

APPENDIX I

PREHISTORIC PERIODS

Paleoindian Stage

Although the specifics of human passage into this continent remain heavily debated, there is little doubt that people were here towards the end of the Pleistocene, a period marked by cooler temperatures, a moister climate, a wider distribution of resources and less seasonal variability than exists in modern times.

The Paleoindian Stage (~11,500-8,000 B. P.) is generally characterized by high residential mobility and low population density. The peoples of the time period are seen as specialized hunters of large megafauna, including the now extinct mammoth, giant bison, camel, and ground sloth, as well as many other big game species. To a lesser extent, small animal and plant resources were also procured (McNees et. al. 1999). McNees et al. (1999) refers to this period as the Northwest Plains Pleistocene-Holocene Transition Adaptation.

The Clovis Complex (~11,500-10,900 B. P.) represents the earliest Paleoindian occupation that has been well established in the United States. There is more recent data indicating that a pre-Clovis occupation may have existed, though the data is still inconclusive. The Clovis Period is characterized by large, well made fluted points, often associated with faunal remains, including the extinct mammoth. The Colby site (48WA322) in the Bighorn Basin suggests planned mammoth hunting (Frison and Todd 1986). Portions of the remains of at least eight mammoths were recovered (Frison et. al. 1996). Other mammal remains were also recovered in much smaller numbers. These included bison, camel, horse, pronghorn and jackrabbit (Frison et. al. 1996).

The Goshen Complex (Frison 1996), which some archaeologists ascribe as coeval with Clovis, may represent the beginnings of a transition from a specialized big-game hunting adaptation to part-time bison-hunting adaptation (Frison et al. 1996; McNees et al. 1999). Goshen Complex sites date around 11,300-11,000 B. P. (Frison et al. 1996; McNees et. al. 1999). The Goshen complex was first described at the Hell Gap site in Wyoming (Frison et. al. 1996). Goshen points are very similar to Plainview and Midland points. Frison et al. (1996) suggest that the Goshen complex should be referred to as Goshen-Plainview when dealing in the Northern Plains, because the relationships among Goshen, Folsom, Plainview, and Midland are unclear.

The Folsom complex (10,900-10,200 B.P.), whose hunting adaptations appear to concentrate on taking bison, are often seen as the descendants of the Clovis Complex. Folsom points are characteristic of this complex, being smaller and more finely crafted than the preceding Clovis points. Major Folsom sites are generally located in topographic areas conducive to bison hunting by means of traps and drives (Frison et al. 1996). The Hanson Site (48BH329), located in northeast Bighorn Basin contained both fluted and unfluted Folsom points (Frison and Bradley 1980). The Midland Complex (10,700-10,400 B. P.) slightly overlaps Folsom and Agate Basin. The points are similar to Goshen and Folsom, though Midland points are not fluted. Some non-fluted points have been found in Folsom assemblages, again raising question to the relationship of the Midland complex to Goshen, Folsom, and Plainview (Frison et al. 1996).

Following the Folsom, the Late Paleoindian period is characterized by a proliferation of projectile point types and a shift to a broader subsistence base in mountain and foothill contexts (Frison 1992). The Agate Basin complex (10,500-10,000 B. P) is possibly a continuation of the

Goshen and Folsom complexes. The long and narrow Agate Basin points are thought to have been ideal for hunting bison and other large game (Frison and Stanford 1982). Efficient use of arroyo traps is evident during this complex (Frison et al. 1996). The Hell Gap complex point (10,000-9,500 B. P.), according to Frison (1991), point likely developed from the Agate Basin point. The two point types differ only slightly in that the Hell Gap points are wider and have a shoulder (Frison et al. 1996).

Alberta points (9,000-9,500 B. P.), first recognized in Canada, has broad stems and sharp shoulders and as such are hafted differently (Frison et al. 1996). The Alberta-Cody complex points (~10,000 B. P.) are similar to Cody and Alberta, thus the name. The Cody complex (8,800-9,300 B. P.) is characterized by Scottsbluff and Eden points. These points are found in a wide range of environmental settings. The Horner site (48PA29) is a Cody complex site within the Bighorn Basin (Frison and Todd 1987). This site yielded a large assemblage of Cody Knives and Eden and Scottsbluff projectile points (Frison 1991).

The Foothill-Mountain Paleoindian period (~8,000-10,000), proposed by Frison (1992) reflects a dichotomy between Foothill/Mountain and Plains groups. The foothill-mountain groups participated in a broad spectrum hunting and gathering strategy similar to the Archaic period, while the plains groups tended toward a more specialized big game, particularly bison, strategy (Frison et al. 1996). Frison originally proposed that the dichotomy between the Foothill/Mountain and Plains groups began around 10,000 B.P. and ended around 8,000 B. P. (Frison et al. 1996). However, Frison (1991) also states that there is enough evidence to suggest that the dichotomy persisted in various degrees throughout the prehistoric periods. Sites that provide evidence for this dichotomy in the Bighorn Basin region include Medicine Lodge Creek (48BH499), Little Canyon Creek Cave (48WA323), and Brush Shelter (48SW324) (Frison 1991). These cave and rock shelter sites produced fewer diagnostic points than is common in Plains sites. The points that are present differ from those found in Plains sites (Frison 1991). The Foothill-Mountain Paleoindian component at Medicine Lodge Creek site showed little evidence of Bison procurement. Instead, mule deer and mountain sheep were more commonly relied on for subsistence (Frison 1991).

Archaic Stage

The shift from the Paleoindian Stage to the Archaic Stage is marked by the change from stemmed and lanceolate points to side-notched varieties and a change in subsistence practices (Francis 1983; Frison 1991, Larson 1997). Frison (1991) breaks the Archaic period into three periods: Early, Middle, and Late.

