Life and Death on the Northwestern Plains: Mortuary Practices and Cultural Transformations

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The study of human burials provides us with a rich source of information about people's lives-who they were, what activities they pursued during life, and how they may have participated in rituals of death and mourning. Bioarchaeologists consider skeletal biology, mortuary offerings, and the archaeological context in order to make interpretations about the past. Archaeologists and physical anthropologists have studied human burial sites from the Northwestern Plains since the inception of professional archaeology in the region during the 1930s. Most mortuary sites include one or two individuals found in isolated, often threatened, graves. The majority have been excavated under salvage conditions in order to preserve the materials from destruction related to road and reservoir construction, mineral development, and erosion. In this chapter, overall assessment is provided of bioarchaeology on the Northwestern Plains. Significant trends are highlighted concerning temporal information, mortuary contexts, and paleodemography, combined with osteobiographical portraits. The sample includes all known recorded burials from a portion of the Northwestern Plains, defined here as all of Wyoming, the eastern two-thirds of Montana, northeastern Colorado, and extreme western Nebraska (Figure 2.1). The defined area thus partially overlaps the Intermountain Plateau and Rocky Mountains to the west and the High Plains on the east. This flexible border allows consideration of trends

in adjacent regions that were probably visited by highly mobile people. The sample consists of 302 sites and 706 individuals recorded throughout the area, with the highest concentrations in the state of Wyoming (Figure 2.2).

History of Bioarchaeological Research

Early Projects

The earliest professional recovery of human skeletal remains on the Northwestern Plains was conducted by the Works Progress Administration (WPA) during the 1930s (Mulloy 1958; Snodgrass 1958; Woolworth et al. 1960) and by archaeologists working for the River Basin Surveys (RBS) of the Missouri Basin Project from the 1940s to the 1960s (Bass 1981; Krause 1998; Wedel 1947). The WPA projects were conceived as federal aid assistance for unemployed laborers, whereas archaeologists working for the RBS recovered burials from sites that were threatened by water inundation from reservoir construction. Most of this early work occurred in southern Montana and northern and central Wyoming. During this time, the recovery of skeletal remains was not treated as particularly significant for addressing prevailing questions of chronology and typology, and little or no analysis followed (Snodgrass 1958; Wedel 1948). A well-known example of one of these projects is excavations at Pictograph Cave (24YL1), a site located

Skeletal Biology and Bioarchaeology of the Northwestern Plains

Edited by

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Foreword by WILLIAM M. BASS

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FIGURE 2.1. Study area as a portion of the Northwestern Plains.



FIGURE 2.2. Distribution map of sites with burials.

in a large cave southeast of Billings, Montana (Mulloy 1958). From 1937 until 1941, the Montana Archaeological Survey excavated the site, under the auspices of the WPA. William Mulloy later developed a Northwestern Plains chronology based on his excavations of the site, published in A Preliminary Historical Outline for the Northwestern Plains (1958). The artifacts from this campsite were well preserved and included tanned leather, fletched arrows, and paint applicators-some of which may have been used to draw the more than 100 pictographs that gave the cave its name. During the excavations, the team also uncovered partial skeletons of nine individuals, including six adults and three children. The adults were primarily males, and the children ranged in age from fetal to six years old (Snodgrass 1958). They were associated with a Late Prehistoric-age occupation, and most were recovered from the same area of the cave, suggesting either a remembered and preferred place of burial or a catastrophic event leading to a mass burial. Information about the burial positions or potentially associated artifacts was not published.

Amateur Involvement

Avocational archaeologists involved with the Wyoming, Montana, and Colorado archaeological societies participated in a number of burial investigations, especially in the late 1950s and early 1960s (Bass and Barlow 1964; Galloway 1963a, 1963b; Medina 1975; Steege 1960; Stephenson 1962). These conscientious collectors often documented burial locations after disturbance by others, as well as occasionally participated in excavations of burial sites. Their involvement remains an important contribution to the study of prehistory on the Plains, although today they seldom participate in excavating human remains.

The Colorado Archaeological Society excavated a rockshelter known as the Bradford House III site (5JF52) on the Ken-Caryl Ranch southwest of Denver during 1974 and 1975 (Johnson and Lyons 1997). This campsite was used during Middle Archaic, Late Archaic, and Woodland time periods, as evidenced by rich deposits of stone tools, worked bone, unmodified fauna, and at least 20 hearth features (Gilmore 1999; Tate 1999). The Late Archaic occupation also revealed a 2,400-year-old single flexed interment in a prepared burial pit, located next to the wall of the shelter. This adult male was 40-50 years old when he died and probably had limited use of his right arm (Finnegan 1978). Two ground-stone metates were placed over his skull upon burial. This internment in the southern part of the study area represents one of only a handful of Northwestern Plains burials found in a multicomponent campsite.

Academic and Professional Archaeology

Dr. George Gill (1976a, 1976b, 1978, 1983, 1987) at the University of Wyoming has conducted most of the systematic bioarchaeology in Wyoming since the 1970s. Because of the close relationship between archaeology and physical anthropology at the University of Wyoming, many human remains discovered through professional and cultural resource management projects have been analyzed by Gill, so that files on most of the burials recovered within the state are available for study. Contributions by the Office of the Wyoming State Archaeologist in particular are also noteworthy (e.g., Truesdale and Gill 1987; Zeimens et al. 1978). Most systematic excavations have been conducted for the purposes of collecting biological and cultural information about Plains populations for comparative studies (Gill 1991a). Research during the last decade has led to increased involvement of Native Americans in the excavation, curation, and repatriation of some of these remains.

The lack of a professional physical anthropologist in Montana or Colorado devoted to Plains bioarchaeology, combined with active Native American involvement with the disposition of unmarked graves (e.g., the Colorado Commission of Indian Affairs) and the passage of the Native American Graves Protection and Repatriation Act (NAGPRA) in 1990, has probably contributed to the decline of burial recovery and bioarchaeological research in these states during the last three decades. However, professionals from Montana State University (Malouf 1964), the University of Montana (Arthur 1966), the University of Colorado). The Late Archaic .00-year-old single burial pit, located .his adult male was and probably had nnegan 1978). Two iced over his skull i the southern part of only a handful of ind in a multicom-

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TABLE 2.1. Publications in Northwestern Plains Bioarchaeology by Decade and Publication Type

Decade	State Journal	Regional Journal	National Journal	Book Chapter	Total
1930–1939	0 (.0%)	0 (.0%)	1 (11.1%)	0 (.0%)	1 (.7%)
1940-1949	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)
19501959	4 (4.8%)	0 (.0%)	0 (.0%)	1 (6.3%)	5 (3.6%)
1960-1969	31 (37.3%)	8 (25.0%)	2 (22.2%)	0 (.0%)	41 (29.3%)
1970-1979	17 (20.5%)	9 (28.1%)	2 (22.2%)	4 (25.0%)	32 (22.9%)
1980–1989	21 (25.3%)	9 (28.1%)	1 (11.1%)	3 (18.7%)	34 (24.3%)
1990-1999	10 (12.1%)	4 (12.5%)	2 (22.2%)	8 (50.0%)	24 (17.1%)
2000-2005	0 (.0%)	2 (6.3%)	1 (11.1%)	0 (.0%)	3 (2.1%)
Total	83 (100.0%)	32 (100.0%)	9 (100.0%)	16 (100.0%)	140 (100.0%)

(Anderson 1966), and Northern Colorado University (Brunswig and Wanner 1993) have analyzed previously excavated remains and have rescued threatened burials when needed.

