University of Alberta

Old Man's Playing Ground: An Intergroup Meeting and Gaming Place on the Plains/Plateau Frontier

by

Gabriel M. Yanicki

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Abstract

Though it has been destroyed, much can be learned from an interdisciplinary study of Old Man's Playing Ground. Oral traditions of the Piikáni, from whom a plurality of accounts about the playing ground are known, and other First Nations of the Northwest Plains and Interior Plateau, together with textual records spanning centuries, show it to be a place of enduring cultural significance irrespective of its physical remains. Knowledge of the site and the hoop-and-arrow game played there is widespread, in keeping with historic and ethnographic accounts of multiple groups meeting and gambling at the site. Archaeological investigation of the adjacent site DlPo-8 suggests a shift at this locale from residential occupation to ceremony and trade in the Late Prehistoric period, with evidence of trade together with gambling pointing towards the site's role as an intergroup trade fair location.

Preface

> For both the archaeologist and the native dweller, the landscape tells – or rather is – a story. It enfolds the lives and times of predecessors who, over the generations, have moved around it and played their part in its formation. To perceive the landscape is therefore to carry out an act of remembrance, and remembering is not so much a matter of calling up an internal image, stored in the mind, as of engaging perceptually with an environment that is itself pregnant with the past [Ingold 1993:152-153].

My scholarly interest in the Oldman Gap began over a decade ago with a chance reading of Peter Fidler's *Journal of a Journey by Land from Buckingham House to the Rocky Mountains in 1792 &3* (Fidler 1991; Hudson's Bay Company Archives [HBCA] E.3/2). Of all the stomping grounds of my youth, the Gap is the one I remain fondest of; I was quite surprised to see it mentioned in the journal of the first European explorer to venture into southern Alberta. This interest led to an honours thesis in archaeology at the University of Calgary (Yanicki 1999) and has continued to be the driving impetus for my graduate research.

I am very aware that this work is far from complete. I make no apologies for this: down every avenue of inquiry that I have followed thus far, there is something unexpected to be learned and a new path to take. I have learned the most by far from the elders, ceremonialists, and traditional knowledge holders from several First Nations who have generously shared their time with me, and who have gently reminded me that the stories Fidler recorded in his journal are a reflection of vibrant, living traditions that continue to this day. I am grateful for this opportunity to share what I have learned; it is my hope that this work is but a chapter in a story that for generations to come will continue to unfold.

The Gap is the spot where the Oldman River flows out of the Livingstone Range, the long wall of the Front Range of the Rocky Mountains that extends north for a distance of

about 35 km from the Crowsnest Pass. From the east, the Livingstones exude a forbidding, impenetrable air, and there are but few ways through. One is the broad Crowsnest Pass at the range's southernmost end, where the Crowsnest River makes its way out of the mountains; the other, to the north, is the Gap. Beyond this, the range loses some of its imposing character, obscured by a rugged range of foothills known as the Whaleback, but the Livingstones' southern extent marks a very abrupt transition between the Rockies to the west and the prairies to the east. From the Crowsnest to the Oldman, the prairies seem to roll right up to the mountains' feet.

I first visited the Gap in my late teens, camping in the mountains with friends. We set out from Barons, a small town on the prairies, and headed due west over the Porcupine Hills with nothing but a tent, a few backpacks, and a cooler full of beer. I was a newcomer to the area; I had no idea what to expect. At the crest of the Porcupines on the old Starline Road, you can make out the Livingstone Range from between towering stands of lodgepole pine and Douglas fir, but the Gap itself is hard to discern. It is concealed, secretive, a hidden parting through what from a distance looks like a continuous range. Only when much closer can you see that the Livingstones are actually two ranges, slightly offset and overlapping, with a narrow cleft between them through which the southeast-flowing Oldman must suddenly veer north before resuming its previous course, making an S-shaped curve.

I've made the trip countless times since, and still a sense of anticipation builds when I reach Highway 22, cross to the south side of the Oldman, and follow the gravel secondary road past Maycroft, past the Smith and Dennis ranches on the river's south bank, and past the cattle guard that marks the entrance to the forest reserve. From here, one last bend takes you

to the very foot of the mountains, following them north; another long, sweeping turn and the Gap is revealed, a narrow ravine with the blue-green waters of the Oldman far below. Through this ravine, the road swiftly descends and switches back to the south; at the narrowest part, only a manmade embankment separates the rapids from the rock of the mountain itself.

Another few hundred meters and the Livingstones are traversed, and the broad intermontane Livingstone Trench opens out, running north to south with the Livingstone Range on the eastern flank and the Main Range of the Rockies to the west. Here there are creeks and rivers that flow into the Upper Oldman, few that I haven't put a fly line into with my old man; horse trails over the continental divide into British Columbia that are an adventure for another day; peaks and valleys with names like Sugarloaf Mountain, the Beehive, and Cow Juicer Pass; and one nameless hump of rock which I once climbed with my old friends, where we carved our initials into the trunk of a gnarled snag and lightened our packs of the beer that we'd hauled all that way.

My perception of the place has changed as my understanding of its history, and of its cultural significance, has grown. A short time before beginning my field work for this study in the summer of 2010, I visited the Gap with Piikáni ceremonialist Allan Pard, *Mikskimmisukahsim* ('Iron Shirt'). I was taught to approach the Gap in a different way: to leave offerings to honour and respect all those who have come before, and to proceed with the intention of my work being of benefit to the First Nations communities whose heritage sites in the Gap represent. It is with those same intentions that I put forward the following report.

Acknowledgements

Earlier drafts of some sections of this study have previously been prepared as term

papers for classes during my graduate studies at the University of Alberta. The Preface and Chapter VII are substantially reworked portions of a term paper for Dr. Charles Schweger's Cultural Landscapes course in the Winter of 2010. Large parts of Chapters II and III were prepared for Dr. Lisa Philips's Ethnohistory course, also in the Winter 2010 semester, although the conclusions have been significantly amended. Chapter IV is an updated version of a term paper submitted for Dr. Duane Froese's Quaternary Geosciences course in the Fall of 2009. Their guidance and advice through these earlier drafts is greatly appreciated; Dr. Philips's provision of a research assistantship to visit the Hudson's Bay Company Archives in Winnipeg and Dr. Froese's provision of funding, lab access, and materials for the radiocarbon dates presented here are gratefully acknowledged.

It has been a rare privelege to work with traditional knowledge holders from several communities during the course of this research. I am very thankful to Allan Pard, Art Calling Last, Henry Holloway, and Bruce Starlight for sharing their time and knowledge, and for their great patience in working with a rank newcomer to this type of study. I hope that my work does justice to the great faith they have put in me.

Funding for this study has been provided by a Roger Soderstrom Scholarship Grant from the Alberta Historical Resource Foundation. I would like to thank Brian Ronaghan, Robin Woywitka, Eric and Joan Damkjar, and others at the Archaeological Survey of Alberta for their assistance over the course of this research.

Field work in the Gap was greatly facilitated by Ron Drysdale's kind offer of a place to stay; the extension of this offer to my full field crew was in incredible act of generosity. Thanks also go to Ron for his introductions to the many members of the Maycroft commu-

nity, too many to list here, whose interest and input are reflected in portions of this work.

I was blessed with a wonderful crew in the summer of 2010. Without the assistance of Justina Smith, Peter Stewart, Aileen Reilly, Brett Tegart, Jim McMurchy, Terry Quinn, Bob Shore, Mateya Dimnik, Tim Gronfors, and Peter Davis-Imhof, this work would simply not have gotten done. Additionally, the artifact drawings that appear in this work are courtesy of Justina Smith. A very special thank-you is also owed to Jim McMurchy for inviting me to give a presentation to the Lethbridge Centre of the Archaeological Society of Alberta in October 2008; it was that event which sparked my interest in resuming my studies in the first place.

Others who have provided me with invaluable insight, direction, and assistance over the past several years are too numerous to list; briefly, and with apologies for the many omissions, thanks are owed to Drs. Dale Walde, Ruth Gruhn, Ray Le Blanc, Gerald Oetelaar, Gerry Conaty, Shawn Bubel, Martin Lalumière, and Kelly Suschinsky, as well as Jack Brink, Don Hanna, Christopher Cox, Elizabeth Sawchuk, Loretta Holloway, and Janet Janvier for their various contributions. I would be greatly remiss not also to thank my parents—Dad, for always being willing to make the trip out to the Gap together, even if it might be too windy to fish, and Mom, for sharing her experience with everything from readings on indigenous worldviews to how to properly present tobacco to an elder.

Finally, I find myself at a loss to fully express my gratitude to my supervisor, Dr. Jack Ives, for his unfailing encouragement and support through the highs and lows of this study. Our hours of conversation and his always timely input and advice on every aspect of this work have completely shattered my expectations of what being a grad student would be like. I'm eternally thankful for his taking a chance on me; working together has been a great pleasure.

Concepts and terms

For readers of this text, a degree of familiarity is assumed with North America's indigenous peoples and culture areas, and with basic archaeological units and concepts. Following is a brief summary of some terms and concepts which frequently appear in this work.

First Nations

The convention of referring to historic Canadian aboriginal groups as First Nations is followed here, as opposed to the terms Native American or North American Indian, which are more commonly used in U.S. scholarship. As this research refers to groups from both Canada and the U.S., the term First Nations/Native American may be most applicable, but is felt to be too unwieldy for general use; for the purposes of this work, the term First Nations also refers to groups from south of the border.

A detailed synopsis of the First Nations referred to in this study is a more ambitious undertaking than time or space permit. Where relevant, specific culture patterns are referred to directly in the text; readers are referred to the *Handbook of North American Indians* series for additional detail. For a history of group movements on the Northwest Plains, particularly since the time of European contact, readers are encouraged to read Ted Binnema's (2001) *Common and Contested Ground: A Human and Environmental History of the Northwestern Plains*. This study follows the principle that archaeological materials can be meaningully associated with historic First Nations groups, a process referred to as the Direct Historical Approach (Forbis 1963; Lyman and O'Brien 2001). For a discussion of how archaeologically recognized cultures on the Northwest Plains relate to historic groups, see Vickers (1994) and Vickers and Peck (2010).

As much as possible, self-referential group terms, or autonyms, are used for First Nations instead of conventional anglicized exonyms; the latter are often derived from names for a people used by other groups, and these are sometimes deeply offensive. A similar rule is applied to names of First Nations languages (i.e., *Siksikaitsipowahsin* for the Blackfoot language, following Bastien [2004] and Mistaken Chief [2004]). The exception is when group identifiers are directly quoted from another source. A brief list of First Nations autonyms used in this work follows (others are indicated as they occur in the text):

Group name (this study)	Other names
Kainai	Blood
Ktunaxa	Kootenay, Kutenai, Kootenuha, Cottonahew, etc.
Nakoda	Stoney, Assiniboine
Nehiyaw	Cree
Piikáni	Peigan, Piegan, Pikunni, etc.
Siksika	Blackfoot
Siksikaitsitapi	Blackfoot Peoples (incl. Kainai, Piikáni, and Siksika), Niitsitapi[1]
Tsuut'ina	Sarcee, Sarsi

Culture areas

The similarities in culture patterns between groups living in similar geographic regions has long been recognized, leading to the subdivision of geographic areas into corresponding culture areas (Kroeber 1939; Wissler 1914; and others). Definitions of the culture areas re-

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[1] Following Betty Bastien (2004:1), Niitsitapi, lit. 'real people', is a *Siksikaitsipowahsin* term that can refer to all indigenous people.

ferred to in this work generally follow the Smithsonian Institution's *Handbook of North American Indians* series, with particular reference made to the Plateau (Walker 1998) and Plains (DeMallie 2001). The area addressed in this study straddles the boundary between two subareas, referred to here as the Interior Plateau and Northwest Plains.

Interior Plateau

The Plateau culture area is generally defined as the Columbia and Fraser River drainages, comprising much of southern British Columbia, eastern Washington, northern Oregon and Idaho, and western Montana (Walker 1998:1). Although this area naturally extends only as far as the continental divide, some authors include both the Western and Eastern Slopes of the Rocky Mountains in this broader culture area, based on their overall similiarity in geography, resources, and past cultural occupation (Driver and Massey 1957; Murdock and O'Leary 1975; Walker 1998:2). This broader definition, with the Eastern Slopes as the boundary between the Plateau and the Plains, is adhered to here. The Rocky Mountains in southeasternmost British Columbia are intermediate between two of the Plateau's principal subareas, the Northern Plateau (Pokotylo and Mitchell 1998) and Eastern Plateau (Roll and Hackenberger 1998). Given its indeterminate allocation, the more general term Interior Plateau is used here.

Northwest Plains

The Plains culture area extends through the centre of the continent from the Canadian Prairies in the north to central Texas in the south (DeMallie 2001). Its northwestern extent, extending from central Alberta and Saskatchewan, bordered by the Rocky Mountains on the west, and including the upper portions of the Missouri River drainage in central and eastern Montana, is referred to here as the Northwest Plains.

Archaeological units and concepts

The sequential ordering of assemblages of artifacts, differentiated by style, is the basis for the identification of archaeological cultures in North America. Following Peck (2011:6), and in turn drawing from the work of Vickers (1986), Reeves (1983), and Mulloy (1958), the term *phase* is used to describe an archaeological culture whose visible traits are distinct enough to be reliably differentiated from other such groupings, and where its sequential relationship to earlier and later assemblages is well-understood. When this sequential relationship is unclear, the term *complex* is instead used. Particularly on the Northwest Plains, the primary stylistic evidence of culture change over time is the stone projectile point; artifacts such as projectile points which are typical of a given complex or phase are termed *diagnostics*.

In a scheme originally devised by Mulloy (1958:204-223), North American prehistory can generally be divided into three periods: the *Early*, *Middle*, and *Late Prehistoric*. Each complex and phase can be assigned to one of these three periods, differentiated primarily by the hunting technology used. During the Early Prehistoric period, hunters relied on large thrusting spears; the Middle Prehistoric featured moderately sized, notched dart points used with atlatls, or spear-throwers; relatively tiny projectile points from the Late Prehistoric are associated with the widespread adoption of the bow and arrow. The dates for these periods as referred to in this work follow Peck (2011):

Early Prehistoric, ca. 11,050 to 8,600 BP (before present)

Early Prehistoric to Middle Prehistoric Transition, ca. 8,600 to 7,500 BP

Middle Prehistoric, ca. 7,500 to 1,500 BP

Middle Prehistoric to Late Prehistoric Transition, ca. 1,500 to 1,350 BP

Late Prehistoric, ca. 1,350 to 250 BP

Finally, the *Protohistoric* and *Historic* periods represent the time periods following, or just in advance of, European contact. The Protohistoric period extends from about 250 to 200 BP (Peck 2011:417); during this timespan, even though groups may not have been in direct contact with European traders, goods such as metal and horses, and other phenomena associated with the arrival of Europeans in the New World such as mass migrations and disease, were widespread. The Historic period here refers to any time following the advent of the reservation system in the late 1870s, the forced removal of aboriginal peoples from most of their former territory, and the colonization of western Canada by settlers of European descent.

