapter 15, this volume). Food was also probably prepared by baking or roasting in large, often bell-shaped pits, although the kind of food processing that they represent remains unclear.

### Culture Contact, Mobility, and Trade

Evidence for contact or trade between Dismal River people living on the High Plains and other groups, particularly those in the Southwest, is indicated by the presence of Euro-American-manufactured metal (such as an ax found in a hearth at White Cat Village), gunflints, catlinite, turquoise, micaceous ceramics, and puebloan painted pottery (Champe 1949; J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941; Roper 1996b; W. R. Wedel 1959). However, these materials do not occur in high quantities. Perhaps Dismal River Apachean people occasionally traded prepared buffalo hides for agricultural products at New Mexico pueblos as part of a Plains-Pueblo regional interaction sphere (Habicht-Mauche 1995; Spielman 1991; S. C. Vehik 2002a). The lack of these materials is another indication of an earlier time frame. Euro-American-introduced materials become more common later in the eighteenth and nineteenth centuries.

Other methods for determining interaction and settlement patterns rely on sourcing traditional items, such as lithics used to make stone tools and clays used to make ceramic vessels. These types of analyses have for the most part been descriptive, rather than quantitative, and await more formalized studies (but see T. Butler 1997; Roper 1984–1985). Most of the raw material at the eastern sites in Nebraska and Kansas consists of Smoky Hill jasper (T. Butler 1997; J. H. Gunnerson 1960; W. R. Wedel 1986). This yellow-brown silicified chalk is found along tributaries of the Smoky Hill and Republican rivers in north-central Kansas and south-central Nebraska, indicating that Dismal River groups in the eastern areas obtained most of their raw material from local or nearly local sources. Alibates agatized dolomite from the Texas panhandle, more than 300 kilometers (200 miles) south, is also present at Scott County Pueblo (T. Butler 1997; Witty 1983b).

On the other hand, Dismal River sites in southeastern Wyoming instead contain materials from the closer Hartville Uplift in eastern Wyoming, i.e., Hartville Cherts and Spanish Diggings Quartzite (Reher 1973, 1991). Interaction or travel from west to east is not well expressed in terms of raw material procurement, although at least one

site in the Medicine Creek valley may have contained materials from Hartville (Roper 1984–1985).

As long ago as 1932, Strong noted the “rather common occurrence” of obsidian at Dismal River sites (Strong 1932: 152). Since that time, small quantities of obsidian continue to be recovered and observed in Dismal River assemblages (Champe 1949; J. H. Gunnerson 1960; A. T. Hill and Metcalf 1941: 192; Strong 1935: 217; W. R. Wedel 1959: 455). Roper (1984–1985) suggests that obsidian found at Dismal River sites macroscopically resembles northern sources near Yellowstone in northwestern Wyoming and eastern Idaho. However, more recently Hughes and Roper (1999: 80) imply that pieces of obsidian from Dismal River sites are likely from southwest sources because of the presence of other southwestern materials at these same sites. Clearly, until actual source analyses are conducted, various assumptions cannot be substantiated. Obsidian has also been recovered from several sites in southeastern Wyoming. X-ray fluorescence data from these sites suggest that some of the obsidian came from southern sources in New Mexico, while other pieces originated at northern sources in the Yellowstone area (Reher and Kunselman 1990).

#### Dismal River Summary and Conclusions

Dismal River is a Late Prehistoric/Protohistoric cultural complex that extends across much of the High Plains. People associated with this material culture practiced mixed subsistence strategies, including some maize horticulture in the eastern sites. Resource use focused on locally available items, although some material was obtained from outside the vicinity, especially in areas to the south.

If the Dismal River archaeological complex is the material manifestation of Plains Apachean peoples (and overwhelming evidence points in that direction), then the wide distribution of Dismal River sites may be the result of multiple bands or divisions of Apaches, such as the Cuartelejo Apache in western Kansas and the Paloma Apache in the Sand Hills of Nebraska (Roper 1984–1985; Schlesier 1972). Based on ethnographic evidence, Dolores and James Gunnerson believe that some of the northern groups may have later become the Kiowa Apache, while others joined the Jicarilla and Lipan Apaches during the early eighteenth century (Gunnerson and Gunnerson 1971; D. A. Gunnerson 1974). Farther west in Wyoming and Colorado lived either different unnamed bands or these same eastern groups during different parts of the year.

Although connecting Dismal River archaeological sites with historically known groups is appealing, several questions remain unanswered. For instance, how typical over the broader area are the few sites that serve to define Dismal River? To what degree did these people rely on horticulture, and for how long during the year did they stay in the more settled communities? Do the sites in this large area represent sequential occupation or seasonal occupation by the same or related peoples or more permanent territories of unrelated groups? And finally, what is their relationship

#### CONCLUSIONS AND GOALS FOR FUTURE RESEARCH

In summary, the last 750 years of prehistory in western Kansas reflect dynamic changes occurring throughout the Plains and provide crucial links in the long-term histories of several Native American groups. The diagnostic criteria used to define these sites are clear. Ceramic and projectile point styles have been studied and identified for more than 60 years. Archaeologists also have some ideas about the subsistence practices of the groups of people in this broad region, although the relationship between farming and foraging practices, and farmers and foragers in general, remains uncertain. The diagnostic artifacts for both periods are found across wide areas but are recognized mainly based on “types” defined at the eastern villages, not the western sites.