Publications

As with all archaeological information, research results need to be disseminated outside the laboratory to have an impact on interpretations about the past. Authors have written about burials and burial practices from the Northwestern Plains since the 1930s (Table 2.1 [e.g., Howells 1938; Mulloy 1958]). During the last four decades, more than 100 articles or book chapters have been published (Scheiber and Gill 1997). Despite, or because of, NAGPRA legislation, nearly 30 articles have been published since the law was passed in 1990 (e.g., Carlson et al. 1999; Gleichman and Mutaw 1994; Owsley and Hunt 2001).

Most articles that discuss Northwestern Plains burials have been published in state journals, such as the Wyoming Archaeologist (Buff 1990; Gill 1978; Korell 1981), Archaeology in Montana (Brumley 1974; Frison and Van Norman 1985), and Southwestern Lore (Breternitz and Wood 1965; Scott and Birkedal 1972; see Table 2.1). Regional journals such as Plains Anthropologist have also published the results of bioarchaeological studies (Gill and Lewis 1977; Sheridan et al. 1992), and chapters in books such as Bioarcheology of the North Central United States (Scheiber and Gill 1997), Prehistoric Hunters of the High Plains (Gill 1991a), and Skeletal Biology of the Great Plains (Gill 1994) provide useful syntheses. On the other hand, national journals such as American Antiquity are less likely to include bioarchaeology-driven research, except when it concerns Paleoamerican remains (Breternitz et al. 1971; Lovvorn et al. 1999).

BIOARCHAEOLOGY OF Northwestern Plains Populations

In the most commonly applied cultural framework (Frison 1991), the earliest human occupation in the New World is called Paleoindian or Paleoamerican. It is followed in time by three Archaic periods: Early, Middle, and Late. The next period, called the Late Prehistoric, is sometimes subdivided into Early Ceramic (or Woodland) and Middle Ceramic. The Protohistoric (or Late Ceramic) is the time period just preceding European settlement, and the Historic period on the Northwestern Plains usually dates to between AD 1800 and 1900. Burials dating to at least seven identifiable cultural time periods are documented in the study area of Wyoming, Montana, Colorado, and Nebraska (Table 2.2). These 507 individuals from 171 sites span all time periods and include individuals from a variety of ethnic identities. Many of these burials have been chronometrically aged with the assistance of radiocarbon dating (Table 2.3). An additional 199 individuals and 131 sites are not dated. With the fairly steady accumulation of data over the years, some

	TOTAL SITES		Total Individuals Reported			Total Individuals with Recorded Information			
Time Period	Ŋo.	% Within All Time Periods	% Within Known Time Periods	No.	% Within All Time Periods	% Within Known Time Periods	No.	% Within All Time Periods	% Within Known Time Periods
Paleoindian	2	.7	1.2	3	.4	.6	3	1.2	1.6
Early Archaic	3	1.0	1.8	3	.4	.6	3	.6	.8
Middle Archaic	2	.7	1.2	3	.4	.6	3	.9	1.2
Late Archaic	21	7.0	12.3	25	3.6	4.9	19	5.8	7.6
Woodland	19	6.3	11.1	123	17.4	24.3	61	18.5	24.5
Late Prehistoric	44	14.6	25.7	93	13.2	18.3	71	21.5	28.5
Protohistoric– Historic	80	26.5	46.8	257	36.4	50.7	89	27.0	35.7
Unknown	131	43.4		199	28.2		81	24.5	
Total	302	100.0	100.0	706	100.0	100.0	330	100.0	100.0

TABLE 2.2. Northwestern Plains Burials by Time Period

Note: Recorded information = osrcological data: age and/or sex.

broad research questions can be addressed, including biological and cultural change through time and demographic and pathological trends.

The Ancient Ones (11,200-3000 BP; 9250-1050 BC)

Human burials from the Northwestern Plains that are more than 3,000 years old are extremely rare. To date, only seven sites and nine individuals have been recovered from Paleoindian, Early Archaic, and Middle Archaic contexts (Carlson et al. 1999; Gill 1984, n.d.; Stewart 1964; Zeimens et al. 1978; see also Magennis et al. 2000). The chronometric association for most of these sites was determined by radiocarbon dating. The remains were found isolated and in habitations, from both primary and secondary interments. Individuals age from young children to elderly adults, and most remains are fragmentary. Those that are relatively complete and mature may demonstrate less pronounced East Asiatic features (i.e., the Mongoloid skeletal complex) than more recent Native American populations, suggesting that microevolution during the last 11,000 years was slow and gradual (Gill, this volume [ch. 17]; Lovvorn et al. 1999). However, given the variable recovery in space and time, neither biological nor cultural connections between the individuals can be easily traced.

The two earliest locations with human remains are the Anzick site (24PA506) in south-central Montana and the Gordon Creek site (5LR99) in north-central Colorado, both initially investigated during the 1960s. These remains have recently been the focus of reanalysis and discussion, especially vis-à-vis the recovery of and subsequent power struggle over the early skeleton from Washington State known as the Ancient One or Kennewick Man (Muniz 2002; Owsley and Jantz 2001; Swedlund and Anderson 1999).

At the Anzick site, a one-and-a-half-year-old child was placed in a grave almost 11,000 years ago, with more than 100 stone tools and bone artifacts such as finely crafted oval and lanceolate bifaces, fluted Clovis projectile points, and large mammal bone foreshafts (Lahren and Bonnichsen 1974; Owsley and Hunt 2001).¹ Someone in the group applied a thick layer of red ocher to the child's body and the chosen funerary objects in preparation for burial and placed them in a rock ledge overlooking the surrounding countryside. The people who made the diagnostic Clovis stone tools ("Clovis" people) often left behind caches of beautifully crafted objects (Frison 1991:41), but this is the only cache known from a mortuary context (Owsley and Hunt 2001). Perhaps the people who buried

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> and bone artifacts and-a-half-year-old 1 Jantz 2001; Swedι from Washington s have recently been y context (Owsley , but this is the only ck ledge overlookscussion, especially people who buried Bonnichsen 1974; and large mammal **Dne or Kennewick** subsequent power lanceolate bifaces,

 24.5 100.0	27.0	21.5	18.5	5.8	.9	.6	1.2	(individua ded Infor % % Within All Time Periods
100.0	35.7	28.5	24.5	7.6	1.2	.00	1.6	LS WITH MATION % Within Known Known Time Periods

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TABLE 2.3. Radiocarbon Dates Associated with Northwestern Plains Burials