Notes on interview transcriptions

Interviews with elders, ceremonialists, and traditional knowledge holders from several First Nations constitute an important aspect of this study. The text that appears in this document is an edited version of the speech that appears in the original recordings. Excerpts of these interviews are interspersed throughout the main text, while the full transcripts are included as Appendix A.

To enhance clarity, hesitations (i.e., uh, um, etc.), repetitions, tag questions (i.e., eh?) and corrections of misspoken words have been removed, as has extraneous conversation not pertinent to the interview. Editorial comments are added in square brackets and bold font, e.g., [**recording interrupted**]. Other notes on transcription are as follow:

,	short pause
..	medium pause
…	long pause

Speech

Overlapping speech

[*Coughs.*] Non-verbal expression

baby emphasized word

Apyoomitai non-English term

Transliteration of *Siksikaitsipowahsin* (Blackfoot language) terms follows the pronunciation key of Duane Mistaken Chief, Sr. (2004), in Betty Bastien's *Blackfoot Ways of Knowing: The Worldview of the Siksikaitsitapi* (2004). Nakoda terms follow the guidlines for phonemic transcription set out by Emily Shudel (1997), with the exception of 'ŋ' being used to denote nasalized vowels. Tsuut'ina terms were graciously transcribed by Christopher Cox of the Department of Linguistics, University of Alberta, following orthographic conventions set out in community publications such as the Tsuut'ina pedagogical dictionary (Starlight and Donavan 2009) and online resources of the Tsuut'ina Gunaha Institute (2010). Assistance with Cree terms was provided by Tanya Boman, with additional reference to Nancy LeClair's (1998) *Alberta Elders' Cree Dictionary*.

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Introduction

On December 31, 1792, Hudson's Bay Company (HBC) surveyor Peter Fidler arrived at the headwaters of the Oldman River, in present-day southern Alberta, at a place now known as the Gap. This visit was a historic occasion: it marked the furthest exploratory foray of a European yet into what was then Piikani territory; it was also at this spot that Fidler made the first contact with the Ktunaxa. This study is an examination of a footnote to that historic occasion, a "curiosity" that briefly captivated Fidler's attention that day. What he observed, recorded what he could learn of, and sketched in his journal (HBCA E.3/2, fo. 17; Figure 1.1) was the prehistoric rock alignment and gaming place known as Old Man's Playing Ground[1]. It was the namesake of Oldman River—*was* in the sense that Fidler's is the only account to have described it while it was still intact. No trace of the playing ground can be seen today.

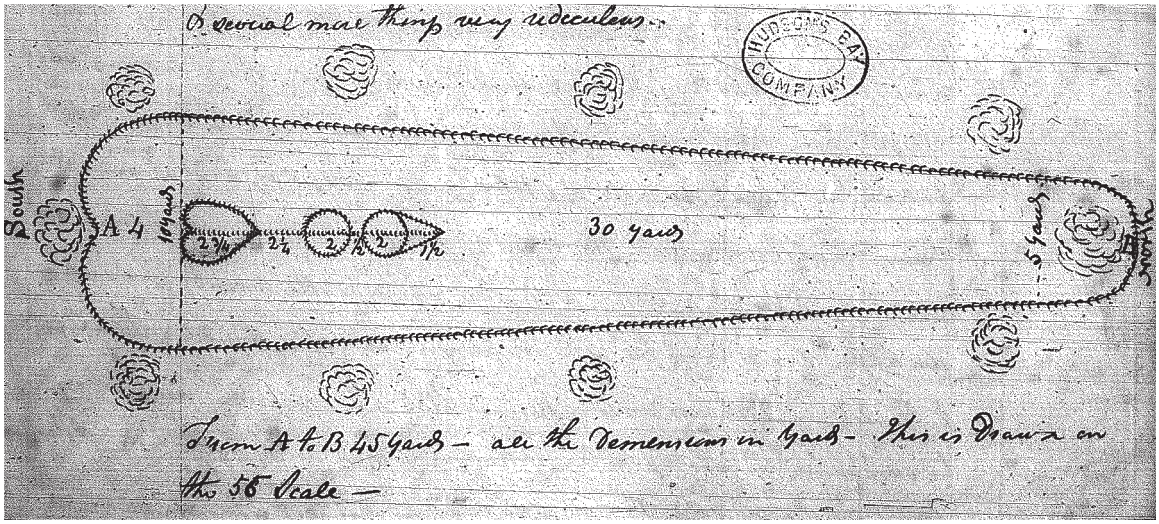

Figure 1.1: Peter Fidler's sketch of the playing ground in the Gap (HBCA E.3/2, fo. 17)

[1] This English translation of the site's name was first presented by George Dawson (1886:80). Rationale for its use throughout this work is provided in Chapter II.

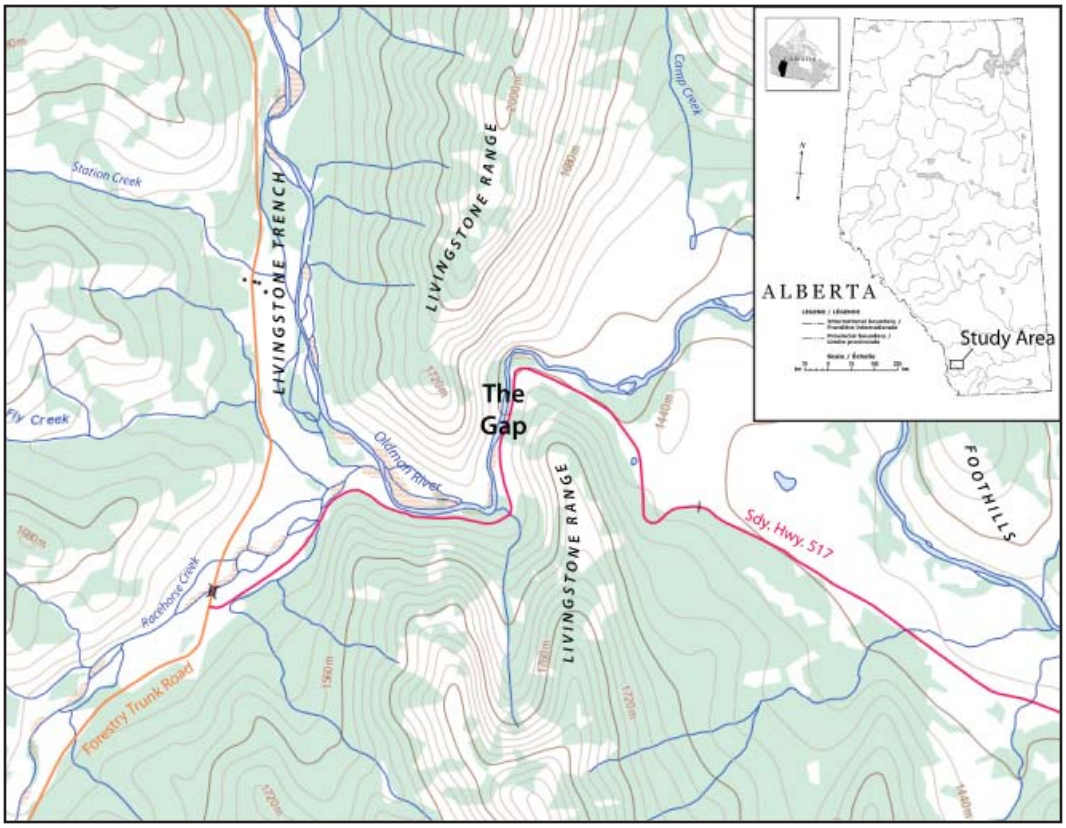

Figure 1.2: Study area (maps adapted from Natural Resources Canada 2002, 2009)

This study began simply as an attempt to identify the most probable location of Old Man's Playing Ground and determine whether any portion of it could be detected through archaeological testing. That effort was unsuccessful: while a landform matching the site's description still exists, if the rock alignment observed by Fidler was located there, it has been washed away by the Oldman River, probably in the past century. The archaeological record of the adjacent prehistoric campsite DlPo-8, also examined in this study, does reinforce the Gap's importance as a locus for interaction and trade to peoples from either side of the Rocky Mountains, particularly in the Late Prehistoric period.

Traditions of gambling and gaming at Old Man's Playing Ground mentioned by Fidler and other historic and ethnographic accounts are of considerable value in interpreting these

archaeological materials. But perhaps most significantly, in describing the playing ground, Fidler serendipitously recorded an ancient story about Old Man, the Creator and Trickster figure in a number of First Nations traditions,[2] that continues to be told today. The perdurance of this tradition and its link to a specific part of the landscape suggest a site that, to the First Nations who share knowledge of it, goes "to the core of their cultural values and identity" (*Kitkatla Band v. British Columbia*, Supreme Court of Canada [SCC] 2002: par. 46).[3] The Gap continues to be of special significance in spite of the apparent fate of the site.

Long before its eventual destruction, the abandonment of Old Man's Playing Ground was the inevitable outcome of two centuries of European and Euro-Canadian influence on the First Nations of western Canada. The process by which knowledge even of its location came to be lost is symptomatic of a broader erasure of cultural identity brought about by an era of imposed residence on reservations and attendance at residential schools. This study aims to draw together traditional knowledge, historic and ethnographic accounts, and archaeological findings to identify those communities that have ties to the site, and for whom there may exist a duty to consult in the long-term management of the area as a significant cultural resource. It is my hope that this work can assist in this threatened aspect of aboriginal heritage being preserved and someday even reclaimed.

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[2] Old Man is known as *Napi* to the Niitsitaapi peoples and *Xalítsà-tsi* to the Tsuut'ina; he is further referred to interchangeably in some cases with Trickster, *Sičáŋyuški* to the Nakoda and *Wîsahkeâhk* to the Nehiyaw (Plains Cree) (see discussion in Chapter II).

[3] In this benchmark decision, a B.C. First Nation contested the province's jurisdiction over cultural heritage (in this case, culturally-modified trees), allowing it to be destroyed. Although he ruled against Kitkatla, Justice Lebel said he could envision sites of such significance that the issue could be revisited.

Study overview

Primacy of place is given in this study to First Nations traditions; it is from these stories of place, both contemporary and recorded in earlier accounts, that a full sense of the significance of Old Man's Playing Ground as a heritage resource can be derived. These traditions are presented in Chapter II. As the launching point for this study, the chapter begins with a review of Peter Fidler's account, the earliest and most detailed recorded version of the traditions about the playing ground in the literature. In the two centuries since Fidler's visit, a number of other versions of this story have been recorded, which are also reviewed here. These accounts collectively point to knowledge of the playing ground being shared by a number of First Nations, both in the Northwest Plains and the Interior Plateau; an effort has been made to speak with traditional knowledge holders from a number of these communities so that knowledge of the playing ground as it presently exists can be recorded and shared. Some sense of which groups shared knowledge of the playing ground can also be drawn from the fact that the name of the Oldman River is a calque, having the same meaning across every indigenous language of the region. The potentially sacred nature of the association between Old Man and the playing ground is briefly discussed here, followed by a discussion of the possible reasons for the site's ultimate abandonment.

Fidler's account is very specific in describing the playing ground as a place where a game was played involving two contestants attempting to throw arrows through a rolled hoop. This game is very well represented in the ethnographic and historic literature from across North America. Through a primarily ethnohistoric review of these gaming traditions, presented in Chapter III, a distinct variant of the hoop-and-arrow game can be recognized that

was played at the time of first European contact by peoples on either side of the continental divide, including southern Alberta, western Montana, and much of the Upper Columbia drainage in the Interior Plateau. This shared gaming tradition provides key insight into which peoples might once have met at Old Man's Playing Ground, centrally located in the geographic range of this game variant's distribution. Archaeologically attested occurrences of this game provide some indication of how old the site in the Gap could be. Further, the strong connection between gaming and gambling is of considerable explanatory power concerning the mechanism by which trade was effected at prehistoric meeting places like the playing ground.

Chapter IV focuses on identification of the landform on which the playing ground was located. Previous research in the Oldman Gap is reviewed, including earlier attempts to locate the playing ground that have largely focused on a high terrace at the south end of the Gap. Textual analysis of Fidler's and other accounts strongly suggests that this previously investigated landform is not the location of the site; a landform better matching descriptions of its location has not previously been archaeologically investigated. The results of a preliminary geomorphic assessment of this landform found that it was created through regular flooding; radiometrically dated soil samples, taken from plant macrofossils and charcoal fragments, indicated that in addition to flood sediments from the past half century, buried strata could exist here of sufficient age to contain a prehistoric cultural site.

These preliminary results were deemed sufficient to merit further archaeological testing of the landform, to determine whether instead of being destroyed, the rock alignment observed by Peter Fidler in 1792 had instead been buried. The results of this work are presented in Chapter V; unfortunately, a series of trenches excavated across the landform failed to

intercept any trace of a buried rock alignment and produced no other evidence of prehistoric cultural occupation. Instead, a sequence of stratified flood sediments showed that the landform had recently been subjected to catastrophic erosion and redeposition during a flooding event; if the playing ground was located here, it would have been destroyed. These findings are consistent with anecdotal accounts that a flood was responsible for the site's destruction a short time before the earliest scholarly investigations took place.

No insight into the prehistoric use of the playing ground pertaining to the time it first came into use, the cultural affiliation of the people who prehistorically visited it, or the time period in which it fell into disuse could be obtained from work on the low flat. However, the presence of DlPo-8, a known archaeological site, on the adjacent landform immediately above raised the possibility that some of these research questions could still be addressed. Chapter VI presents the results of the archaeological testing of this higher landform. Twenty-five shovel tests and 10 m^2 of excavations in two areas at DlPo-8 yielded a considerable array of cultural material; description of these findings up to the standards set out in archaeological research permit requirements (Alberta Government 2008) accounts for much of the volume of the present work. The archaeological record suggests the presence of people reliant primarily on locally-sourced raw materials and with technological adaptations linked primarily to the Interior Plateau for much of the Holocene, based on the presence of a Salmon River style projectile point dating to as early as 6,200 BP. A shift in raw material utilization and other changes in the archaeological record are associated with the Late Prehistoric period, including deemphasis on local materials, increased presence of exotic raw materials sourced from the Northwest Plains, and increased utilization of ochre. Although far from conclusive, these

trends do provide the tantalizing suggestion that later occupation of DlPo-8 included a more ceremonial aspect of the site and trade between people from either side of the continental divide.