Archaeologists studying Upper Republican and Dismal River peoples have been preoccupied with linking these complexes with cultural identities, especially how and why the High Plains Upper Republican differ from the other Central Plains tradition phases and how Dismal River materials relate to the ethnohistoric accounts of the Plains Apache. The current prevailing opinion is that Upper Republican and Dismal River peoples probably moved across large areas and practiced diverse lifeways within specific regions. Cultural identity was reflected and expressed in unique ways within these various river valleys, although connections among groups were maintained.

The transitions between the peoples and cultures of the Upper Republican phase and the Dismal River aspect are not clear. Many of the stratified sites on the western Plains represent multiple occupations, in which Dismal River levels overlie Upper Republican levels. The relationship between the Upper Republican and Dismal River occupations is rarely considered (instead separating time into tidy packages of Middle Ceramic and Late Ceramic), even though the migration of Central Plains tradition peoples during the late 1300s might be related to early Athabaskan arrivals.

Although both groups occupied a similar area, practiced a range of subsistence strategies, and are primarily defined by their distinctive ceramic vessels and small triangular arrowpoints, numerous differences exist as well. For instance, the large Dismal River baking pits are absent in Upper Republican sites, whereas Central Plains tradition storage pits are absent in Dismal River sites. Domestic architecture also varies between groups, especially in the eastern sites where house features have been recovered. The use of nonlocal resources, especially lithic raw materials, suggests an east-west movement and exchange during the Upper Republican phase (with Flattop Chalcedony found in the east and Smoky Hill jasper found in the west) but more of a north-south trend during the Dismal River time period (with Alibates and obsidian found in High Plains sites). Archaeologists are just beginning to unravel some of these questions, extending traditional debates of typology to include other ecological and social issues.

Early archaeologists studying these sites on the High Plains focused primarily on typology and classification of material remains. Further work from recent excava-

methodological approaches have led to new interpretations of the variability within High Plains Upper Republican and Dismal River lifeways. These results will contribute greatly to our understanding of the dynamics of Kansas prehistory. Additional questions can be better explored with further problem-oriented research:

1. Researchers can conduct multi-scalar analyses that explicitly incorporate both macroscale models of hunter-gatherer and farmer interaction and microscale daily activities at single sites.
2. Researchers can reanalyze museum collections, specifically targeting the materials that can be sourced, such as lithics and ceramics, as well as faunal and paleoethnobotanical remains. Although biased recovery techniques hamper some kinds of analyses, preliminary assessments written 50 years ago often represent the only data that were collected.
3. Researchers can conduct fine-scale excavations at selected sites, focusing on intensive recovery techniques.
4. Researchers can participate in interregional collaboration. Because these cultural groups are found within the modern boundaries of four states, special efforts would help combine and synthesize data, resources, and conceptual frameworks.

## 9. Late Prehistoric Oneota in the Central Plains

Lauren W. Ritterbush

The Oneota tradition is an Upper Mississippian complex best known from archaeological investigations in the Midwest. Oneota sites in that region have been dated between about A.D. 1000 and the earliest portion of the Historic period. Several well-known, but until recently little-studied, sites in Kansas and Nebraska are clearly affiliated with this archaeological tradition. Those sites in the Central Plains that contain Oneota components dating to the Late Prehistoric period are the Leary (25RH1), Ashland (25CC1, 25SD147), and various White Rock phase sites (Figure 9.1). Additional Oneota artifacts have also been found among late prehistoric assemblages from southern Kansas.

Modern studies of Oneota sites in Kansas and Nebraska indicate westward migration of certain midwestern populations in the late thirteenth or early fourteenth centuries. Little is known about their fate after about A.D. 1450, although this cultural tradition continued in the Midwest, including along the eastern edge of the Central Plains, into the Protohistoric period. The expansion of Oneota peoples into the

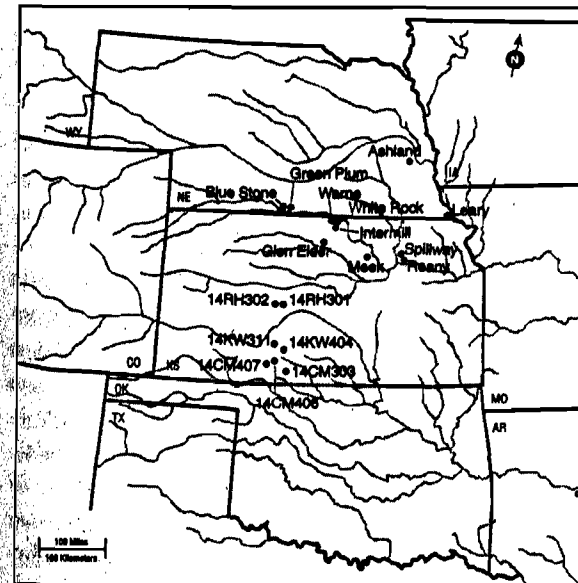


Figure 9.1. Map of the Central Plains showing locations of the Leary and Ashland sites and White Rock phase sites, as well as those Plains Border variant sites in southwestern Kansas that include Oneota materials in their assemblages

# KANSAS ARCHAEOLOGY

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