Site Name (Site No.)	Lab No.	Date bp	Calibrated Date Range, one sigma ⁴	Source	Reference(s)
Paleoamerican			· · ·		
Anzick (24PA506)	Not reported	Not reported	вс 9600 ± 60	bone	Owsley and Hunt 2001
Anzick (24PA506)	Not reported	Not reported	вс 8730 ± 50	bone	Owsley and Hunt 2001
Gordon Creek (5LR99)	GX-0530	9700 ± 250	вс 9380 (9216) 8694	bone	Breternitz et al. 1971
Gordon Creek (5LR99)	Not reported	9400 ± 120	вс 9088 (8672) 8480	bone	Swedlund and Anderson 1999
Anzick (24PA506)	Not reported	Not reported	вс 6650 ± 90	bone	Owsley and Hunt 2001
Early Archaic					
J. David Love (48SU4479)	B-169796	7290 ± 50	вс 6214 (6156) 6097	sediment	University of Wyoming (UW) Oste- ology Lab file
Dunlap-McMurry (48NA67)	RL-651	5350 ± 160	вс 4345 (4191) 3979	charcoal	Zeimens et al. 1978
	RL-543	5250 ± 150	вс 4317 (4020) 3944	charcoal	Zeimens et al. 1978
Meadow Draw (48UT63)	RL-1150	5040 ± 160	вс 3982 (3858) 3653	bone	UW Osteology Lab file
Sidney (25CH55)	B-66571, CAMS-9886	3710 ± 60	вс 2466 (2427) 2288	bone	Lovvorn et al. 1999
Late Archaic					
Wind River Canyon (48HO10)	RL-1876	3520 ± 140	вс 2030 (1823) 1685	charcoal	Frison and Van Norman 1985
Witkin (5AH6)	GX-725	3190 ± 80	вс 1522 (1471) 1400	bone	Swedlund and Goodman 1966
Jimmy Allen (48PA899)	Not reported	2940 ± 260	вс 1490 (1172) 826	charcoal	Wyoming Cultural Records
Whitewater (24PH9001)	Not reported	2620 ± 200	вс 799 (637) 403	bone	UW Osteology Lab file
Enron (48SW595)	Not reported	2550 ± 70	вс 802 (675) 546	feature fill	UW Osteology Lab file
Boar's Tusk (48SW502)	RL-617	2480 ± 110	вс 799 (637) 403	bone	Eakin 1980
Bradford House III (5JF52)	UGa-993	2440 ± 185	вс 801 (447) 263	bone	Finnegan 1978; Medina 1975
Willson (48GO9003)	UCR-3696A, CAMS-54126	2100 ± 40	вс 195 (134) 49	bone	UW Osteology Lab file
Willson (48GO9003)	UCR-3696B, CAMS-56209	2080 ± 40	вс 168 (76) 4	bone	UW Osteology Lab file
Weld Burial (5WL2055)	B-39363	2080 ± 160	bc 360 (75) ad 79	bone	Wanner and Brunswig 1992
Iron Jaw (24RB93)	TX-3066	1790 ± 50	ad 134 (240) 323	wood charcoal	Gill and Clark 1983

rith human remains 5) in south-central 2ek site (5LR99) in nitially investigated

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Site Name (Site No.)	Lab No.	Date bp	RANGE, ONE SIGMA ²	Source	Reference(s)
Woodland			·	· · · · · · · · · · · · · · · · · · ·	
Benick Ranch (48AB571)	B-36257, ETH-6378	2340 ± 70	вс 410 (398) 380	bone beads	Davis 1992
Benick Ranch (48AB571)	B-49929	1510 ± 60	ad 441 (550) 636	bone	Davis 1992
Benick Ranch (48AB571)	B-48470	1400 ± 60	ad 604 (652) 669	bone	Davis 1992
Ehrlich (5WL1813)	B-47466	2095 ± 185	вс 198 (108) 3	charcoal	Brunswig and Wanner 1993
Ehrlich (5WL1813)	B-50673	1740 ± 60	ad 238 (290) 389	charcoal	Brunswig and Wanner 1993
Ehrlich (5WL1813)	B-46465	710 ± 60	ad 1268 (1287) 1379	bone	Brunswig and Wanner 1993
Carter Lake (SLR42)	B-59298	1850 ± 90	ad 69 (133) 318	charcoal	Gleichman and Mutaw 1994
Carter Lake (5LR42)	B-59297	1650 ± 90	ad 260 (412) 534	charcoal	Gleichman and Mutaw 1994
Hutcheson (5LR97)	GX-531	1805 ± 105	ad 82 (237) 379	bone	Wade 1966
Michaud A (5AH2)	GX-0529	1800 ± 105	ad 82 (238) 383	bone	Wood 1971
Muddy Creek (48CR325)	RL-1338	1790 ± 70	ad 131 (240) 339	wood	Reher 1987
Kerbs-Klein (5WL47)	RL-188	1780 ± 130	ad 82 (243) 413	bone	Scott 1979
Huntley (48GO7)	UCR-3697B, CAMS-56211	1730 ± 40	ad 242 (306) 390	bone	UW Osteology Lab file
Huntley (48GO7)	UCR-3697A, CAMS-56210	1680 ± 40	ad 263 (388) 418	bone	UW Osteology Lab file
Dicken (48GO9004)	B-37535	1570 ± 60	ad 420 (474) 560	bone	Adams 1991
Hazeltine Heights (5AM3)	I-885	1305 ± 100	ad 648 (688) 849	bone	Buckles et al. 1963
Badlands (25SX9001)	NWU-61	750 ± 90	ad 1215 (1278) 1376	charcoal	Gill and Lewis 1977
Late Prehistoric					
County Line Draw (48PL9001)	Not reported	1700 ± 60	ad 256 (364) 418	bone beads	UW Osteology Lab file
Aurora (5AH244)	B-4730	1570 ± 95	ad 402 (474) 602	charcoal	Gilmore et al. 1999
Torrington (48GO6)	UCR-3691	1540 ± 40	ad 435 (502) 569	bone?	UW Osteology Lab file
Aurora (5AH244)	B-4733	1230 ± 80	ad 686 (778) 892	bone	Gilmore et al. 1999
Aurora (5AH244)	B-4732	1040 ± 50	ad 978 (1000) 1023	charcoal	Gilmore et al. 1999
Bairoil (48SW7101)	B-26887	1430 ± 60	ad 584 (640) 660	feature charcoal	Sheridan et al. 1992
Lena Gulch (5JF1780)	B-126837	1430 ± 50	ad 599 (640) 658	charcoal	Jepson and Hand 1999
Lena Gulch (5JF1780)	B-124401	1310 ± 40	ad 663 (687) 768	charcoal	Jepson and Hand 1999

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TABLE 2.3. (cont'd) Radiocarbon Dates Associated with Northwestern Plains Burials