A synthesis of these findings is presented in Chapter VII that draws together the available oral traditions, historic and ethnographic records, and archaeological data. Changes in site occupation strategies at DlPo-8 are linked to the Late Prehistoric period; the timing of this shift corresponds with ethnohistoric and archaeological data that suggest the game described by Peter Fidler originated only around the onset of the Late Prehistoric. The spike in exotic materials is meanwhile anticipated from accounts describing intergroup meeting and gambling at the site; the evidence of trade materials may allow characterization of Old Man's Playing Ground as a Late Prehistoric trade fair or festival-type site. Further work on a regional scale is recommended to elaborate this identification. DlPo-8 also offers great potential for correlating the archaeological record to oral traditions and ethnographic accounts of peoples of the Interior Plateau, particularly bands of the Ktunaxa, formerly being resident on the Northwest Plains, and for explicating the time period when the Livingstone Range became the boundary between this group and the Piikáni. This study concludes with recommendations for the locale's long-term management as a cultural heritage resource; given its role as a sacred site, respectful and meaningful collaboration with First Nations traditonal knowledge holders is critical to this process.

Chapter II
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Background: Stories of Place

To the *Aapátohsipikáni*, or Northern Piikáni, whose modern-day reserve is within sight of the Livingstone Range in southwestern Alberta, the range is known as *Panihtatsis*, 'the Tipi Liners.' In an interview conducted for this study (for full text, see Appendix A), Piikáni ceremonialist Allan Pard, *Mikskimmisukahsim* ('Iron Shirt'), explained the meaning of the term:

> **Allan Pard (AP)**: If you look at that area, the range kinda just looks like the tipi curtains.
>
> **Gabriel Yanicki (GY)**: Symbolically, what do you think that means?
>
> **AP**: Well it's basically.. they call it that because of the chinook winds that we get. When you use tipi liners in a tipi it helps keep the tipi warm. So the Tipi Liners of course help, with the chinooks, you know, keep us warmer in the wintertime. That's why this area that was chosen by.. our leaders at the time of treaty preferred this area, because it was a favourite wintering area for our people, because of the chinooks, and the easy access to the wood and whatnot for fuel. For warmth. You can't get that way out in the prairies, you know, so our people always camped closer to the mountains and the foothills so they had access to wood and whatnot for the winter.

December 1792, the time of Peter Fidler's visit to the Oldman River and the Livingstone Range, was one such typically mild winter: the river was not frozen, and the ground had no significant snow cover. Travelling with a band of the Piikáni, Fidler dutifully recorded what

bits of traditional knowledge that he could about the land he was being introduced to; perhaps he even heard the story of the Tipi Liners. The story he recorded about the name of the Old-man River is the inspiration for the present study.

There are few other First Nations heritage sites in Canada for which traditional knowledge has been recorded in four different centuries. Traditions about Old Man's Playing Ground exist in the literature from the 1700s, 1800s, and 1900s; ancient by the time they were first written by Fidler, these stories are still being told today. The wealth of information preserved in these stories are the key to understanding the site's significance, in terms of the groups who share this knowledge and the sacred connotations of the stories' association with Old Man, the Creator and Trickster. Changes in First Nations peoples' access to traditional territories are evident in the stories, first through the geopolitical upheavals that accompanied European contact, and then through outright prohibition against access in the reservation era. The variations in these stories are perhaps best viewed in chronological order from when they were first recorded, beginning with Fidler's account.

Peter Fidler's journal

Peter Fidler has been described as Canada's forgotten explorer—a contemporary of David Thompson who, despite having surveyed similar extents of North America, never found the renown that has since come to his peer. Historian James MacGregor attributed this to Thompson having had a publicist (MacGregor 1966:xvii): Joseph Burr Tyrrell came into possession of the unfinished manuscript of Thompson's *Narrative* around the turn of the last century and saw it through to publication (Thompson 1916). Fidler, on the other hand, never had the opportunity to compose his memoirs. He passed away in 1823, a short 18 months after

retiring to the Red River Colony from a long and eventful service with the HBC (MacGregor 1966:xvii-xviii).

Fidler was born in Bolsover, Derbyshire, in 1769 and signed on as a labourer with the HBC in London at the age of 19 (MacGregor 1966:1). Little is known of his early years, but there are indications that he had a sound education. He arrived at York Factory in the summer of 1788, and by December of 1789 had progressed to the position of writer for the South Branch House; the post journal for that winter (HBCA B.205/a/4) is written in his "beautifully legible hand" (MacGregor 1966:20). By the following spring, his aptitude had stood out enough for him to be selected as a pupil of Philip Turnor, the HBC's chief surveyor. Turnor's only other student at the time was David Thompson (MacGregor 1966:21-26).

It was only shortly after the completion of his apprenticeship, while stationed at Buckingham House on the North Saskatchewan River and still very much a young man, that Fidler and another trader, John Ward, were sent out to winter with a band of Piikáni that had arrived to trade. Fidler's first journal entry from his voyage, dated November 8, 1792, notes:

> These Indians had little Trade in with them to the House & consequently could not purchase what necessaries they required, the greater part of them went away dissatisfied and as they are a warlike people, not a man would accompany me on that account as they was much afraid that they would take their Horses & property from them, besides ill use them. Such was the reasons that no person would trust to go with them except John Ward… The Indians are going farther to the South along the mountain this than any former winter of late when our people have been with them [HBCA E.3/2, fo. 1; all spelling and capitalization in this and other quotes from Fidler's original text].

So began his journey to the Rocky Mountains, with a mixture of trepidation and cocky enthusiasm for daring to venture where no other trader would go. It is implied from the start

that his mission is to explore previously uncharted territory for the HBC – the journal begins with a detailed listing of the surveying equipment he was taking with him – followed by a reiteration of some of the difficulties he perceived in the undertaking:

> John Ward & myself don't know a single word what the Indians say that we are going with—time only can enable us to Learn. I much wished some one of those of our men to accompany me that had been at the Rocky Mountain before & understood a little what the Indians said, but not one of them would venture as they dreaded the Indians molesting them on account of their going from the House dissatisfied [HBCA E.3/2, fo. 2].

As Fidler notes in this passage, he was not the first bayman to winter with the Piikáni. Preceding him were James Gaddy in 1785/86 and David Thompson two years later (Jackson 2003:34).

His qualms about staying among them must quickly have dissipated; following that initial entry, there is no further mention of concerns. The journal settles instead into a routine of the duties of a surveyor: weather observations and sextant readings, distances travelled and maps of lakes passed, coupled with a very keen interest in the wildlife, topography, and the people he met along the way.

Fidler paid particularly close attention to the mercurial political situation on the prairies. On November 15, he reported news of the "Snake" (Shoshone) and "Cottanahou" (Ktunaxa) suing for peace (HBCA E.3/2 fo.4). There are also signs of his progress with *Siksikaitsipowahsin*, the Blackfoot language. By November 29, the place-names of landmarks he was learning from the Piikáni had begun to appear in his writing (HBCA E.3/2, fo. 6). However, he had not achieved anything near fluency. On December 12, after crossing the Bow River, Fidler noted the great difficulty a young Piikáni had in getting them to put on their best clothes for

a meeting with a Shoshone peace delegate: "He said a great deal to us, very little of which we understood" (HBCA E.3/2, fo. 11).

This, then, was the situation on December 30, 1792, when a group of scouts arrived at the Piikáni camp in the foothills near the Highwood River, their traditional winter range, with news:

> These Men say that a few Tents of Cottanahew [Ktunaxa] Indians are at the *Naw peu ooch e tay cots* river wishing our Indians to visit them with Goods, to barter for Horses… At 4¼ AM 50 Men well armed with both Guns & Bows & Arrows set off to Trade with the above Indians, & I & John Ward accompanied them on purpose to see these Indians, who has never seen a European before [HBCA E.3/2, fo. 16].

The *Siksikaitsipowahsin* term that Fidler transcribed as "*Naw peu ooch e tay cots*" is his attempt at transliteration of the name of the Oldman River. This is recognizable as what today is referred to in the Piikáni dialect as *Napiitohtai,* 'Old Man River' or '*Napi*'s River' (Allan Pard, see Appendix A), and in the Kainai dialect as *Napii'htai*, 'Old Man's River' (Art Calling Last, see Appendix A)—the "*ooch*" in Fidler's account should be read as something like a Scots Gaelic "*ach*" to mirror the *-h* sound in the current *Siksikaitsipowahsin* terms.

Fidler's addition of "*cots*" to the end of the river's name is curious, as this changes the meaning of the river's name from 'Old Man River' to the 'Where-Old-Man-Played River' (Allan Pard, personal communication, Novermber 4, 2011). As the term for 'river' is included within the *Siksikaitsipowahsin* name, Fidler's "*Naw peu ooch e tay cots* river" is redundant, effectively the "'Where-Old-Man-Played River' river". The discrepancy between Fidler's and the modern terms is attributable to one of two causes: either the name of the Oldman River in modern Blackfoot has changed from what it was more than two centuries ago, or Fidler was confusing the name of the river for the name of the place he would visit on its banks the following day

and described as the river's namesake. Evidence from 19th century records of Nakoda and Nehiyaw names for the river indicate that the former is in fact the case (Dawson 1886:80; see Table 2.1 and discussion below).

From the camp on the Highwood, it was a full day's journey to the Oldman, which the trading party arrived at in the foothills east of the Gap. They camped there, and on the morning of December 31 followed the river upstream to the spot where the river emerges from the Livingstone Range. Here they met the chief of the Ktunaxa band that the Piikáni scouts had reported; after smoking together, they proceeded into the Gap, where the Ktunaxa were encamped (HBCA E.3/2 fo. 16). A short distance in (his notes on the exact location of the site are discussed in Chapter IV), Fidler wrote:

> A place here called *Naw peu ooch eta cots* from whence this river Derives its name. It is a place where Indians formerly assembled here to play at a particular Game with by rolling a small hoop of 4 Inches diameter & darting an Arrow out of the hand after it & those that put the arrow within the hoop while rolling along is reckoned to have gamed. This is on a fine level grass plain, very little bigger than the enclosed space. One side is within 10 yards of the river & the direction of this curiosity is directly one North & South. All those pieces that compose the outer & inner parts are small stones set close together about the bigness of a persons fist above the ground, & they are so close set & neatly put together that it appears one entire ledge of stones. There are 11 piles of stones, loosly piled up at regular distances along the out sides, about 14 Inches in Diameter & about the same height. These I imagine to have been places for the Older men to sit upon to see fair play on both side & to be the umpires of the Game. On my enquiring concerning the origin of this spot, the Indians gave me a surprising & ridiculous account. They said that a White man (what they universally call Europeans) came from the South many ages ago, & built this for the Indians to Play at, that is different nations whom he wished to meet here annually & bury all anamosities betwixt the different Tribes, by assembling here & playing together. They also say that this same person made Buffalo, on purpose for the Indians. They describe him as a very old white headed man & several more things very ridiculous

[HBCA E.3/2, fo. 17; Figure 1.1].

He then went on to tell of the meeting with the Ktunaxa and the trading and ceremonies that ensued. Fidler made no indication that any gaming occurred at the time of his visit (Yanicki 1999:37), instead noting that people "formerly assembled here to play at [the hoop-and-arrow] game" (HBCA E.3/2, fo. 17).

This is a very detailed account for one who had only seven weeks' knowledge of the Blackfoot language; the richness of detail should not be considered a product of embellishment, though. There are several points in Fidler's journal in which a day's entry includes references to future events, long after he had returned to Buckingham House. For example, upon meeting an elderly Cree man suffering from a gangrenous leg injury on December 29, 1792, Fidler concludes his journal entry for that date by noting the man's death in June of 1793. The surviving copy of Fidler's journal appears to have been rewritten at a later date to include more recent news, as noted by editor Bruce Haig (Fidler 1991:41-42). Many of the details he described, particularly the location and the layout of the playing field, were from firsthand observation. Other details, such as how the hoop-and-arrow game was played, could be from seeing it played elsewhere. If he continued to ask questions and add details to his original notes on the playing ground as his skill with the language improved, this new knowledge served to further enrich the account.

Stories about Old Man

The stories at which Fidler scoffed were about the supernatural figure known as Old Man, *Napi* to the Siksikaitsitapi. This is the "*Naw pen*" in Fidler's transliteration of the *Siksikaitsipowahsin* name of the site, and of the like-named river. His mention here is no insignifi-

cant detail—in the oral traditions of all the First Nations present in southern Alberta today, Old Man plays the archetypal roles of both Creator and Trickster.

Old Man in Siksikaitsitapi oral tradition

Old Man is particularly well expressed in the oral tradition of the Siksikaitsitapi peoples, the Piikáni, Kainai, and Siksika. Ethnographers like George Bird Grinnell (1892), Walter McClintock (1910), and John C. Ewers (1958) devoted considerable attention to detailing Napi's central role: "Elderly Blackfoot men and women… in buffalo days had no doubts about the origin of their people. They knew, because their grandparents had told them, that Napi, the Old Man, was the creator of the world and every living thing in it" (Ewers 1958:3).

Despite his importance, stories about Napi can be inscrutable—in addition to his role in creating the world, he is also a trickster. Stories about him are often of a humourous nature, and can be quite ribald. For the Edwardian sensibilities of Walter McClintock, these were "vulgar and even obscene… [and] cannot appear in a book for general circulation" (McClintock 1910:337). Likewise Peter Fidler felt them unfit to retell, describing those details of the Napi stories he heard as "several more things very ridiculous" (HBCA E.3/2 fo.17).

Fidler's description of Napi coming from the south is not unusual. Spotted Eagle, a respected Piikáni ceremonialist, told McClintock (1910:338): "Old Man first came to the Blackfeet from the south. The last we heard of him, he was among the Crees, and disappeared towards the east, whence he is not likely to ever return." Grinnell (1892) told a number of stories about Napi, explaining how he changed the landscape as he travelled, beginning with the Milk River, and again, moving to the north.

The well-known story of Napi and the Big Rock exemplifies his dual role as both

Trickster and Creator. Like the story of the playing ground on the Oldman River, this story links him to a well-known southern Alberta landmark, the split glacial erratic near Okotoks. In an interview conducted for this study, Kainai elder and ceremonialist Art Calling Last, *Sahwiina* ('Hail Chief'), recounted it as follows:

> **Art Calling Last (ACL)**: Napi was walking with his puppy, that dog, a coyote. Somehow he came up to this rock, a big rock, and the weather was cold, freezing, raining. And Napi has a robe, a buffalo robe. He approached the rock and he noticed the rock was cold. And he talked to the rock, and told him: "I pity you. I feel sorry for you. You've got no fur, nothing. You're just bare. I'll give you my robe. The robe will warm you up." So he took his robe and threw it on the rock. He left the robe, he left the rock, and they walked away. Somehow down the way, he was freezing, and he told his dog, the coyote, "We're going to go back to that rock. I want my robe back, I'm freezing." So they went back and got to the rock and told the rock, "I'm going to get my robe back, my blanket. It's cold!" So he grabbed that buffalo hide, and as soon as he got it, the rock kind of moved. He noticed Napi was taking his robe back. And that's when that rock got angry, moved, and chased them. And Napi knows the rock is going to chase them and crush them, and they took off, him and his coyote, that dog. That's how come we have rocks.. and one of the last piece of rocks is in Okotoks. It's our word. *Okotok* means rock, and over there, you call it Okotoks. And you could see some of the rock over there where I live, west of, around the Glenwood area, there's rocks south of there. So that's one of the stories I

was told.