The Early Plains Archaic (8,000-4,000 B. P.) is arguably the least understood and most controversial of the prehistoric periods. Previous thought was that during the Altithermal, an arid climactic period of warmer temperatures, the plains would have been unable to support sufficient bison populations for a cooperative bison-hunting subsistence strategy (McNees et al. 1999). Currently it is believed that a bison hunting adaptation continued on some level throughout the Altithermal, though the general bison population and human activity was lower (McNees et al. 1999). The paucity of early Archaic sites may also reflect poor site preservation and visibility. The Early Plains Archaic is marked by the appearance of side-notched points (Bitterroot/Northern side-notched points) and, according to Frison et al. (1996), an increase in

plant resource usage. Leigh Cave (48BH304), a rock shelter in the foothills of eastern Bighorn Basin with Early and Middle Archaic components, showed evidence of plant use including wild onion, buffalo berry, thistle, wild rose, wild rye, and yucca (Frison and Huseas 1968, Frison 1991). The roasting pits in this site had remains of roasted Mormon Crickets (Frison 1991).

The Middle Plains Archaic (~4,000-3,000 B. P.), as Frison (1991) describes it, is characterized by the presence of McKean complex projectile points (Frison 1991). The Altithermal ended, more modern climates were established, and the modern subspecies of bison had evolved (Frison et al. 1996). Stone circles, or tipi rings, begin to appear in the archaeological record. Stone circles, fire or roasting pits, slab lined pits, and grinding stones became more prevalent. The McKean complex is defined by the McKean lanceolate point, which have deep to shallow basal notching, as well as Duncan points, Hanna points, and Mallory side-notched points (Frison et al. 1996). The McKean complex appears to have overlain a variety of distinct settlement and subsistence strategies in a wide geographical area (McNees et al. 1999). The McKean complex is well represented in the Bighorn Basin. The Dead Indian Creek Site (48PA551), located in a small basin northwest of the Bighorn Basin, is a winter camp that shows extensive use of mule deer and lesser use of mountain sheep (Frison 1991). The site yielded grinding slabs and manos, suggesting at least some plant resource utilization (Frison 1991) and possibly a house pit (Frison 1991). Other sites with a Middle Plains Archaic component in the Bighorn Basin include Medicine Lodge Creek (48BH499), Granite Creek Rock Shelter (48BH330), Leigh Cave (48BH304), The Bighorn Canyon Sites (Sorenson and Bottleneck), Paint Rock V (48BH349), and Beehive (48BH346) (Frison 1991, Hall 1998).

The Late Plains Archaic (~3,000-1,500 B. P.) showed an increase in sites as evidenced by the rise in the number of radio carbon dates (Frison 1991; Frison et al 1996). Projectile point styles of this period include Pelican Lake, Yonkee, Besant (Frison 1991). The use of caves and rock shelters in the Absaroka and Bighorn Mountains was prevalent during this period. The Spring Creek Cave and Daugherty sites, located on the western slopes of the Bighorn Mountains, yielded basketry fragments, woodworking debris, bark cordage, sinew, hide, feathers, shell, porcupine quills, and wooden and elk antler digging tools (Frison 1991; Frison et al 1996). Both sites show evidence for atlatl and dart manufacturing and use (Frison et al. 1996). The digging tools suggest recovery of plant resources such as wild onion, sego lily, bitterroot, and biscuitroot (Frison et al. 1996).

Late Plains Prehistoric Stage

There is no clear boundary between the Late Plains Archaic and the Late Prehistoric periods. The transition between the two periods appears to represent an overlap of technological traditions further complicated by an apparent Archaic hunting and gathering life way which continued in the Bighorn Basin almost into the Historic period (Frison et al. 1996). The Late Plains Prehistoric period is marked by a change in projectile point types and sizes related to the adoption of the bow and arrow, and use of ceramics (Frison 1991). The end of the Late Plains Prehistoric period is placed at the onset of the dramatic changes that the acquisition of European-American trade goods, horses (Ewers 1955), firearms, and population movements and dislocations wrought on the settlement and subsistence patterns (McNees et al. 1999).

Avonlea represents the first appearance of groups using exclusively bow and arrow technology (Hall 1998). Avonlea sites are typically located in and around buttes which, according to Frison

(1991), suggests either a defensive tactic or a need for greater visibility. Slab-lined pits are common in Avonlea sites (Frison 1991). Avonlea sites in the Bighorn Basin appear to be a local variation since the basin was unsuitable for large bison herds due to climatic conditions (Frison 1991). Instead, Avonlea groups in the Bighorn Basin region focused on mule deer and bighorn sheep as their primary faunal resource (Hall 1998). The Beehive site (48BH346), Medicine Lodge Creek (48BH499), and Wortham Shelter (48BH730) are examples of sites in the Bighorn Basin with an Avonlea component (Frison 1991).

Pottery is another marker of the Late Plains Prehistoric period, though it started to appear near the end of the Late Plains Archaic period (Frison 1991). Besant complex sites have Woodland-type ceramics, sites with Plains side-notched and tri-notched points have Intermountain Tradition ceramics (interpreted as Shoshonean) and Mandan-Hidatsa Tradition (interpreted as Crow Indian) ceramics. These ceramic traditions are often seen as incursion from outside groups into the region. According to McNees et al (1999) the Mandan Tradition complex was associated primarily with the foothills of the Bighorn Mountains and adjacent areas of Montana and South Dakota. A number of distinct groups resided in the region by the Late Prehistoric period (McNees et al. 1999).