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Aurora (5AH244)	B-4733	1230 ± 80	ad 686 (778) 892	bone	Gilmore et al. 1999
Aurora (5AH244)	B-4732	1040 ± 50	ad 978 (1000) 1023	charcoal	Gilmore et al. 1999
Bairoil (48SW7101)	B-26887	1430 ± 60	ad 584 (640) 660	feature charcoal	Sheridan et al. 1992
Lena Gulch (5JF1780)	B-126837	1430 ± 50	ad 599 (640) 658	charcoal	Jepson and Hand 1999
Lena Gulch (5JF1780)	B-124401	1310 ± 40	ad 663 (687) 768	charcoal	Jepson and Hand 1999

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TABLE 2.3. (cont'd) Radiocarbon Dates Associated with Northwestern Plains Burials

Site Name (Site No.)	Lab No.	Date bp	Calibrated Date Range, one sigma ^a	Source	Reference(s)
Mummy Cave (48PA201)	I-1009	1230 ± 110	ad 665 (778) 958	debris	Husted and Edgar n.d.
Shute Creek (48LN1296)	Not reported	1100 ± 70	ad 887 (930) 1017	bone	Gillam 1989
Shute Creek (48LN1296)	B-27117	1060 ± 90	ad 892 (991) 1029	bone	Gillam 1989
PK Burial (48SH308)	A-548	`990 ± 240	ad 778 (1023) 1278	bone	Haynes et al. 1967
Hanna Seminoe 1 (48CR121)	RL-736	910 ± 100	ad 1020 (1114) 1240	bone	UW Osteology Lab file
Espy-Cornwell (48CR4001)	B-10696	890 ± 70	ad 1033 (1161) 1221	juniper beads	Truesdale 1984
Antelope Mine (48CO481)	Not reported	790 ± 200	ad 1023 (1259) 1395	unknown	Greiser et al. 1982
Turk (48WA301)	A-583	760 ± 160	ad 1061 (1276) 1393	bone	Haynes et al. 1967
Rattlesnake (24MO1071)	GX-2976	490 ± 160	ad 1301 (1430) 1627	bone	Taylor et al. 1974
Stone Fence (48CR933)	RL-1005	460 ± 110	ad 1334 (1439) 1616	bone	Miller and Gill 1980
Protohistoric		-			
Bridger Gap (48UT920)	B-13156	90 ± 60	ad 1671 (1805) 1955	wood	Truesdale and Gill 1987

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Note: Site numbers beginning with 9000 are temporary designations. Only dates from directly associated artifacts or features or from bone are included. ^a Stuiver and Reimer 1993; Stuiver et al. 1998; Stuiver et al. 2005.

BURIAL CONTEXT	Late Archaic	WOODLAND	Late Prehistoric	Protohistoric– Historic
Crevice	3 (15.8%)	1 (6.2%)	15 (38.5%)	40 (56.3%)
Mound/Cemetery	0 (.0%)	10 (62.5%)	0 (.0%)	3 (4.2%)
Isolated	13 (68.4%)	4 (18.8%)	19 (48.7%)	14 (19.7%)
Other	3 (15.8%)	2 (12.5%)	5 (12.8%)	14 (19.7%)
Total	19 (100%)	17 (100%)	39 (100%)	71 (100%)

FABLE 2.4. Northwestern Plains Burial Contexts	ŝ
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Note: Table does not include sites older than Late Archaic (n = 7), sites from unknown time periods (n = 131), or sites from known time periods with unknown burial contexts (n = 13). "Other" includes above ground, cairn, habitation, and none of the above.

this child did not plan to return to their "cached" objects, and the presence of these finely crafted items may suggest that the child maintained a particularly special place in the community.

Only a handful of human remains dating to the Early and Middle Plains Archaic have been identified. In southwestern Wyoming, an older female was interred in a hearth feature within a pit house that was radiocarbon dated to about 7,300 years ago after she was discovered during mitigation excavations at an oil well pad in 2002 (48SU4479 [Gill 2002]). At the Dunlap McMurry site (48NA67) located near Casper, Wyoming, an elderly man aged 50–65 years was found buried in a shallow pit among dozens of fire pits in a 6,000-year-old campsite (Zeimens et al. 1978). A crew from the Office of the Wyoming State Archaeologist and the University of Wyoming salvaged this site during highway construction in 1975. This burial pattern of bodies buried or placed in the middle of camp deposits is also observed during the Middle Plains Archaic at the McKean site (48CK7 [Frison 1991; Haspel and Wedel 1983]) and the Dead Indian Creek site (48PA551 [Gill 1984]), both in northern Wyoming.

Late Plains Archaic

(3000-1500 BP; 1050 BC-AD 450)

Archaeologists have documented an increased number of sites and presumably of people on the Northwestern Plains after about 3,000 years ago. Late Plains Archaic hunter-gatherers occasionally participated in communal bison hunting, with material culture ranging from coiled basketry to ground stone to diagnostic corner- and side-notched dart points. At their campsites, they constructed features such as fire pits and boiling features, stone circles, and pit houses (Frison 1991).

Twenty-one potential Late Plains Archaic burial sites have been recorded on the Northwestern Plains, with 25 individuals. Late Archaic burials are fairly evenly distributed throughout most of Wyoming (except for the central part of the state) and the eastern one-third of Montana. Only a few Late Archaic burials have been identified in Colorado. Individuals of the Late Archaic were primarily buried in isolated shallow pits, although some were also placed in rockshelters, campsites, and cairns (Table 2.4). Single interments are the dominant pattern (90 percent) in Late Archaic grave sites.

Late Archaic burials are often difficult to recognize because they lack diagnostic artifacts and patterned burial practices. Of the 25 in this sample, 13 (52 percent) have been dated through radiocarbon analysis or by the presence of associated diagnostic artifacts such as projectile points. The remaining burials were designated Late Archaic sites based on cranial morphology, the presence of ground stone, burial style, and stratigraphy. Without better dating methods and more stringent criteria for assigning periods, analysis of morphological and cultural temporal trends in burials may be jeopardized. The Northwestern Plains chronology is primarily based on changes in weapon technology. Because projectile points rarely occur in Late Archaic burials, other criteria must be used. Conversely, the absence of chipped-stone points found in burials during this time period is itself a clue to Late Archaic lifeways and the potential decreased TAF

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Life and Death on the Northwestern Plains

TABLE 2.5. Northwestern Plains Burials, Age Distribution by Cultural Time Period

Age (years)	Late Archaic	Woodland	Late Prehistoric	Protohistoric- Historic
< 15	0 (.0%)	12 (27.9%)	17 (30.9%)	22 (33.3%)
15-19	1 (5.6%)	4 (9.3%)	2 (3.6%)	6 (9.5%)
20-39	4 (22.2%)	13 (30.2%)	. 12 (21.8%)	26 (41.3%)
40+	13 (72.2%)	14 (32.6%)	24 (43.6%)	10 (15.9%)
Average	47. 7	31.4	33.0	25.0
Total	18 (100%)	43 (100%)	55 (100%)	63 (100%)

Note: Adults whose ages could not be further refined are not considered in this table.