In addition to the Okotoks erratic, numerous other geographic features including rivers, vallies, and hills are associated with Napi (Grinnell 1892). Also still venerated by the Siksikaitsitapi today are numerous anthropomorphic effigies across the northwest plains, referred to as "Napi figures" (Grinnell 1892; Vickers 2008:199).

Old Man in Nakoda oral tradition

While Old Man is known in Nakoda oral tradition, in an interview conducted for this study, Chiniki band member, elder, and traditional knowledge holder Henry Holloway emphasized the centrality of *Sičáŋyuškel* ('Trickster') in Nakoda tradition rather than *Iséguin* ('Old Man') (for full text of interview, see Appendix A). Old Man is but one of Trickster's many forms:

> **Henry Holloway (HH)**: They [Old Man and Trickster].. I think it's the same figure. It's the same person. It's just that sometimes the Trickster can be anybody, anywhere. And he can be identified as a bear or any animal, so a person of clairvoyant power, and he could change himself to anything he wanted to.

The role of Trickster as the principal supernatural entity responsible for creation in Nakoda oral tradition remains analogous to that of Old Man in other traditions:

> **HH**: Trickster was a teacher. He was the person that taught our people, he taught all tribes of North America how to survive, how to live together, and what depends on the other. It's like Mother Nature. Trickster created Mother Nature… The Trickster was the Creator to us. He taught men. He developed men.

Several Nakoda stories about Trickster were told by Mr. Holloway, and are presented in Ap-

pendix A. While often possessing a moralizing theme, these stories are quite humorous and feature much of the ribald nature also associated with stories about Old Man.

The interchangeability of Trickster and Old Man extends to places on the landscape of southern Alberta. Among the places attributed to Trickster are such sites as the Okotoks erratic:

> **HH**: Yeah, there are various areas in southern Alberta that I've heard is a special place that they've met the Trickster. One is somewhere around Okotoks, there's a great big rock there, and they say they met him there, they talked with him there. There are spots everywhere in southern Alberta where Trickster has showed up. People have seen him there, talked with him there and everything. And that's one location that I can remember, other than the one on the Oldman River.

Old Man in Tsuut'ina oral tradition

Stories about Old Man also surface in the traditions of he Tsuut'ina. Tsuut'ina elder and language expert Bruce Starlight believes that these stories were learned from the Siksikaitsitapi peoples after the migration of the Tsuut'ina onto the Northwest Plains in the 1600s. Prior to this event, the Tsuut'ina lived alongside the Dënesųłiné in the Canadian Subarctic. "Our stories until that time were the same as those told by the Dënesųłiné. After this, though, we adopted the stories of the Blackfoot" (Bruce Starlight, personal communication, October 13, 2011).

According to Starlight, the Tsuut'ina were few in number, and the stories of the dominant group prevailed; previously, Raven and Coyote figured prominently in Tsuut'ina oral

tradition, while Old Man was unknown. "Naturally, the Dene culture got set aside, and we adopted Blackfoot ceremonies. But we never gave up our language—there are only four words borrowed from Blackfoot in the Tsuut'ina language" (Starlight, personal communication, October 13, 2011). Hence, rather than Napi, the Tsuut'ina refer to the character in these stories as *Xalítsà-tsi* ('Old Man').

Several stories about Old Man are known, some of them, according to Starlight, characteristically "X-rated." Like the Oldman River, the story of the Tree and the Bird explains how the name of the Blindman River in central Alberta comes from a story about Old Man. Its name in Tsuut'ina is *Sinághà xàníkà* (literally, 'my eyes, fall out!'). As told by Bruce Starlight[1], this is the story of Old Man, Xalítsà-tsi, who saw a bird and asked it for the gift of a special trick. The bird at first refused to teach him. "No," it said, "you're too crazy." But Xalítsà-tsi kept after it, and eventually the bird gave in, saying, "Alright, but you can't overdo it."

The gift, the bird explained, was to say, "*Sinághà xàníkà*!" ('my eyes, fall out!'); this would make his eyes fall out onto a tree. By saying, "*Sinághà kúúníkàs*!" ('my eyes, fall (back) in!'), his eyes would come back into his head. "But you can only do this four times," the bird cautioned Xalítsà-tsi.

So Xalítsà-tsi tried this trick, and he enjoyed it, but quickly the four times were up. "Gee, I wonder if I can do it five times," he thought, and ignoring the bird's warning, decided to give it another try. "*Sinághà xàníkà*!" he said, and his eyes fell out. But then he said, "*Sinághà kúúníkàs*!" and his eyes would not fall back in. He tried again and again. So Xalítsà-tsi was left

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[1] The interview with Bruce Starlight on October 13, 2011, was not recorded; this story is retold from interview notes, and the retelling presented here was verified by Mr. Starlight.

blind. He started to wander, and went up on a hill and sat down.

Coyote was walking by and saw him, and snuck up for a closer look. Seeing that Xalítsà-tsi had no eyes, Coyote waved his paw in front of his face, and Old Man didn't notice a thing. Coyote ran away to think what to do next, then had an idea and went back.

Coyote had a stinky, pus-infected hangnail, and held it under Xalítsà-tsi's nose. "Hoo-ya!" Old Man shouted, "my brother-in-law is butchering. I wonder if he'll feed me" (he is always saying how hungry he is). Coyote giggled and held his paw under Xalítsà-tsi's nose again, and again he said, "My brother-in-law is butchering! I should go get myself something to eat."

But then the wind shifted. Holding his paw up under Xalítsà-tsi's nose a third time, Old Man heard Coyote giggling and quickly grabbed his paw. "I need your eyes," Old Man told Coyote, and against Coyote's protests, he plucked out one eye and put it in his own socket. He could see a bit now, and went to a tree. Taking some of the gum, he rolled it into another eye. And this is why coyotes sometimes have two different-coloured eyes (Bruce Starlight, personal communication, October 13, 2011).

Old Man in other oral traditions

The choice between reference to Old Man and Trickster appears to be largely a matter of cultural preference. Old Man is most strongly associated with Siksikaitsitapi tradition, an idea voiced by Bruce Starlight (personal communication, October 13, 2011) in reference to Tsuut'ina adoption of Siksikaitsitapi stories, and further exemplified by the presence of similar supernatural beings in the oral traditions of other groups that translate as Trickster, but not Old Man—*Sičáŋyuški* among the Nakoda, and also *Wîsahkeâhk* among the Nehiyaw (Plains Cree) (LeClaire 1998).

One notable lacuna in knowledge of stories about Old Man exists in the data available for the Ktunaxa. Given their presence at the playing ground in 1792, one might expect that some familiarity with the stories of Old Man would be present in Ktunaxa oral tradition. This is particularly true for those Ktunaxa that formerly resided either permanently or for portions of the year on the Eastern Slopes and Northwest Plains (Brunton 1974:20-21; Coues 1897:703-705; Schaeffer, GA M-1100-54 & 55; Teit 1930*a*:306-318, 1930*b*:625-628; Turney-High 1941:18-19).

Attempts were made to contact Ktunaxa elders and traditional knowledge holders who might be able to relate stories about the Oldman River, and particularly about the playing ground at its headwaters. However, through consultation with the Traditional Knowledge & Language Sector of the Ktunaxa Nation Council, no elders who knew these stories could be identified (Gwen Phillips, personal communication, August 2011). This does mean that knowledge of the site did not exist; rather only that the knowledge went unrecorded (Yanicki 1999:87). Traditional stories that have been recorded for the Ktunaxa point to the importance of Coyote as the trickster figure rather than Old Man (Boas 1918; Kootenai Cultural Committee of the Confederated Salish and Kootenai Tribes 1997). Boas (1918:281) notes a series of "Transformer tales" involving the ancient chiefs Nałmu'qtse and Ya.uk^{u}e'$_{i}$ka˙m, but that these are distinct from the stories of Old Man told by the Siksikaitsitapi.

Oldman River as a calque

Names of the Oldman River from Kainai, Nakoda, Nehiyaw, Piikáni, and Tsuut'ina informants, including both historic sources and traditional knowledge holders interviewed during the course of the present study, are presented in Table 2.1. In the data that are available

(and therefore, unfortunately, excluding the Ktunaxa), two trends are evident. The first is that the name of the river has changed; second is that regardless of cultural preference for stories about Trickster or stories about Old Man, the name of the river refers exclusively to Old Man.

Regarding the first point, First Nations informants consulted in the course of this study universally provided terms in their languages that include the morphemes only for 'old man' and 'river'. However, sources dating from prior to 1900 recorded terms that include the morphemes not only for 'old man' and 'river', but also 'playing ground' or 'game'. The discrepancy between the name of the river provided by Peter Fidler (HBCA E.3/2, fo. 17) and modern Siksikaitsitapi informants has already been noted; this does not appear to be an error in transcription on Fidler's part. Geologist George Mercer Dawson, who surveyed the headwaters of the Oldman River in 1883 (Dawson 1886:79), recorded terms from Nehiyaw and Nakoda informants that capture the same meaning provided by Fidler.

It is unclear whether Dawson was aware of this meaning of the river's name. In a brief

Table 2.1: Names of the Oldman River in First Nations languages

First Nation	Term	Gloss	Source	Date
Piikáni	*Naw peu ooch e tay cots*	'Where-Old-Man-Played River'	Fidler (HBCA E.3/2, fo. 17)	1792
Nehiyaw	*Is-e-enoo-mit-ewe-win-si-pi*	'Old Man's Game River'*	Dawson (1886)	1883
Nakoda	*Is-sa-goo-win-ih-ska-da-wap-ta*	'Old Man's Playing Ground River'*	Dawson (1886)	1883
Piikáni	*Napiitohtai*	'Old Man River'	Allan Pard**	2011
Kainai	*Napii'htai/Napioochita*	'Old Man's River'	Art Calling Last**	2011
Nakoda	*Išéguinwapta*	'Old Man River'	Henry Holloway**	2011
Tsuut'ina	*Xalítsà-tsísgà*	'Old Man River'	Bruce Starlight**	2011

** Dawson noted only that the terms he recorded were the Nehiyaw and Nakoda names of the Oldman River. Morphemes other than those for 'Old Man' and 'river' are present in the terms he provided; these are translated in the glosses given here.*

*** Terms and glosses provided by interviewees in the present study (see Appendix A).*

footnote, he mentioned only: "The name of the Old Man River in Cree is *Is-e-enoo-mit-ewe-win-si-pi*; in Stoney, *Is-sa-goo-win-ih-ska-da-wap-ta*. It will be sufficiently obvious why these names have not passed into common use" (Dawson 1886:80). The names were, in fact, in common use[2]—what he wrote as *Is-sa-goo-win* corresponds exactly with the Nakoda for 'old man', *išéguin*. It should be noted that in the Nakoda gloss, this is not explicitly a reference to the supernatural entity Trickster. As put by Henry Holloway: "As far as I can understand.. I think it's through, my understanding from great-grandfather is that it [the Oldman River] was named after an old man. I think it's had something to do with the playgrounds of the Trickster in the Oldman River." *Wapta*, meanwhile is Nakoda for 'river'. This much, at least, was translated into the river's English name. The morphemes "*ih-ska-da*" are not referenced in the English name for the river, however. Their meaning is evident in the term *Sičáŋyuški šká́de*, 'Trickster's playing ground', as stated by Mr. Holloway (personal communication, September 5, 2011; see Appendix A).

In the Nehiyaw term, the same pattern is seen. Dawson's *Is-e-enoo* is recognizable as the modern *kiseyiniw*, literally, 'old man'. The wording itself is general, and like the Nakoda term, only indirectly connotes the Nehiyaw culture hero *Wîsahkeâhk* ('Trickster') (LeClaire 1998; *con-*

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[2] The earliest printed version of 'Oldman River' appears on Capt. John Palliser's (1865) map, though Palliser himself visited only the South Saskatchewan and Bow Rivers (Palliser 1863). Thomas Blakiston, who "threw off" Palliser's command (Blakiston 1860:33), independently ventured to the Waterton Lakes area. Having had no local guide (Blakiston 1860:69), his attribution of landmarks has proven difficult to verify (Dawson 1886:11) and is dubitable at best. What he referred to as the Belly River flowing out of a gap in the Livingstone Range (a term he coined) (Blakiston 1860:69) was, in fact, the Oldman.

tra Dawson 1886:80, who suggests 'Old Man' as a translation of "Wī-suk-ī-tshak"). Dawson's *mit-ewe-win* and *si-pi*, meanwhile, translate directly to 'a game or sport' and 'river', respectively (LeClaire 1998).

In linguistic terms, this item-by-item copying of the individual morphemes that make up the river's name is known as a *calque*, a type of borrowing from one language to another (Crystal 2008:64). Irrespective of the broader cultural significance of Old Man as Trickster, only the most literal translation is preserved in each language—an old man rather than the Old Man. Only to the Siksikaitsitapi peoples (and to the Tsuut'ina, where the term is admittedly borrowed [Bruce Starlight, personal communication, October 13, 2011]) does a literal translation of 'old man' equate to the Trickster figure, *Napi*. This feature very reliably indicates that the calqued name of the Oldman River is borrowed from the Siksikaitsitapi.

By extension, this connotation of borrowing applies to the story of the playing ground as well, from which the river is named. This should come as no great surprise. References to the playing ground are exceedingly rare outside of the ethnographic and ethnohistoric literature pertaining to the Siksikaitsitapi, and particularly the Piikáni.

Other accounts of the playing ground

Hugh Munro, ca. 1823

While Fidler was the first European to reach the Gap, others soon followed. A number of men were dispatched from the HBC's Edmonton House after 1792 to live with the Piikáni and encourage them to return there to trade. One such man was Hugh Munro (also spelled Munroe or Monroe), who in the spring of 1823 was sent "to live with them and learn their

language" (Edmonton House Journal, HBCA B.60/a/22, fo. 26). Munro went on to spend much of the rest of his life living among the Piikáni, leaving the HBC service to work for the American Fur Company and as a free trader. In the 1890s, on the Blackfeet Reservation in Montana, a very aged Munro recounted his experiences to George Bird Grinnell and James Willard Schultz, the latter turning these stories into two biographical accounts of Munro's first two years on the plains (Schultz 1919, 1927). A typescript of Grinnell's version of these stories surfaced in the 1970s and was also published (Grinnell 1972, 1973). Both versions of Munro's life story date his arrival on the plains to 1813 and state that he was immediately sent out to live among the Piikáni. However, these claims are not corroborated by any HBC records; rather, he is first listed as an employee in 1815/16 (List of Saskatchewan Servants, HBCA B.60/f/1, fo. 70), and he was not sent out until 1823 (Jackson 2003:34).