PROTOHISTORIC-HISTORIC 40 (56.3%) 3 (4.2%) 14 (19.7%) 14 (19.7%) 71 (100%) known time periods with

ieir campsites, they re pits and boiling ouses (Frison 1991). ce Plains Archaic on the Northwest-Late Archaic burihroughout most of al part of the state) ontana. Only a few identified in Colo-

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its, although some

ers, campsites, and

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TABLE 2.6. Northwestern Plains Burials, Sex Distribution	oy Cu	ultural Time Perio	ď
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Sex	Late Archaic	WOODLAND	Late Prehistoric	Protohistoric– Historic
Male	10 (45.5%)	19 (30.8%)	27 (32.1%)	23 (21.3%)
Female	7 (31.8%)	20 (29.2%)	24 (28.6%)	34 (31.5%)
Unknown/ Not Collected	5 (22.7%)	26 (40.0%)	33 (39.3%)	51 (47.2%)
Total	22 (100%)	65 (100%)	84 (100%)	108 (100%)

importance of weapons as symbols of personal possessions in mortuary rituals.

On average, people during the Late Archaic were generally in good health. The majority of the individuals in the sample (72 percent) were more than 40 years old, and almost all of them (94 percent) were more than 20 years old (Table 2.5). Their mean age is 48 years. No children and only one individual aged 15–19 years old have been recovered in a sample of 18 individuals. Females (41 percent) are less represented than males (59 percent; Table 2.6).

One of the Late Archaic sites that has been well dated is the 2,500-year-old Boar's Tusk site (48SW502), named after the large rock remnant of an ancient volcano on the edge of the Red Desert in southwestern Wyoming (Eakin 1980). A man in his fifties or sixties apparently fell facedown in the sand at the site, perhaps dying of old age, exhaustion, or both. His body was not laid to rest in a prepared burial but, instead, was eventually covered by the sand (Figure 2.3). He may have been alone or was traveling with people who chose not to bury him. Signs of spondylosis (a degenerative joint disease of the spine) and severe dental abscesses suggest normal signs of aging and a likely natural death (Gill 1991a). Extremely elderly individuals are most often associated with Late Archaic burials, such as Boar's Tusk and Iron Jaw (24RB93), found in a cairn burial in southern Montana (Gill 1983; Gill and Clark 1983).

Plains Woodland (1000-2000 BP; AD 0-1000)

The Plains Woodland period, sometimes referred to as the Early Ceramic, marks the introduction of ceramic cooking vessels into the material inventory of hunter-gatherers on the Northwestern Plains. Although debate continues as to the degree of migration of eastern Woodland ideas versus actual people, most of the data from the Northwestern Plains suggests largely in situ cultural change without biological replacement (Johnson and Johnson 1998). Burials that date to the Plains Woodland period on the Northwestern Plains are geographically limited to the North and South Platte River drainages in southeastern Wyoming, northeastern Colorado, and western Nebraska and are thus more associated with the High Plains. They temporally overlap the terminal Late Plains Archaic and the beginning of the Late Prehistoric. For the present



FIGURE 2.3. Boar's Tusk individual.

study, burials from the Late Archaic Besant complex are categorized as Woodland because the two are often considered interchangeably at sites with burial mounds and pottery (Johnson and Johnson 1998:218). At least 19 burial sites on the Northwestern Plains represent Woodland occupations, with 123 individuals. Almost all of these contain multiple burials with as many as 37 individuals (although the majority have less than 10).

Colorado archaeologists have conducted much of the research concerning Plains Woodland mortuary patterns, called by some the Colorado Plains Woodland Mortuary complex (Breternitz and Wood 1965; Gilmore 1999). Dating of these burials has occurred primarily through radiocarbon determinations and diagnostic burial practices. Woodland peoples were often buried in flexed positions in ossuaries, burial pits, and earthen and rock mounds, occasionally with numerous shell and bone beads (see Table 2.4 Adams 1991; Breternitz and Wood 1965; Brunswig and Wanner 1993; Butler et al. 1986]). What this means is that multiple flexed burials are often identified as Woodland in the absence of other diagnostic material culture. Similarly, other burials that do not fit the "classic"

pattern may not be recognized as Woodland (Nickens 1977). Most of the sites that have been reported cluster around the beginning of the Plains Woodland period, that is 1,400 to 1,800 years ago. Burial practices may have changed during the later Woodland period, as evidenced by a 700-year-old subterranean burial in western Nebraska containing a single adult male and a complete pottery vessel (Gill and Lewis 1977). Perhaps through time, the ideas about proper burial changed from communal to individual and from public activities to private ceremonies. This change could be associated with an increased influx of Late Prehistoric peoples through time.

Many Woodland burials with multiple graves and grave offerings, such as the Bisterfeldt site (25SF3) in Sioux County, Nebraska (Breternitz and Wood 1965; Mattes 1965), and the Huntley site (48GO7) in Goshen County, Wyoming, were looted decades ago by artifact collectors, leaving little to study in terms of site context, burials, and funerary objects. Although the presence of pottery is the hallmark of the Woodland period, and in many ways separates this period from the Late Archaic, ceramic vessels or sherds are rarely found in Wood-



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Life and Death on the Northwestern Plains



FIGURE 2.4. Benick Ranch burials.

land burials (however, see Gill and Lewis 1977). Whatever these group interments represented to the people who constructed them, diagnostic lithic tools and pottery were not usually placed in the graves as funerary offerings. Instead, people were more often buried with ornaments and objects of personal adornment. Morphologically, the people buried at these sites are indistinguishable from those in the previous period (Davis 1992), thus posing the question of why and how this change in cultural beliefs about group cemeteries, funerary offerings, and flexed burial positions occurred.

Demographic analysis of Woodland burials demonstrates a mortality profile very different from that of the Late Archaic (see Table 2.5). The age profile divides fairly evenly among individuals less than 15 years old (28 percent), 29 to 39 years old (30 percent), and more than 40 years old (33 percent). A small number of teenagers (9 percent) complete the total. The average age is 31 years. Based on a sample of 43 individuals, people during this time were no longer regularly living to old age and had a much higher incidence of youth and infant mortality. The sample is composed of 51 percent females and 49 percent males (see Table 2.6).

Burials at the Benick Ranch site (48AB571), located on a terrace of the Laramie River in southern Wyoming, provide a detailed look at what appears to be a typical Woodland pattern (Davis and Miller, this volume; Figure 2.4). Six individuals were buried in a group interment about 1,500 years ago, including three children under the age of six years old and two older adults aged 44 to 65 years (Davis 1992). These individuals show pathologies common to hunter-gatherers, such as osteoarthritis of the vertebral column, dental abscesses, and transverse lines of arrested growth.

The Dicken site was salvaged during winter 1990 by a team from Eastern Wyoming College and the University of Wyoming when gravel operations in Goshen County exposed a minimum of 12 skeletons (Adams 1991), buried 1,500 years ago on a terrace of the North Platte River in eastern Wyoming. Because of the fragmentary, crushed, commingled condition of the remains, a complete osteological analysis has not yet been completed. Of the 12 known individuals, three elderly adult women, one adult woman, five adult males, one adolescent, and one child are identified.

Isolated burials are uncharacteristic of the Woodland period on the Northwestern Plains. One example is an adult man found in Sioux County in western Nebraska (25SX25), fully extended and buried with a large complete Woodland vessel (Gill and Lewis 1977). This pattern is similar to Woodland practices in eastern Nebraska and Kansas, although morphologically the skeleton is identical to others from the Late Archaic and Woodland on the Northwestern Plains, including higher cranial height; larger, more rugged crania; greater robusticity; and greater stature (Gill and Lewis 1977:72). At 600 years old, this burial is almost 500 years younger than the rest of the known sample from the Northwestern Plains.

Late Prehistoric (1800–250 BP; AD 150–1700)

The Late Prehistoric period marks several changes in the lifeways of prehistoric people on the Northwestern Plains. Besides the introduction of ceramic vessels and the concomitant changes in cooking technology that occurred during the Woodland and continued here, the bow and arrow replaced atlatls and spears (Frison 1991). Some of the changes in projectile point types and pottery probably signify the movement of new peoples into the Plains, whereas others represent diffusion of ideas from other areas and interregional contact. The majority of the precontact burials found on the Northwestern Plains date to the Late Prehistoric period. Unlike burials from previous periods that often lack diagnostic artifacts, Late Prehistoric funerary offerings are more likely to include time-sensitive materials.

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Forty-four burial sites on the Northwestern Plains date to the Late Prehistoric period, with 93 individuals. Although so far none has been recorded from the middle or northwest parts of Wyoming, these burials are otherwise distributed fairly evenly throughout the study area. As during the Late Archaic, single interments are the most common during the Late Prehistoric (61 percent). However, two to five individuals were buried at 24 percent of the sites, and as many as nine individuals have been recorded. This pattern is more similar to the Woodland, although within different primary contexts.

As is the case in the Late Archaic, the majority of the Late Prehistoric burials were found in isolated contexts (49 percent; see Table 2.4). However, more than one-third was found in rockshelters (39 percent). This pattern represents a change from both the preponderance of isolated burials of the Late Archaic and the ossuary burials of the Woodland. The reasons that people may be buried in rockshelters are numerous and may include an increased habitation presence near escarpments and crevices, preferences for burial closer to the sky, or a decision to hide the dead from others.

The average age at death for these 55 individuals was 33 years, similar to the Woodland specimens (31 years; see Table 2.5). The highest frequencies of individual ages occur in the 40+ years category (44 percent), followed by the less than 15 years category (32 percent). The least number of individuals were aged 15-19 when they died. All of these data resemble the Woodland data. Females account for 47 percent, and males, for 53 percent, of the known sexed individuals (see Table 2.6).

An example of an unusual Late Prehistoric burial form is the Stone Fence burial (48CR933). This interment was recovered from a crevice in southcentral Wyoming during July 1977 after bones began to erode from a prominent sandstone outcrop (Miller and Gill 1980). Judging from the disarticound on the Northe Prehistoric period. 5 periods that often Prehistoric funerary clude time-sensitive

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tte Prehistoric burial al (48CR933). This a crevice in south-1977 after bones bec sandstone outcrop g from the disarticulated nature of the skeletal elements and the absence of certain bone elements, this middle-aged man was probably interred in a secondary bundle burial and was buried sometime between AD 1334 and 1616. Grave goods include a handful of bone beads. Bundle burials are well known from Protohistoric contexts several hundred years later but are not common during the Late Prehistoric. This individual retains Archaic physical features such as a mesocranic skull, small size, high vault, and less rugged cranium (Miller and Gill 1980:240), which are frequent traits among individuals living in this area of Wyoming called the Wyoming Basin.

Intergroup conflict is suggested based on skeletal indicators in several of the burials, including severe skeletal injuries (Sheridan et al. 1992), the presence of projectile points embedded in bone (Agogino 1962; Joyes et al. 1984; Martindale and Gill 1983), and to a lesser degree the presence of points in the graves (Bass and Lacy 1963; Galloway 1968; Grey 1963; Frison 1988; Truesdale and Gill 1984). This pattern is in strong contrast to both Late Archaic and Woodland burials. Projectile points, either embedded in bone or present in the burial assemblage, are found in one-third of the sites (Scheiber and Gill 1997). Distributions among males and females are equally high. Increased hostilities have been noted on the Central and Northern Plains during this time period as well (Blakeslee 1994; Hollimon and Owsley 1994; Owsley 1994). Increased competition for resources and territory may have led to these increased hostilities. The projectile points left as grave offerings may not necessarily indicate aggression but could be related to ideas and identities surrounding weapon technology and the afterlife. Less than half of the total number of burials with projectile points contain embedded points.

Projectile points that do indicate a prehistoric homicide were discovered at the Robber's Gulch site (48CR3595) in the Red Desert of southern Wyoming (Martindale and Gill 1983; Figure 2.5). An adult man in his thirties and two children aged 12 and 9 years were recovered. The man was lying facedown in an arroyo with 14 Late Prehistoric corner-notched projectile points embedded in his skeleton and contained in the body cavity. Gill (1991a) suggests that 12 arrows hit him from behind and two hit him from the front. Several large rocks were found on top of his body. The presence of the stones may suggest hurried concealment by his assailant(s). A deliberate placement by his group or other natural postdepositional processes are much less likely interpretations. The children found near him were not shot by arrows but may also have been victims of violence. An adult man from the Bairoil site, found in the same area of the state as the Robber's Gulch site, also showed multiple signs of trauma (Sheridan et al. 1992).

Protohistoric and Historic (300–100 BP; AD 1700–1900)

The majority of dated burials from the Northwestern Plains are from the Protohistoric and Historic period, a term used here to signify the time period after direct or indirect contact with Europeans until the end of the nineteenth century. Although archaeologists cannot positively associate most prehistoric populations with known tribal descendant groups, after about AD 1700 these tribal identities can be explored in more detail. The Northwestern Plains was a crossroads for numerous peoples during the Protohistoric, and many people buried their dead within the study area considered here. Some of these Native American inhabitants include the Crow, Lakota, Cheyenne, Arapaho, Blackfeet, Assiniboin, Atsina, Kiowa, Plains Apache, and Shoshone (Hanson 1998). The Flathead, Kutenai, Kalispell, Pawnee, Ute, and Bannock also visited the region. This was a dynamic time on the Plains frontier. European contact brought many changes, as Native peoples became increasingly involved with the fur trade and were pushed and pulled into new territories. These changes are reflected in subsistence and settlement strategies, marriage patterns, trade negotiations, labor, and demography (Champagne 1994; Dobyns 1992; Whelan 1983; Wolf 1982). Material inventories changed as well, as firearms, equestrian tackle, metal pots and ornaments, cotton and wool clothing, and glass beads were innovatively incorporated into native lifeways. Direct evidence of contact through intermarriage and intimate relationships is witnessed by mixedheritage individuals, both in this sample and in the



FIGURE 2.5. Robber's Gulch individual.

wider region (Lovell and Dublenko 1999; Scheiber and Gill 1997; Snow and Fitzpatrick 1988).