While the timelines given by Munro may be called into question, his tales do speak to a considerable breadth of understanding of Siksikaitsitapi lifeways and worldview. His brief story about the playing ground is attributed by Schultz to Munro's first year on the Plains:

> Late in the afternoon of our seventh day out from the fort we went into camp at the junction of two beautiful, clear mountain streams, as I afterward learned, the Belly River and Old Man's River. The former was so named on account of the broad bend it makes in its course, and the latter because it is believed that Old Man, when making the world, tarried long in the mountains at its head and gambled with Red Old Man, another god. On a mountain-side there is still to be seen a long, smooth furrow in the rock formation, and at the foot of it several huge stone balls which the gods rolled along it at the goal [Schultz 1919:63].

While Munro's account differs in some key details from Fidler's 1792 account, it is not told as that of a firsthand eyewitness. Rather, it conveys the significatory aspect of the name of the Oldman River, much as one would expect to be told to anyone inquiring about the river's

name without actually being at the site on its headwaters. Munro's version also introduces the idea that gambling was associated with the place, a theme that is prevalent in descriptions of gaming practices across North America, and especially with the hoop-and-arrow game Fidler described as being played at the site.

Two authors have also written about Hugh Munro's participation, with Donald MacDonald, another HBC employee, in an epic battle near the playing ground, pitching the Piikáni and their allies the Kainai and A'aninin (Gros Ventre) against the Apsáalooke (Crow), Shoshone (Snake), Nimíipuu (Nez Perce), and Salish (Flathead) (Johnstone 1954:21-22; MacGregor 1981:46). This battle is said to have taken place "during their second year with [the Piikáni]… at an area known to the Indians as Non-ah-bouse ("where the Old Man bowls")" (Johnstone 1954:21). The source of Johnstone and MacGregor's information is not cited; although Munro and MacDonald's second year with the Piikáni seems to indicate it would appear in Schultz's second book about Hugh Munro, *Red Crow's Brother: Hugh Monroe's Story of His Second Year on the Plains* (1927), no mention of the event appears in that work. The linguistic derivation of the term *non-ah-bouse* is similarly unattributed, and does not correspond with any terms for Old Man or the playing ground previously recorded.

George Dawson, 1883

A few years before Hugh Munro told his stories to Schultz and Grinnell, George Dawson actually passed through the Gap of the Oldman River while reconnoitering the mountain passes of the area for the Geological Survey of Canada (Dawson 1886). Describing the route through the narrow pass, he provided the following account:

> On a narrow piece of flat open ground, a short distance further on [from the eastern

> entrance to the Gap], are the obscure remains of a couple of rectangles formed of larger stones. This place is well known to all the Indians, and named by them the "Old Man's playing ground." It is from this spot that the Old Man River derives its name, many superstitions attaching to the neighbourhood. The 'Old Man,' Wī-suk-ī-tshak of the Crees, is a mythical character, with supernatural attributes, familiar under one name or other, to all students of American folklore [Dawson 1886:80].

As mentioned previously, in addition to noting the correspondence between *Wîsahkeâhk*, the Trickster in Nehiyaw tradition, Dawson also reported Nehiyaw and Nakoda names for the Oldman River. Dawson did not explicitly state in his work who his guides were, but demonstrated great familiarity with the place names in the southern Canadian Rockies of the Nehiyaw and Nakoda, a good indicator that he worked with informants from those groups.

On the topic of these place names, Dawson lamented the low number of toponyms available from the Nakoda. His discussion of the matter is an informative one:

> ...it is a remarkable circumstance that the Stoney Indians attach definite names to very few of the features in the region, whether mountains or rivers. As these Indians are known to be recent immigrants, and to have occupied the district for about forty years only, the paucity of names might be supposed to be accounted for by this fact. The Stoneys, however, have since incorporated with themselves the families of Mountain Crees who formerly hunted here, and many of the names which can be ascertained are either Cree or their equivalents in Stoney. I am, therefore, led to believe that the Crees themselves had come comparatively recently into possession of the region, from which they expelled some hostile tribe, probably of the Kootanie (Kootenuha) stock [Dawson 1880:12-13].

Dawson's field assistant in the 1883 expedition to the Upper Oldman, Joseph Burr Tyrrell (Dawson 1886:9), would later prove more diligent in attributing his geographical knowledge to a specific informant from the Nakoda community at Morley (Tyrrell 1887:172). In addition to the Nakoda, Dawson singled out the Mountain Cree, a branch of the Nehiyaw

whose Métis leader, Peechee, assisted Capt. John Palliser in his traverse of the Rockies in 1857 (Dawson 1886:9); knowledge of the playing ground could persist within both of these very broadly defined communities, a topic which should merit further consideration.

It should also be noted here that Dawson's notion of Nehiyaw expulsion of the Ktunaxa seems unlikely: the Nehiyaw were one group the Ktunaxa remained on particularly friendly terms with, particularly in the sphere of gambling relations (Brunton 1974, 1998:225). The time period suggested by Dawson for the arrival of the Mountain Cree in this country could perhaps indicate when this relationship originated. The relatively short timeframe suggested by Dawson for their presence in the southern Canadian Rockies meanwhile strengthens the proposition that the names of the Oldman River and the playing ground were calqued from another language.

Dawson's account is a valuable source for several reasons: his is one of only two first-hand observations of the playing ground to exist in the literature, which makes it an essential source for attempts to identify the playing ground's location, a topic which is explored further in Chapters IV and V. His claim that the place was "well known to all the Indians" reiterates the point made by Fidler that Old Man "built this for the Indians to Play at, that is different nations whom he wished to meet here annually & bury all anamosities betwixt the different Tribes" (HBCA E. 3/2, fo. 17). In addition to demonstrating the multiethnic character of the site's function in early accounts and showing that knowledge of the site extended to the Nakoda and Nehiyaw, Dawson's is also the first published English translation of a name for the site, Old Man's Playing Ground. Given the remarkable consistency of this term in the calqued early forms of the Oldman River's name and that the term was recognized by several First

Nations, it continues to be the most appropriate English name by which to refer to the site.

Ethnographic sources

Numerous ethnographers have made mention of the playing ground; in fact, when it comes to those who have worked primarily with the Siksikaitsitapi, few authors have failed to note the site from which the Oldman River gets its name (noteworthy among those who did not record a version of this story are Grinnell [1892*a*] and Kidd [1986]). Researchers who have worked with the Piikáni have made particular mention of the playing ground; for instance, consider the following account from among the *Aamsskáápipikani*, or Southern Piikáni, on the Blackfeet Nation in Montana:

> Far up in the north there is a place known as Old Man's Gambling Place. There is where Old Man played the game of the arrows and the rolling wheel. Once when he came to this place, he found some people playing the game. He joined them, and lost his robe and moccasins. As soon as he took them off, the robe became back-fat, and the moccasins buffalo-tongues. As the winner had no use for such things, he gave them back at once. Then Old Man put the tongues on his feet, and they became moccasins, and, putting the back-fat on his shoulders, it became a robe. So he gambled again and again, always with the same result [Wissler and Duvall 1995 (1908):24].

John MacLean meanwhile noted that the home of Old Man "was in the Rocky Mountains near the source of the Old Man's River, in the provisional district of Alberta" (MacLean 1898:435), the location of which Wissler and Duvall associated with the playing ground (1995 [1908]:24). This statement is mirrored somewhat by Nakoda elder Henry Holloway's comment that the playing ground was "where Trickster first started to teach our people how to survive" (Henry Holloway, personal communication, September 5, 2011).

And yet another account of the gaming place surfaces in the work of Ewers (1958:157), who wrote:

> The Blackfoot Indians look upon the hoop-and-pole game as a very old one. They claim that Napi once played it against a Kutenai on Oldman River. The stakes were control of the buffalo. According to the legend, Napi was the winner, and "that is why there were no buffalo west of the Rockies."[3]

Like the others, this version subtly differs in its details. The principal unifying theme is that the game *Napi* played is intimately tied to the Oldman River.

Ethnographically recorded accounts preserve much of the mythological character of the playing ground's origins, much like the account Hugh Munro related to James Willard Schultz (1919:63). None, however, intimate firsthand observation, for instance by pinpointing the location of the site to the Oldman Gap, or by describing the meticulous arrangement of cobbles seen by Peter Fidler in 1792, or the stone lines and rectangles observed by George Dawson in 1883. An important change had occurred by the time of the various ethnographers' work: now restricted to various reservations in Canada and the United States, the First Nations traditional knowledge holders with whom they spoke no longer had regular access to the site.

Current knowledge of the playing ground

Dawson's (1886) account is the last recorded firsthand description of the playing ground. By 1960, when archaeologist Richard Forbis led a team from the Glenbow Foundation Survey in Calgary to attempt to locate Old Man's Playing Ground (Glenbow Archives [GA] M2105-4), the playing ground was gone. Following the directions given in Fidler's journal, they were able to identify the general area where Fidler said it had been located (see

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[3] Quotation marks in this passage are preserved from Ewers's text, which cites Thompson (1916). However, no such statement appears in that work—the quote is from an unnamed Piikáni informant.

discussion in Chapter IV), but they were unsuccessful in identifying any trace of the site. By 1966, historian James MacGregor noted: "Many old-time ranchers were familiar with the Old Man's Bowling Green. Unfortunately, a few years ago, high water in the Old Man River swept it away" (1966:76).

Around this era, there may still have been a few traditional knowledge holders in First Nations communities that knew specific details of, or had even visited the site personally. Jack Crow, a Piikáni elder born in 1901 and interviewed by Albert Yellowhorn in 1973, included the playing ground within traditional Piikáni territory. Describing the lands Sitting on the Eagle Tail Feathers claimed on behalf of the Piikáni at the signing of Treaty 7, Mr. Crow said:

> He [Sitting on the Eagle Tail Feathers] claimed the Porcupine Hills and the Crowlodge country. It is part of our land where the Old man's playgrounds are (mouth of Old-man River). *The landmarks are still there*. A white man used to live there and he knew that this was Indian land, and whenever Indians would go there he would send them away [Yellowhorn 1973:2, emphasis added].

It is unclear which landmarks Mr. Crow was referring to in this statement—by the time of this interview, the rock alignment matching the playing ground's description could no longer be seen, but other boulder monuments have been reported in the Gap. These are discussed further in Chapter IV.

The association between the playing ground and the Oldman River remains common knowledge in the Piikáni community today. Allan Pard explained this as follows:

> **AP**: Well, the Oldman River is called *Napiitohtai*, which means the Oldman River, *Napi*'s River. And the reason why it's called that, the story that was told about, was *Napi*'s gambling place, or *Napi*'s playground was what it referred to. And that's why, because it was right at the Gap at the mountains, where the Oldman

> River comes out, where they had the gambling playground. And that's why it was called after that playground.

The elementary school in Brocket, on the Piikáni Nation, is even named after the site. In the 1980s, Mr. Pard explained, "We still had a few elders that were knowledgeable of the stories and basically that's what they recommended, was that school be called *Napi*'s Playground after that story."

There may still be elders within the Piikáni community who know the story of the playing ground, but Mr. Pard believes they are very few in number today. He did not feel he knew the story well enough to retell it properly. Art Calling Last of the Kainai Nation, meanwhile, was not familiar with the story of the playing ground, while Bruce Starlight of the Tsuut'ina Nation felt that stories from the Oldman River area could be told best by members of the Ktunaxa or Piikáni communities (Bruce Starlight, personal communication, October 13, 2011). As mentioned earlier, there no longer appear to be Ktunaxa elders familiar with the story today; I have so far been unsuccessful in meeting elders from the Piikáni community who could tell the story of the playing ground. Recording this story as it is presently known by Siksikaitsitapi elders remains an objective both for future study and for preservation of an aspect of traditional knowledge that appears to be on the brink of vanishing completely.

Not to be overlooked in this discussion is the existing traditional knowledge of other visitors to the Gap such as those mentioned in Dawson's (1886) account. During the course of archaeological field work conducted for this study, long-time residents of the Maycroft area just east of the Gap described meeting members of Nakoda communities camping and hunting in the area as recently as the 1960s. In her autobiography of ranching life in the Liv-

ingstone Trench, Doris "Babe" Burton also mentioned meeting a party of Nakoda passing through the Gap in 1923 (Burton 1995:7). Given a history of continued visitation to the Gap area during the reservation era, outreach to members of these communities is well justified. And indeed, Nakoda elder Henry Holloway, 80, expressed a strong familiarity with the story of the playing ground, having visited the Upper Oldman with his grandfather as a child.

HH: A lot of times these stories have been told about him around there, how there came to be the spot of that Oldman River, about Trickster.

GY: Ok, so you're familiar with the story of the Trickster's Playing Ground.

HH: Right.

GY: Do you know a version of that story that you'd be willing to talk about?

HH: Well, my grandfather used to talk about Trickster there. He had his own playground where he had played with different species, different animals, or even people. And he called the shots, what kind of games they played, and ninety-nine percent of the time the Trickster wins it... I've always been told that that's where he comes to play, that's where he meets with people.

...

GY: Somewhere up on the headwaters of the river, then?

HH: Yeah, yeah. Where the present rocks are, where it leads in around there, at the Oldman River? That's where, usually the place where they go meet him.

GY: The rocks?

HH: At Oldman River. Have you ever seen it?

GY: Do you mean the Gap?

HH: Yeah, there's a gap there, and there, did you see where all the rocks are sitting in the circle in the Oldman River?

GY: I haven't seen a spot where the rocks are sitting in a circle.

HH: Yeah, there's one there.

GY: Ok. Inside the mountains?

HH: Inside, right, just right go in the middle there. You can see the big rocks laying there. And that's, Trickster laid that. They call it *Sičáŋyuški škáde*, the Trickster's Playground, that's what it is.

GY: Ok. You've been through that area then.

HH: I've seen it in the distance, I've never been there. I went there with my grandpa. But I've never been right exactly at the spot where I'm talking about. But he told me rocks were set in a circle right there. That's where he, that's his playing ground, and we call it *Sičáŋyuški škáde*, that means Trickster's Playground.

The description of rocks lying in a circle in the middle of the Oldman Gap that Mr. Holloway received from his grandfather is of such exacting detail as to suggest firsthand observation. His grandfather can probably be counted among the last to have seen the playing ground intact.

Old Man's Playing Ground as a lost place

With time, stories about the playing ground have become less detailed: less information is available about the types of activities conducted at the site, and Peter Fidler's 1792 ac-

count remains the most specific in terms of the hoop-and-arrow game that was played there. A few stories from the Piikáni preserve the tradition of the game, but others are silent on this point. A general trend can also be seen to mythologize the activity that went on at the site in later accounts, concomitant with a decline in actual visitation to the site.

These trends are both to be expected given a fact that the playing ground was abandoned by the time of Fidler's visit. This conclusion can be drawn from his statement that "it is a place where Indians *formerly* assembled here to play at a particular Game" (HBCA E.3/2, fo. 17, emphasis added). In fact, within only a very short period of time of Fidler's visit, the playing ground would come to be remarked on only as a conflict zone rather than a traditional meeting place (Johnstone 1954:21-22; MacGregor 1981:46).

The meeting between the Piikáni and Ktunaxa that Fidler observed was an unusual event, and when it did occur, no gaming took place. Nor did they gamble, which several sources identify as an important aspect of the playing ground story, including the Piikáni versions related by Hugh Munro (Schultz 1919:63), John Ewers (1958:157), and Clark Wissler and David Duvall (1995 [1908]:24), as well as Henry Holloway's version of the story from the Nakoda tradition. Fidler's contemporary, David Thompson, noted that the hoop-and-arrow game was still widely played amongst the Piikáni around the time of Fidler's visit to the playing ground, and that gambling was an essential aspect of it (Thompson 1916:359); it was not the game that had fallen out of favour, then, but the site (Yanicki 1999:37).

I have previously speculated that the evident abandonment of the playing ground can be attributed to two elements of the social upheaval that permeated First Nations culture around the time of European contact: the introduction of disease, which decimated entire

communities and caused dramatic shifts in settlement patterns, and the negation of traditional modes of intergroup exchange like gambling that would have accompanied the Fur Trade (Yanicki 1999:37-41). Both these possibilities will be discussed briefly here, for they both are directly relevant to the question of the playing ground's fate. But a third aspect of European, or more specifically Euro-Canadian influence has been at play over the past century or so that has had far more deleterious consequences, such that even the location of the site told in the stories in now hardly known. This is the impact on traditional knowledge and culture that came with the reservation era, the consequences of which are still continuing to unfold today.

Smallpox epidemics of the 1700s

Fidler began his voyage in 1792 with the observation that "the Piikáni are going farther to the South along the mountain this than any former winter of late when our people have been with them" (HBCA E.3/2, fo. 1), an opportunity which prompted his joining their party. This is not to suggest that Piikáni were expanding their territory. The situation of the previous decades was summarized by Saukamappee in his relation to David Thompson in the winter of 1787-1788.[4] Warfare between the Piikáni and their enemies the Shoshone, escalating for a number of years, had been abruptly terminated with the outbreak of smallpox among both parties. The most recent smallpox outbreak to Fidler's visit, in 1781, "swept away nearly whole nations" (HBCA E.3/2, fo. 20). Vastly diminished in numbers, contact with other groups

[4] Saukamappee ('Young Man'), Nehiyaw by birth, rose to the station of chief among the Piikáni. Quite elderly at the time of Thompson's visit to his camp on the Bow River, his account includes personal recollections of epidemics from the early part of the 1700s as well as of the introduction of the horse and the gun to the Northwest Plains (Binnema 2001:57-58; Ewers 1958; Thompson 1916).

ceased for a time as the Piikáni retreated to a stronghold on the Bow River to recuperate (Thompson 1916: 336-38; Yanicki 1999:40). Fidler's visit to the Oldman River marked a return of the Piikáni to a part of their territory that they had not had the strength of numbers to return to in some time.

Ktunaxa ethnographic sources are rife with indications that this group was particularly hard-hit by smallpox epidemics in the 1700s. Reviewing these sources, Bill Brunton (1974:20-21; 1998:225) has noted numerous references to a branch of the Ktunaxa formerly being present on the Northwest Plains (Coues 1897:703-705; Chamberlain 1907:740; Jenness 1960:358; and to which can be added Dawson 1886:13). While many of these authors suggested that they were driven across the Rockies as a result of conflict, particularly with the Siksikaitsitapi, their situation may have been more comparable to that of the Piikáni around the same period: reduced numbers from smallpox could have made their military position on the Plains untenable (Teit 1930:306-318, 1930b:625-628). Turney-High (1941:18-19) and Curtis (1907-1930,7:118-120) suggested that the Plains Ktunaxa were so completely ravaged by smallpox that the survivors were forced to relocate to live among related bands in the Interior Plateau of what is now southeastern British Columbia and northern Montana. In an extensive unpublished manuscript on the Plains Ktunaxa, Claude Schaeffer identified this group as the dissolute Michel Prairie band and dated the smallpox epidemic to about 1730 (Brunton 1998:225; Schaeffer, The Plains Kutenai, GA M-1100-54 and 55). These may also be the "Raven's Nest Indians", the former inhabitants of the Crowsnest Pass, who Johnson (1969) says were completely wiped out by smallpox in the 18th century.

The main range of the Michel Prairie band, according to Schaeffer, was between

the Crowsnest and Waterton Rivers, but they also ranged up to the Oldman and Bow (GA M-1100-54 and 55; Kennedy et al. 1982:11; Yanicki 1999:40). Fidler noted that the Ktunaxa group he met had made a 40-mile, five-day journey from their place of origin, west of the Rockies on a southwest by south course, placing them in the vicinity of modern-day Fernie (HBCA E.3/2, fo. 18; Yanicki 1999:39). As this event was long after the the dissolution of the Michel Prairie band, it must be assumed that this was another branch of the Upper Ktunaxa. While this group was likely crossing the mountains to hunt bison on the Plains, its members may not have been as familiar with the gaming traditions associated with Old Man's Playing Ground, and hence the practice came to be a thing remembered only from the past (Yanicki 1999:40).

Disparity in wealth and access to European goods

The perfect condition of the playing ground as Fidler described it merits some discussion at this point. Dawson's (1886) account describing the site as being only rough stone lines, and MacGregor's (1966) claim that it was swept away by the river entirely, raise the possibility that the playing ground could have been frequently disturbed by floodwaters (see Chapters IV and V for further discussion). In such case, the symmetrical shape and evenly piled cairns observed by Fidler would require some degree of periodic maintenance—and in 1792, the playing ground did not have the appearance of being a derelict site. Though this observation could hardly be proven from the textual records, it is worth considering that the site had recently been restored by the Ktunaxa camped in the Gap in anticipation of gambling with the Piikáni visitors, who then chose not to engage in this mode of trade.

In *Stone Age Economics*, Marshall Sahlins's seminal work on tribal economies, gambling

is described as a form of "negative reciprocity", in which participants effectively "attempt to get something for nothing with impunity" (Sahlins 1978:195). While it may be fair to deem gambling a less sociable and balanced form of trade than, say, the mutual exchange of gifts (Mauss 1966; Sahlins 1978:193-195), it is downright personable compared with, say, theft, another well-attested traditional form of exchange. With gambling, even when the outcomes can be weighted in favour of one who possesses particular power, luck, or skill, there is at least some element of risk, and that something like a reciprocal balance of payments will appear. On this conceptual scale of positive versus negative reciprocity, the type of bartering that went on between the Piikáni and the Ktunaxa at the playing ground in 1792 could be seen as an attempt to get even more while risking less.

For while gambling did not take place, trading did occur. Fidler remarked upon the relative poverty of the Ktunaxa, at least insofar as they lacked modern trade goods: while possessed of a wealth of horseflesh, their "kettles" were made of roots and grass, their axes were of antler and stone, and their arrows were tipped with "flint" (HBCA E.3/2, fo. 18-19; Yanicki 1999:40). Rather than risking their valuable European trade commodities through a game of skill or chance, the Piikáni "soon bought all the Cottonahew had to show, for a mere trifle, some only giving an old Hatchet, some an old Kettle, &c.&c." (HBCA E.3/2, fo. 18). Embracing the Fur Trade capitalist ideal, the Piikáni were exploiting their newfound position as middlemen between the peoples of the Interior Plateau and the trading posts to the fullest, so that they "scarcely give [the Ktunaxa] as much for 10 Skins as they can get for one at the Trading Settlement" (HBCA E.3/2, fo. 19).

The pattern of behaviour whereby the Piikáni and other of their allies on the North-

west Plains actively tried to prohibit direct trade between the fur traders and the peoples of the Interior Plateau was by 1792 coming into effect. This policy may have been a defensive measure at first—Siksikaitsitapi and Salish accounts suggest warfare became increasingly frequent after the introduction of the horse to the Plains (Binnema 2001:57; Grinnell 1892:242; Teit 1930*a*:306), and Saukamappee's account to David Thompson illustrates the years of depredation the Siksikaitsitapi suffered at the hands of the horse-mounted Shoshone up until they were able to secure access to firearms (Binnema 2001:57-58; Thompson 1916:328-40). In later years, though, with both horses and guns, the balance of power reversed: the Siksikaitsitapi became a force to be feared, positioning them to dictate terms for the flow of trade goods to their neighbours as they saw fit, and to benefit from their advantageous position as middlemen. Those who transgressed faced severe repercussions: a party of four American traders attempting to cross the Rocky Mountains at the headwaters of the Missouri River were convinced to turn back by the Piikáni only after one of their number was killed (Edmonton House Journal, James Bird to John McNab, December 23, 1806, HBCA B.60/a/6). A party of Siksikaitsitapi attempted to deter David Thompson from trading in the Columbia River valley in 1810 by blocking Howse Pass; Thompson evaded the blockade by making snowshoes and crossing the inhospitable Athabasca Pass instead (Thompson 1916); direct access to trade goods such as firearms may only have served to exacerbate the internecine conflict.

For the period when the disparity in wealth and power between Plains and Plateau groups existed, the situation may have significantly contributed to the abandonment of Old Man's Playing Ground. To engage in such a risky activity as gambling, participants' wagering possessions of equal value would be a prerequisite. Exemplifying the perceived level of risk

involved, Allan Pard notes that in *Siksikaitsipowahsin*, "The old expression of 'gambling' and 'warfare' is referred to as *gaahtomei*... So there was no difference between warfare and gambling." In the event of an encounter with another group, particularly one with which relations could be hostile, he explained, "You had a choice. If it was going to be a friendly encounter, then they would gamble. You know, that was just a part of the way things were." A famous Siksikaitsitapi story shared by Mr. Pard exemplifies the analogous nature of the risks involved:

> **AP**: Instead of warfare, you would play the gambling game. So, it's just basically the same thing as this story about the Peigan who was caught in the thunderstorm, and he ducked into this cave and he felt a presence in that cave, and here was another person. So, they couldn't see one another. It was so dark in the cave that the Peigan took this person's hand and made the signing of the Peigan [*the motion of a fist circling around the cheek*]... And so the other person took the Peigan's hand and made the sign of the Snake [*an extended finger sinuously waving forward*]... Snake Indian. Shoshone. So they waited until the storm passed and when they went out, they played the hoop-and-arrow game. And the Peigan lost the first game and so… he gambled his scalp lock, so he lost his scalp lock. And then the Peigan challenged him again and told him, "Let's play for the whole scalp." So they played a[gain]. [The] Snake Indian had the confidence, probably feeling pretty confident, he beat him already. They played for the whole scalp and then the Snake Indian lost. So the Peigan took his bowstring off and tied it around the Snake Indian's forehead, tied it tight and then grabbed all of his scalp and started scalping him, cutting him, following the bowstring. And that's when the

> Snake Indian cried. He cried, eh? When he started getting scalped. The reason why this story is.. there's a famous song that came from this story. [*Clears throat.*] I'll sing this song. [*Sings.*]
>
> *Piiksiiksiinatapiyoomay* ['The Snake Indian']
>
> *Kiinokaasainiiyoomay* ['He cried anyway']

This victory song, or Scalp Dance, is of profound significance in Siksikaitsitapi tradition, being sung at the end of the Sun Dance ceremony. According to Mr. Pard, songs such as these "give us encouragement in life that we... can always conquer our adversaries and meet our challenges in life." Explaining this concept further, he said, "You're putting your life on the line when you go into war. And the same thing when you're gambling, you're putting something on the line to play the game."

In the case of Peter Fidler's visit to Old Man's Playing Ground, if everything of value that the Ktunaxa owned could be had for trifles, the Piikáni had little incentive to engage in such high-risk activity. The introduction of European-style commerce provided a new mode of exchange that undermined the ceremonialized redistributive mechanism of gambling (Yanicki 1999:40), offering middlemen in the Fur Trade all the one-sided benefits of negative reciprocity while circumventing much of the risk.

The reservation era: Cultural destruction and impact on traditional knowledge

Abandonment of the site does not mean stories about Old Man's Playing Ground have not continued to resonate in First Nations communities. Even long after the site ceased to be associated with meeting and gambling except in a mythological sense, its location continued to be known into the late 1800s and beyond. A substantive shift in knowledge of the site

has occurred in the past century, though, that is reflected in part in a change to the name of the Oldman River, and in that the specific location of the site no longer appears to be a part of this otherwise enduring tradition.

Just as the earliest recorded names of the Oldman River included calqued variants of 'Where-Old-Man-Played River', so too are the names of the river today that translate simply to 'Old Man River' probably loaned terms. However, it may be that the borrowed convention of the shortened name is not from another First Nation's language, but from English, the dominant colonial language of the time period in which these forms have appeared. Such losses of traditional knowledge, including both to language and culture, can in large part be attributed to Euro-Canadian policies of cultural destruction (Bastien 2004:26) that included residential schools, prohibitions against the practice of traditional ceremonies, and a pass system, never legislated but nevertheless enforced by the Royal Canadian Mounted Police (Bastien 2004:21; York 1990), that required First Nations peoples to obtain permits to go off-reserve.

On the degradation of his fluency in spoken Nakoda and loss of traditional knowledge as a result of his residential school experience, Henry Holloway had the following to say:

> **HH**: I was put into school when I was seven years old and my contact with my family, my mom and dad and my grandparents was off for eight years, eight to ten years in residential school. And a lot of history, a lot of the things that my grandparents should have told me have been lost, and a lot of my language, I lost it, because when we were in school, we tried to speak as much Stoney as we can, but we were limited. And a lot of the old Stoney language weren't spoken to us. It's just the common everyday language that we speak to each other.

> But there were a lot of words that we had to cut short. We didn't know we were doing that, but until later on when we got older and I got out of school, certain words that I said and my grandpa said, "No, you're supposed to say it **this** way. You said it the wrong way. You cut that word in half." See, this was done through the residential school. That's where all our language was kind of mixed. We mixed it up with English and our language. So in order to use English in our language, some of our words we had to cut short, so that we can understand it in English. So this is where we got all confused and lost a lot of our language and a lot of our communication with the elders. A lot of the things that should have been passed on to us if we were with our parents right up to adulthood, we might have learned it. But a lot of it, ninety percent of it was lost through residential school.