Two hundred fifty-seven individuals from at least 80 sites are associated with the Protohistoric. These numbers more than double sample sizes from all other known time periods and account for 47 percent of the total site sample and 51 percent of the total individual sample. This large sample size is probably related to a combination of factors, including the higher number of people who traversed this region, better preservation conditions, and improved dating techniques based on the presence of white European- or American-manufactured materials. Also, these burials were more actively sought by early collectors hoping to find old guns, knives, and beadwork (Frison, this volume). Estimating cultural affiliation is possible for some of these individuals, and repatriation efforts are under way in several cases (Douglas W. Owsley, personal communication 2003; Weathermon and Miller, this volume). of Ъŧ m tŗ Ŀ er al ti (1 w rc la Ь sl Ь 0 a v h b e

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Most Protohistoric burials in Montana have been recovered from the central part of the state, especially south-central Montana—the present location of the Crow and Northern Cheyenne reservations, established in 1851 and 1884, respectively. Protohistoric burials have been documented from most of Wyoming. The discovery of a large number

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of burials in the southeastern part of the state may be related to farming activities that have unearthed many of these below-ground graves. Also, many native groups actively participated in trading at Fort Laramie during its heyday from 1834 to 1890 (Lavender 1983). Numerous Protohistoric burials were also found in northwestern Wyoming, a traditional homeland for the Crow for at least 300 years (Frison 1967). The Big Horn Mountains in northwestern Wyoming provided appropriate terrain for rockshelter burials, which became common in the later periods (see Frison, this volume). The distribution in central Wyoming in particular marks a sharp change from the absence of Late Prehistoric burials from the same area. This rise may be a result of increased migration into the Wind River Basin and the establishment of the Wind River Reservation for the Shoshones and later for the Arapahos ca. 1868 (Larson 1965). Only one Protohistoric burial has been documented from either northeastern Colorado or the panhandle of Nebraska.

The majority of these Protohistoric burials (78 percent) were found as single interments, although as many as 15 individuals have been recorded from one site. Those sites with the highest number of individuals are often most closely associated with European trading posts, such as the Bordeaux Trading Post (Gill et al. 1984; Korell 1981), or with European-introduced diseases, such as smallpox (Frison, this volume). Individuals were frequently buried in rockshelters or small caves (56 percent) during the Protohistoric period, followed in frequency by isolated burials (18 percent; see Table 2.4). Similar to the case during the Late Prehistoric, numerous reasons could account for burial in rockshelters. Although ethnographers and explorers commonly described tree or scaffold burials on the Northwestern Plains, these account for only 9 percent of this sample. This absence may be related to looting or decomposition before official documentation. On the other hand, only during the Protohistoric are scaffold or tree burials documented at all. This burial practice is undoubtedly underrepresented in this summary.

The average individual age during the Protohistoric is 25 years (see Table 2.5). Many more people during the Protohistoric were dying at a young age, and very few older adults are found. The majority of the individuals in this sample of 63 (41 percent) were 20 to 39 years old. A high percentage (33 percent) of children less than 15 years old indicates that they were dying in similar numbers as young adults. Only a small number of individuals (16 percent) reached 40 years of age. The main difference between the Protohistoric/Historic Native Americans of the Northwestern Plains and their contemporary white pioneers is the reduced percentage of children among pioneers (one-third of the Native American sample is children, whereas one-sixth of whites are children [Scheiber and Gill 1997]). Within the Native Americans, slightly more females (60 percent) than males (40 percent) have been recorded (see Table 2.6), which also differs from the Historic pioneers, who are predominantly male (Gill, this volume, "Introduction").

The Pitchfork burials (48PA42) illustrate Protohistoric interments and lives on the Northwestern Plains during the expansion of the western frontier (Figure 2.6). Approximately AD 1810, two young men in their twenties died of unknown causes and were placed in a protected shelter of rocks on what 70 years later would become part of the Pitchfork Cattle Ranch in the Greybull River Valley of northwestern Wyoming (Edgar and Turnell 1978; Gill 1976a; Scheiber 1994). They were buried in extended positions with numerous European- and Native-manufactured objects including glass beads, dentalia shells, shell hair pipes, a metal earring and bracelet, buffalo robes, a blue or red coat with brass buttons, and a carved wooden bowl (Gill 1976a). Based on the high number of ectoparasites recovered from preserved hair, these individuals may not have been maintaining standard grooming practices or had poor nutrition, which led Gill and Owsley (1985) to suggest that they could have been living away from their home for as long as a year prior to their death. They must have had companions, as evidenced by their careful placement in a protected shelter of rocks. This is a concrete example of how bioarchaeology can be used to create detailed osteobiographies.

Another postcontact burial is the Korell-Bordeaux cemetery (48GO54), located in the vicinity of the old Bordeaux Trading Post, in operation



FIGURE 2.6. Pitchfork burial.

from the late 1840s to the early 1870s. Sixteen graves were discovered in 1980 by Alan Korell while clearing land for farming. This site is unique among Protohistoric/Historic burials because of the number of individuals and the number of associated funerary objects. Although other cemeteries of a similar time frame exist and have been recorded, little to no analysis has been conducted, usually because of looting activities. Over the course of possibly 70 years from 1830 to 1890, numerous individuals were buried in the cemetery, most in pine coffins and often with extensive grave goods of European manufacture. Most of these individuals were adult women (six individuals) and small children under seven years of age (seven individuals [Armstrong 1999; Armstrong and Furgeson, this volume; Gill 1987]). The artifact assemblage includes thousands of beads, copper bells, numerous fragments of clothing including children's shoes, marbles, a miniature tea set, copper bracelets, rings, sewing kits, and tobacco pipes (Armstrong 1999; Zeimens et al. 1987). At least three individuals were suffering from chronic infections at the time of death, although cause of death of these individuals is

unknown (Fisher n.d). A murdered adult white male, thought to be Cy Williams, also found in the cemetery has been extensively described (Gill et al. 1984).

BURIAL CONTEXT

The combined data from skeletal biology and mortuary analysis can contribute to our understanding of the past in several ways. This discussion focuses on two significant changes through time: burial context and paleodemography. Other contributors in this volume address issues of bone and dental pathologies, microevolution, and biological change through time, and therefore these issues will not be explored further here. Because of the very small Paleoamerican, Early Archaic, and Middle Archaic samples, I will confine this synthesis to the 143 sites and 218 individuals with recorded biological data from the Late Archaic, Woodland, Late Prehistoric, and Protohistoric periods.

The preferred context for burial varied markedly through time (see Table 2.4). Although burials in cairns, habitations, and scaffolds have been documented and account for 16 percent of the known



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urial varied mark-). Although burials ulds have been doccent of the known and dated Native American mortuary contexts, they have been grouped together as "other" for this analysis. I here compare the three most common contexts: isolated (34 percent), rock crevices (41 percent), and mounds/ossuaries (9 percent). Late Archaic burials are primarily found in isolated contexts, away from large rock formations, usually in the ground overlooking a terrace, riverbank, or other plain (68 percent). Late Prehistoric burials are also often isolated (49 percent), but rockshelter burials in small rock outcrops are much more frequent (39 percent). By the Protohistoric time period, though, rockshelter burials are much more common (56 percent) than isolated ones (20 percent). On the other hand, Plains Woodland burials are almost exclusively restricted to multiple individuals buried in low mounds or ossuaries (63 percent), with few isolated burials (19 percent) and only one crevice burial recorded. Although small sample sizes are considered, these differences are statistically significant (p = .000).

Demography

Mortality distribution also changed through time during the last 3,000 years on the Northwestern Plains. Age distributions were collapsed into several categories: preadults (< 15 years), teens (15–19 years), young adults (20–39 years), and old adults (40+ years). Distinct patterns emerge when examining the demographic profiles through time.

The number of Late Archaic child burials is very small in comparison with those in the other time periods (see Table 2.5). No child burials have been recorded. This absence may be explained by a much lower incidence of infant and youth mortality (statistically the number of children from the Late Archaic sample is lower than the number of children from all other periods; p = .18) or by limited sample sizes. On the other hand, child mortality was very similar throughout the last 2,000 years, averaging 23 percent of the Late Prehistoric, Woodland, and Protohistoric samples. This pattern is markedly different from the Central Plains, which demonstrates increased mortality of younger children through time and where even the Woodland populations show almost a 50 percent child mortality rate (Owsley and Bruwelheide 1997). Owsley and Bruwelheide (1997) attribute this decline to changing subsistence strategies from hunting and gathering to mixed horticulture, increased Euro-American contact and trade, and increased population with accompanying decline in sanitary conditions. The lack of increased child mortality on the Northwestern Plains shows that these populations were not affected by such problems.

A decreasing age at death among adults is also observed through time (p = .006; see Table 2.5). Subadult (15-19 years old) interments are uncommon through time, averaging 10 percent of individuals older than 15 years. Once individuals reached the teen years, they would more likely survive until at least early adulthood. On the other hand, the frequency of young adult (20–39 year old) deaths was low during the Archaic (22 percent of adults more than 15 years old) and steadily increased to reach its maximum during the Protohistoric (63 percent). In contrast, old adult (40+ years old) deaths were very high during the Archaic (72 percent) and decreased to the Protohistoric (24 percent). People during the Late Plains Archaic lived to be very old, with an average of 48 years. Woodland and Late Prehistoric individuals averaged 31 years and 33 years at death, respectively. By the Protohistoric, mortality decreased even further, so that the average individual age was 25 years old. The shorter life span and few elderly individuals of the Protohistoric are perhaps not surprising and probably relate largely to epidemic disease, intensified hostilities, and increasing labor demands, combined with social disruption and constant negotiations for space and position. However, the Protohistoric was the end of a general trend of declining mortality rates that appears to have started during the Late Prehistoric.

This pattern is probably in part an outgrowth of population increase, territory circumscription, and resource depletion. Projectile points recovered from Late Prehistoric burials may relate to increased intergroup conflict in some cases but may also reflect ideological changes associated with burial rituals in others. Increased conflict alone probably did not totally cause the decline in age at death, although it may have contributed heavily toward it. A declining age at death in more sedentary neighbor populations has been attributed to changing diet and decreasing sanitary conditions especially during smallpox epidemics, but these explanations seem less applicable to the more nomadic huntergatherers of the Northwestern Plains. In comparison to the case on the Eastern and Southern Plains, people living in the western areas were healthier and lived longer lives, regardless of time period (Scheiber 2007).

The ratio of biologically assigned males to females through time remains fairly equal and stable, although a slight (but not significant) increase in the number of female deaths occurred in the Protohistoric period (see Table 2.6). Evidence from the east suggests that young mothers and their babies of the (Proto)Historic period were most significantly affected by disease and compromising social conditions (Owsley and Bruwelheide 1997). In addition, age and sex are not correlated through time, meaning, for example, that older women or younger men are not found in disproportionate numbers.

Summary and Conclusions

I have provided a brief summary of the kinds of research questions that bioarchaeology on the Northwestern Plains can address. No one period has a sufficient sample size to draw significant conclusions about populations in the past. Instead, these bioarchaeological data can more usefully provide snapshots about individual lives. In grouping individuals who may have been born hundreds or thousands of years apart, we cannot also commit the error of assuming that people belonged to the same cultural group or shared similar identities. Individuals buried during the same time period could represent various neighboring permanent inhabitants or nomadic travelers. Similarly, the sample precludes a thorough analysis by geographic area within the Northwestern Plains, although some variation may relate to unique communities inhabiting different areas.

Through time, the sample sizes increase, perhaps indicative of rising populations. Two traits that do not change are the relatively low number of children compared with numbers in neighboring areas and the equal number of males and females. The most dramatic difference through time relates to mortality profiles. Although the sample sizes are small, the marked decline in average age at death from 48 years during the Archaic to 25 years during the Protohistoric represents a dramatic change in longevity.

Mortuary practices altered though time as well, from primarily below ground to primarily above ground. This change may reflect shifting ideas about the afterlife among the inhabitants of the Northwestern Plains or the arrival of new immigrants with their own mortuary rituals. Rockshelter burials in particular may represent the least amount of time needed to prepare for burial and could imply a more hastened and perhaps less public process. On the other hand, Woodland people probably returned to their prepared interments for several years as each new member of a family group passed away. These burials show more energy and time investment in burial ritual and created visible changes to the local landscape, perhaps indicative of more public ceremonies.

The bioarchaeological data generated from the analysis of human burials are different from other archaeological data. Human remains, associated funerary objects, and the prepared burials in which they are placed contain the actual physical remains of once living people and demonstrate careful efforts by their families to bury them in a culturally appropriate manner. These events differ from other activities of discard and disposal and represent specific activities that can remind us of individuals and their everyday lives. However, because human burials of the Northwestern Plains are often located away from habitations or campsites, they are less likely to be included as part of explicit archaeological research designs. Even when found as isolated discoveries, mortuary data can be studied to help trace the culture history of Plains peoples. The study of human skeletal and funerary remains complements and strengthens standard archaeological interpretations and adds a human element to the study of Plains inhabitants.

Acknowledgments

This chapter is an updated and summarized version of Scheiber and Gill (1997). These data derive from a thorough review of published literature as well as unpublished files from the University of

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Id summarized ver-). These data derive olished literature as 1 the University of Wyoming Human Remains Repository, the Wyoming Cultural Records Office, and the Montana Archaeological Records Office. The most significant changes since the original 1997 publication are that (1) sites from the western one-third of Montana have been eliminated because they were considered to be more properly associated with the Intermountain Plateau than the Plains, (2) sites from northeastern Colorado and western Nebraska have been included because of their overall similarity to many of the sites in southern and eastern Wyoming, and (3) treatment of the Historic pioneer burials has been omitted because these are treated elsewhere in this volume.

Note

I. Recent reanalysis suggests that a second child burial recovered from the Anzick site is not associated with the Clovis cache and is instead several thousand years younger (Owsley and Hunt 2001).

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