Both Art Calling Last and Allan Pard also expressed strong feelings about the effect of their residential school experiences on their knowledge of traditional language and beliefs. Themes of racism and abuse at the hands of nuns and priests, and attempts by their educators to foster feelings of shame and fear at their own traditional culture, permeate both accounts. For both men, these traumatizing events strengthened their resolve to pursue traditional knowledge in their later lives. Out of respect for their wishes to share these experiences, they are presented in largely unreduced form here.

> **ACL**: I went to school in this.. on the reserve, it's called St. Mary's School. St. Mary's R.C. [Roman Catholic] School. I went to school in 1938 to 1947. During my school years, they were called Grey Nuns, and they were called Sisters.

Sisters of Charity. They were women that wear funny hats, and they wore uniforms. They were from down east, from Quebec. They didn't really talk English, and they don't know us. They **hate** us. And the priests, too. So, they put a stop, over at the school, not to use our language. But a lot of our people, a lot of us, don't talk English. So we're scared if they, if the supervisor caught us talking our language, we're going to get punished for that. So slowly, we started talking English. You know, somehow people got used to talking English. That's the way it was. They.. didn't raise us of talking our language. They took our language away.. and our beliefs. When a priest says mass, they call it, the priest will say mass, I used to be an altar boy to the priest, I helped the priest up there in the altar. I even dressed like a priest during the mass. And the priest says sermon, when they start preaching to the people, in no time, he will say, he will tell us that: "Your parents are going to go to hell." I heard this. "'Cause they go to the Sun Dance. You people worship Lucifer, Satan, the Devil. You people are going to burn in Hell for that." It's just **scaring** us, you know, and I didn't like it. I didn't like the…

When I was working for.. I work over there, at the Kainai Correctional Centre. I've been there for twenty-one years now. I'm still working over there. Back in the nineties, it must be ninety-five, summertime, July. There's a priest over there in Stand Off, that lives in Stand Off. He was new to the community. I met him that morning at where I work, at the correctional centre. He stopped and asked me my name, and I told him, and then he went a little further and

told me, "What school did you go to when you were a kid?"… I told him, "St. Mary's School." And he kept asking me questions, and I was in a hurry. I told him, "Father, I don't have time. I have to go. I don't have time to talk to you." He kept bothering me, he wants me to say something about the school. Then I stopped and I told him, "Father, I'm going to tell you this. I don't have good words for St. Mary's School, if that's what you think I'm going to say, I'm going to praise the school system, the school, the Catholic school. It's no good. That school was just like a reform school." I told him. He was looking at me, and I was getting mad, and I told him, "Father, I'm going to tell you this. Since you want me to say something about the school, about St. Mary's School, I told you before, I don't have good words for it, and the way I was taught in school. You guys, you priests, every time you say a mass, you start preaching to us. In no time, you condemn our way of life, our spirituality, what we believe. In no time. You're civilized, and us, you call us savages. If you were civilized, if you believe in what you have, this so-called Christianity, if you believed in it, you wouldn't be treating us like that. You wouldn't be treating us like.. you always call us down, condemn our way of life, our spiritualities, our beliefs. How come you guys are like that? In order to be ordained as a priest, you've got to have a good education, you've got to have good brains, you've got to be smart. And you guys are not like that." He was looking at me when I said these things. I told him, "Father, let me put it this way. We were here before you guys. The higher power that put us in this part of the world, **here**, gave us our own spirituality,

our beliefs, our way of life. That's how come we lived that long. And you guys came over and started killing us, and started messing up our lives. Don't you think, don't you ever think, "These people are here before us, they have their own spirituality, they have their own beliefs?" And yet you condemn our ways, our beliefs. The way we are, we have our medicine men, **our** healers. We respect them, we treat them very nice. We don't mistreat our medicine men, our elders. But I'll put it this way. You guys have your own medicine man, a long time ago. You guys killed your medicine man. You guys were jealous of him, performing miracles, bringing back the dead. You guys were scared of him, and you were jealous of him, so you guys got together and planned how to kill him. You guys killed him! That was your medicine man." He looked at me and he walked away.

Allan Pard shared the following experiences:

AP: I went to a Catholic boarding school that was called Sacred Heart Residential School and, I think it was established in 1926, that school.

GY: Ok

AP: And there was some before that, that were established, and anyway, it was probably the third generation of boarding school in my family. And like I said, we weren't allowed to speak our language, and everything that was basically Indian was, we were told that our language was the Devil's language, that our beliefs, you know, was basically.. praying to the Devil. So a lot of us were brought up with this concept of being afraid of our ways, scared to speak our language. And so [*coughs*] anything that was being Indian, we just basically were losing

our self-esteem as a people, and how we were treated and mistreated in those boarding schools...

Lining up to go eat, this nun would say, "*Chaa*." You know, tap us on the head, and.. I thought it was just kind of a French expression, you know, because those were French nuns. Anyway, later on, a few years back this.. guy that now is one of the curators at the Museum of Civilization, he was studying to be a priest and he quit studying to become a priest because of the atrocities he learned about boarding schools and how the priests were, how the church, you know, dealt with the people in inappropriate ways, and anyway, he didn't want to be a priest anymore. But anyway, I told him the story about this nun saying "*chaa*" to us and he was just kind of horrified. He said, "Do you know what that nun was saying?" I said, "No..." He said, well, in French Canadian, the language of what they're, when they say *chien*, it means dog.

GY: Dog.

AP: [*Laughs.*] So basically, that nun was telling us, "Hey, dog." You know? [*Laughs.*] So that's how we were treated [*coughs*], and brought up, and I know, after residential school, at the school, too, we weren't allowed to talk, or talk back, or anything like that, so we were really **suppressed**. We weren't allowed to express our feelings or our thoughts because.. we were just basically taught to shut up and listen. So.. a lot of our communication skills, our people skills, you know, sort of, we **lost that** in boarding school. And then.. being isolated and alienated from your family, you know, and then it got the point where you were

almost embarrassed of your family because of how we were indoctrinated, that, you know, being Indian was wrong. And.. so a lot of dysfunctionality was established, you know, through those boarding schools. I didn't know this 'til I started maturing and later on learnt more about life in itself and.. I knew there was something wrong, you know, because one day when I was in kindergarten, I was small, and on the fourth floor was the dormitory where we all slept and there was the boys' washroom. But there was about five stalls of toilets there, but the toilets were all plugged. And anyway, the nun was trying to get me to put my hands in there to unplug those toilets, and there was just no way I would put my hands **in** there. And of course, you know, being severely reprimanded because I was not following instructions. So I was..

GY: Yeah..

AP: I was **whipped** for not doing that. And I was thinking, well, gee, they're teaching us.. about the Bible and about loving thy neighbour as thyself, and yet these people are treating us like **dogs**, you know? Treating us like **animals**. And so I started questioning what they were telling us, you know, what… You know, I was taught… My great grandmother was a Sun Dance woman. She put up Sun Dances, and she was still alive at the time. And I used to think, I hear her praying and our ways, and [*laughs*] I never hear her praying to the devil, and in fact the way she lives, and how she conducts herself, it was so **saintly**, how [*laughs*] she conducted herself. And I just never really bought into what the boarding school, how they were trying to indoctrinate us. So later on in life I was able to,

> once I started, you know, reaching adolescence, being a teenager, I started.. kind
>
> of.. thinking more about.. you know, our ways.

In her book *Blackfoot Ways of Knowing: The Worldview of the Siksikaitsitapi*, Betty Bastien, *Sikapinaki* ('Blackeyes Woman'), herself a former student at the Sacred Heart Residential School (Bastien 2004:40-42), writes:

> ... residential school policies and practices were designed for the destruction and disruption of the life-sustaining kinship relationships of tribal peoples. The destruction of these kinship relations were essentially done by targeting the following: keeping young people away from ceremonies, prohibiting the use of First Nations languages, enforcing a Christian belief system, and treating each pupil as an individualistic monad. The intent is to destroy the purpose, meaning, and life-sustaining relationships of a people [Bastien 2004:30-31].

As part of a coordinated plan to eradicate the identity of a people, Bastien argues, these practices constitute genocide, following the definition of the term as coined by Raphael Lemkin in 1944:

> ... generally speaking, genocide does not necessarily mean the immediate destruction of a nation, except when accomplished by mass killings of all members of a nation. It is intended rather to signify a coordinated plan of different actions aiming at the destruction of essential foundations of the life of national groups, with the aim of annihilating the group themselves [quoted from Bastien 2004:26-27; Davis and Zannis 1973:9].

"Consequently, the phrase 'cultural genocide' is an unnecessary ellipsis: cultural genocide is genocide. In any intellectually honest appraisal," add Chrisjohn et al. (1994:30), "Indian Residential Schools were genocide."

The insidious effect of residential schools on language use and pride in aboriginal identity is only one factor that has contributed to the erosion of cultural identity in First Na-

tions communities. Loss of place-specific knowledge has also been the result of not being allowed to visit traditional use or sacred sites. In the U.S., from 1880 to 1924, Native Americans were prohibited from leaving their reservations (Price 1994:261). Similarly in Canada, a pass system was implemented that barred First Nations peoples from leaving a reserve unless permitted by an Indian Agent, the Canadian federal government's representative on a reserve; this policy remained in place until as recently as 1951 (Sinclair 1998:170). In sharing his recollections, Allan Pard commented on the effect of the pass system on a traditional sense of place:

> **AP:** Right into the fifties, we were still required permits to leave the reserve. I remember my grandfather, you know, going to obtain a permit so he could visit relatives on the Blood Reserve. And if we didn't have that permit, if the Indian Agent didn't give us that permit, we couldn't leave the reserve.
>
> **GY**: What was the risk, what was the penalty?
>
> **AP**: Well the penalty, it was right in the Indian Act. If you looked at the Indian Act in the fifties, it was basically stated right in there, any Indian caught off the reserve, it was a hundred dollar fine or ten days in jail. So we were really.. you know, isolated just to the reserve. And **that** has a lot of bearing to a lot of the Blackfoot territory that we couldn't access. So a lot of the times the stories we were told, we could just visualize the sites [*laughs*], because we didn't have access to those sites, and that's kind of.. the deterioration of our culture was also happening in that way, too.

Even with these barriers against traditional use long since removed, the effect of several generations' removal from the landscape is not well understood. Notes Betty Bastien,

"Average Canadians are probably not even aware... of the genocidal effect of [these] policies" (Bastien 2004:29); it has been a lasting one. Even in the past decade, government administrators have received requests from First Nations peoples seeking permission to access sites on public land (John W. Ives, personal communication, 2010). By the same token, there are no provisions in the Canadian constitution guaranteeing First Nations peoples access to or the right to use sacred sites (Mohs 1994:203).

Nevertheless, in the face of suppression, First Nations spiritual life has proven resilient, providing a vehicle for key aspects of traditional culture to be preserved. As Allan Pard explained:

> **AP**: But still yet as Blackfoot people we are very, very fortunate because we still have a lot of people, too, that fell through the systems, that either didn't go to school because of sickness or **whatever**, but these were the people that basically kept up our traditions. And the good thing about it is, pretty well everything we **did**, spiritually speaking, was still being practiced. So our Sun Dance was not lost 'cause we still had people that still had knowledge and sacred rites to do our Sun Dances, our Beaver Bundle ceremonies, our Medicine Pipe ceremonies, our All Smoking ceremonies, our offerings, our sweats. So basically we're still fortunate to be all intact. We still had a lot of – I shouldn't say a lot, but we still had elders that were practicing our ways. So even in the seventies, when we wanted to do things, it was still possible because we still had the elders who were capable of instructing us and passing on knowledge to us to continue our ways.

Stories about sacred places make up an important aspect of this spiritual knowledge that has been preserved. In *Kahsinoonooniks, If Only the Land Could Speak*, a film by Kainai educator and ceremonialist Narcisse Blood, Dr. Leroy Little Bear speaks about how stories are the defining characteristic of a people's belonging to a place. In the film, Siksikaitsitapi elders visit sites that are spoken of in oral tradition, but which many of them have never had the opportunity to visit before. The film explores the theme of the reinhabitation of sacred places.

There is a strong congruence between the sites visited by elders in the film and those deemed to be of greatest significance by archaeologists in Alberta—places such as Writing-On-Stone, Okotoks, the Women's Buffalo Jump, and the Sundial and Majorville Medicine Wheels. This overlap in interests highlights the opportunities that exist for collaboration between archaeological researchers and First Nations peoples at sites like Old Man's Playing Ground. It is fundamentally important not to view the cultural landscape, including individual sites, as frozen at a specific time in the past (Carmichael et al. 1994:5; Marciniak 1994:141-143). Rather, the living nature of the cultural landscape continues so long as people remain actively engaged in it; the persistence of stories is an important reminder that the significance of these places continue to resonate with First Nations communities today, and can continue to be meaningful in new and unexpected ways in the future. The chapters which follow are dedicated to documenting past cultural activity at Old Man's Playing Ground. While recognizing that much has been lost, this work has also been undertaken with the understanding that the place has not been truly abandoned so long as these stories continue to be told.

Chapter III
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Ethnohistory of the Hoop-and-Arrow Game

Among the recurrent themes that appear in stories of Old Man's Playing Ground, in addition to its association with Old Man, is that a game was played there in which arrows were thrown like darts at a rolled hoop—this appears most explicitly in Peter Fidler's account (HBCA E.3/2, fo. 17), but also in the much later version of the story related to Clark Wissler and David Duvall (1995 [1908]:24). Similar accounts are ubiquitous among the travelers and adventurers who first explored the shores, and later the interior, of North America. From the bowling greens of the Eno in the Carolinas (Lawson 1714:57; Lederer 1672:18) to the gaming places of the Bayogoula and Mugulasha[1] at the mouths of the Mississippi (Margry 1880:261), a game involving a rolled stone disc and tossed spear or pole was known (Figure 3.1). In 1786, on the Monterey coast of California, the Comte de La Pérouse saw a similar game played among the Rumsen on a fence-lined field (La Pérouse 1798:223). And from the north, delving deep into the heart of the continent via the trading posts of the Hudson's Bay Company in 1792, Fidler visited the site on the banks of the Oldman River.

Altogether, scores of accounts of such a game have been reported in the historic and ethnographic records. These come from at least 93 different First Nations across the full breadth of North America, from language families ranging from Muskogean to Na-Dene, and including such isolates as Haida and Zuni (following Campbell 1997, Goddard 1996, and Mithune 1999). Combined, the rules and forms of these games are as varied as the people who

[1] Noted in the anonymous ship's log of the frigate *Le Marin*, part of the fleet of Pierre Le Moyne, Sieur d'Iberville, in 1698-99.

Figure 3.1: *Tchung-kee, a Mandan Game Played with a Ring and Pole*, **ca. 1832-1833, by George Catlin (Smithsonian American Art Museum 2011)**

played them, but that there is some unifying theme to all of them has long been recognized. In 1886, in his compilation of historic accounts of First Nations gaming traditions, Andrew McFarland Davis wrote:

> The striking fact remains that this great number of tribes, so widely separated, all played a game in which the principal requirements were, that a small circular disk should be rolled rapidly along a prepared surface and that prepared wooden implements, similar to spears, should be launched at the disk while in motion or just at the time when it stopped [Davis 1886:40-41].

In 1893, ethnologists Frank Hamilton Cushing and Stewart Culin began adding ethnographic reports, correspondence with contacts across the United States, and fieldwork of their own to Davis's groundbreaking work. The product of 14 years research, of which Cushing did not live to see the end (Gabriel 1996:6-7), was Culin's (1907) *Games of the North American Indians*,. This endeavour still stands as the authoritative source on gaming traditions of every descrip-

tion, including what has come to be known as the *hoop-and-pole game* (Culin 1907:420-527).

The pioneering work of Davis, Cushing, Culin, and others did not include the historic accounts of exploration of the British North American, and later Canadian territory to the north. In point of fact, this oversight was through no fault of their own—David Thompson's *Narrative*, covering the years 1784-1812, was not published by Toronto's Champlain Society until 1916 (Thompson 1916), while the complete text of the 1792-93 journal of Peter Fidler did not reach published form until 1991 (Fidler 1991). In consequence, early historic accounts from north of the border about a hoop-and-pole game among such peoples as the Piikáni and Ktunaxa have never been examined within the broader context of regional, or indeed continent-wide gaming traditions.

A comparison of Peter Fidler's account to ethnohistoric records of the hoop-and-arrow game among both the Siksikaitsitapi and Ktunaxa reveals that Fidler's account is actually somewhat enigmatic. While the game itself is familiar to both, Old Man's Playing Ground does not match descriptions of playing fields used by either of these peoples. Expanding on this comparison, and building on the groundwork laid out in Stewart Culin's (1907) comprehensive study, the site can be shown to be located near the center of an area where a very specific variant of the hoop-and-pole game was played, involving the use of an arrow for a dart, a playing field with logs laid down at either end, and a hoop wrapped with rawhide and set with coloured beads. The variant of the hoop-and-pole game involving arrow-like darts rather than poles or spears is referred to here as the *hoop-and-arrow game*. In reviewing this literature, one can surmise not only how the game may have been played at Old Man's Playing Ground and how old the site could be, but which peoples, through shared aspects of their gaming traditions, could

prehistorically have had knowledge of and visited the site. Archaeologically visible signatures of the game could relate to its ceremonial function, its age, and, through its association with gambling, evidence of long-distance trade.

Siksikaitsitapi accounts

To review, Fidler wrote that the game at Old Man's Playing Ground was played "by rolling a small hoop of 4 Inches diameter & darting an Arrow out of the hand after it & those that put the arrow within the hoop while rolling along is reckoned to have gamed. This is on a fine level grass plain..." (HBCA E.3/2, fo. 17). This same game is instantly recognizable in the writings of David Thompson, who observed it being played among the Piikáni in 1800:

> In the day time the game generally played is with a round ring of about three inches diameter, bound round with cloth or leather, and the game is played by two men, each having an arrow in his right hand: one of them rolls the ring over a smooth piece of prepared ground, and when it has rolled a few yards, each following it, gently throw their arrows through it to rest about half way in the ring, which now lies on the ground and according to the position of these arrows one has gained and the other lost; each of these acts for a party who have an interest in the game; and it sometimes requires two or three hours to decide the game [Thompson 1916:359].

Commonalities between Fidler and Thompson's accounts include the preparation of a level playing field, the size of the hoop, and the contest being to pass arrows through it. Thompson's account introduces several additional features: the hoop was bound in cloth or leather; the hoop was rolled first and then followed by two participants (Fidler did not specifically mention the number of people who played the game, nor giving chase); and that gambling by spectators was a significant aspect of the contest.

Like Fidler, Thompson is vague on the details of how scoring was kept. One clarification was given by John MacLean, who provided this account from the Siksika:

> A board, 8 or 10 inches in width, is placed on its edge upon the ground, held in place by small stakes driven into the ground; and another, in the same fashion, about 12 feet distant. The contestants play in pairs. Each holds in his right hand an arrow, and one of them a small wheel, having fastened to it a bead, or special mark placed upon it. Standing at one end and inside the board, they run together toward the other board. The contestant having the wheel rolls it on the ground, throwing it with such force that it strikes the board. As the two men run they throw their arrows against the board, and as near the wheel as they can. When the wheel falls, they measure the distance between the point of the arrows and the bead or special mark on the wheel, and the arrow which lies nearest to this point has won the throw. They continue this running and throwing until the one who has reached the number agreed upon as the end of the game has won. The number of points made by the contestants are kept by means of small sticks held in the hands. Several pairs of contestants sometimes play after each other, and for days they will continue the game, surrounded by a large number of men, old and young, who are eagerly betting upon the result [Culin 1902-3:444; MacLean 1896:55].

Scoring, then, is settled by a mark on the hoop, namely a bead. Now, however, the rules of the game are again subtly different: the playing field is framed with staked-in boards 12 feet apart; instead of throwing the hoop and then running, the contestants throw it while at a full run; and the hoop must strike the end boards before the arrow is thrown. MacLean's account introduces the concept of tally sticks to keep score. And yet another subtle difference: it does not matter if the arrows pass through the hoop; instead, it is the distance from the arrow tips to the bead that is measured to keep score. It begins to be apparent that a slightly different game is described in each new telling.

It may be tempting to attribute this difference in form to MacLean's account being from the Siksika rather than the Piikáni. However, George Bird Grinnell made a very similar observation from *Aamsskáápipikani* in Montana:

> A favourite pastime in the day was gambling with a small wheel called it-se'-wah. This

> wheel was about 4 inches in diameter, and had five spokes, on which were strung different-colored beads, made of bone or horn. A level, smooth piece of ground was selected, at each end of which was placed a log. At each end of the course were two men, who gambled against each other. A crowd always surrounded them, betting on the sides. The wheel was rolled along the course, and each man at the end whence it started, darted an arrow at it. The cast was made just before the wheel reached the log at the opposite end of the track, and points were counted according as the arrow passed between the spokes, or when the wheel, stopped by the log, was in contact with the arrow, the position and nearness of the different beads to the arrow representing a certain number of points. The player who first scored 10 points won. It was a very difficult game, and one had to be very skillful to win [Culin 1907:444; Grinnell 1892:183].

Similar is the account of the Southern Piikáni game in Montana by Walter McClintock, who wrote:

> There was also the "wheel and arrow," a gambling game played by men with arrows and a small wheel with beaded spokes. The wheel was rolled over a smooth and level course, each player throwing an arrow at it. The points were counted according to the position of the arrows when the wheel stopped. Its origin is very ancient and it is often mentioned in old stories and legends. Its use as a gambling game was very general among the plains-tribes [McClintock 1910:392-393].

Hoops matching Grinnell's and McClintock's descriptions were collected from the Kainai and Piikáni by ethnologists. One, from the Blackfeet reserve in Montana and now at the Field Museum in Chicago (cat. no. 64350; Figure 3.2), is described as:

> An iron ring, 3½ inches in diameter, wrapped with buckskin and having eight rows of colored glass beads of three each, arranged within, like the spokes of a wheel. The beads are of different colors, as follows: Three white; three red; two black; three yellow; three light blue; two black and one red; two green and one blue [Culin 1907:448].

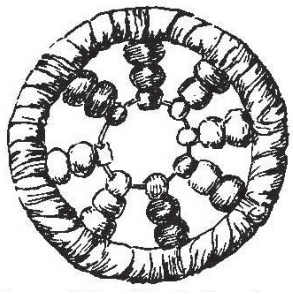


Figure 3.2: Wheel used in Piikáni hoop-and-arrow game (from Culin 1907:448)

From the Kainai reserve in Alberta (Field Museum, cat. no. 51641), the following:

> Ring, 3 inches in diameter, covered with buckskin, painted red, with eight spokes attached inside a rim at equidistant points, four being spirals of brass wire and four alternate ones of beads. Of the latter, one consists of two beads, one red and one blue; another of three, two green and one brass; and the third, of three, one red, one blue, and one red; and the fourth of three red [Culin 1907:443].

And another from the Blackfeet reserve in Montana:

> Ring, 2⅞ inches in diameter, wrapped with buckskin painted red, and having six interior spokes, three consisting of two dark-blue glass beads with the bead of spiral brass wire next the center, and three consisting of pyramidal spirals of brass wire, two with red glass beads and one with a yellow glass bead next the center [Culin 1907:443-444].

These all feature components dating to the post-contact period on the Plains, when European trade goods such as iron, coloured glass and brass beads, and brass wire were available. Again, though, Grinnell (1892:183) mentioned the beads formerly being made of bone or horn.

Larger hoops were known among the Piikáni. Also at the Field Museum are the following items: "Hoop of cherry sapling, 16½ inches in diameter, laced with a network of rawhide, which passes around the edge twenty-eight times… In another similar specimen in the same museum, cat. no. 69352, the thong passes thirty times around the edge" (Culin 1907:447-448). These larger, netted hoops, quite different from the smaller ones Fidler speaks of at Old Man's Playing Ground and elsewhere described, are claimed by Ewers to belong to a children's game:

> Boys played this game with a larger wheel for a target. It was a sarvis-berry-wood hoop with a rawhide webbing inside and a small hole in the center which the boys called "the belly button." The blunt-ended poles were as long as the players could reach with outstretched arms. Boys pretended they were lancing buffalo when they threw the poles. They called it the "bull game." Certainly hurling poles at a moving target was good training for the future hunter and warrior [Ewers 1958:157].

In his work with the Piikáni, McClintock meanwhile provided a photograph of a man holding a larger (approximately 12 inch) hoop bisected by a single, unadorned spoke, with the caption "Wheel and Arrow Game" (McClintock 1910:393; Figure 3.3). This type of hoop is not mentioned in any of the descriptions of the game from the Siksikaitsitapi.

Figure 3.3: "Wheel and Arrow Game" (from McClintock 1910:393)

In the majority of cases, it would seem fair to say that the smaller hoop was used. This includes a rendition of the game targeted at a youth audience, and "still enjoyed by the tribes of Alberta" (Stow 1923:45) which is very much reminiscent of the account by MacLean:

> Two barriers are set up fifteen feet apart. These consist of two or three saplings laid on top of one another and held in place by a pair of stakes driven in the ground at each end… Inside these barriers stand the two players, each with a spear. One of them holds a wooden hoop on the inner rim of which is fastened a single bright colored bead. He starts the hoop rolling down the alley with sufficient force to strike the opposite goal and then quickly changes his spear into his right hand. When the hoop has covered about half the distance, the two players, running abreast, follow it. Each plays as soon as he thinks that he is able to estimate the spot on the barrier that the hoop will hit, throws his spear, aiming at this point… The hoop, on striking the barriers falls on its face, but the javelins have already slid beneath it. In fact, hoop, spears and Indians reach the end of the track at about the same instant. The score is determined by measuring the distance from the bright colored bead to the two spears, for the one lying nearer the bead scores one. For the second inning they merely turn where they stand and run in the opposite direction. The hoop is picked up by the

> player that did not wheel it before. Each stands his spear on end and taps it once lightly on the ground. What they mean by this strange little custom it is impossible to say except that they hold it to be some ceremony that brings good luck… For each point scored, the winner picks up a small stick and carries it in his hand for a counter. The game continues until one of the pair has made ten [Stow 1923:45-47].

This account, although not attributed to any particular First Nation, reiterates many of the observations already noted: a playing field with logs at either end, the use of a hoop with a bead set in it, the game proceeding in alternating directions, the use of tally sticks, and the score being counted to ten. The choice between a single bead sewn into the rim of the hoop or multiple spokes with multicolored beads seems optional, perhaps determined by the materials at hand. One gets the sense from Edith Stow's account that there may be a ritual aspect to the game that is not so clearly suggested in the other descriptions.

There is one more account of the hoop-and-arrow game among the Siksikaitsitapi that is more detailed than the rest. This rich account comes from the ethnographic work of Ewers with the Southern Piikáni:

> The men's societies also competed in the wheel game. One society challenged another by sending tobacco to its leader… The playing field was a level stretch of ground about thirty feet long, with a log placed across the course at each end. Before the game began, members of each society gathered around one of the logs and sang their ritual songs. Each society carefully selected as its representative one of its members who possessed an outstanding war record and who was adept at this game. The wheel used as a moving target in this game was a small hoop, about three inches in diameter, made from the fire-hardened neck cord of a buffalo. Inside the hoop were five or more spokes of rawhide cord and a small opening in the center. The spokes were strung with beads, a different color being used for each spoke, and each color representing a different kind or color of horse… Each contestant carried an arrow-like pole about three feet long with a metal head and feathering. Spectators lined the sides of the course, many of them betting on the outcome of the contest. They were

> silent as the two players stepped on the course. Each of these contestants raised his pole toward the sun and offered a short prayer in such words as, "See me. See this arrow. See how it is painted. That is how my arrow was painted when I killed a Crow. I shall shoot to win because what I say is true." Each man then declared his target on the wheel in terms of his own war experience. One might call out, "I took a white horse from the Flatheads. I shall shoot for the white beads." The other might say, "I took a sorrel horse from the Crows. I shoot for the red beads." If a player lied in proclaiming his coup, he would surely lose. The players agreed between themselves which of them was to roll the hoop. If they couldn't agree, the one with the better war record was given his choice. Some men preferred to roll the wheel so they could know its course and speed. Others preferred to let their opponent roll the hoop so they could concentrate upon casting their pole. Before rolling, each man spat upon the head of his pole. The roller then lifted the wheel to the sun and rolled it toward the log at the far end of the course. Both men ran after it and hurled their weapons before the hoop struck the log. If one man pierced the center of the hoop with his pole, he won. If neither pole hit the center, that man won whose pole was in contact with the color beads of his choice when the wheel stopped after rebounding from the log barrier. The game continued until one player either pierced the center hole of the wheel or scored his point. Usually it was not necessary to roll the wheel more than twice. Judges representing each society were stationed at both ends of the course to determine the winner. Some young men played this hoop-and-pole game informally as a means of gambling. In these contests there were no recountings of war exploits or prayers to the sun before rolling the wheel. The players merely declared their targets [Ewers 1958:156-157].

It is after reading this account that it becomes apparent how much of the variation in these records comes not so much from different methods by which the game was played as from the differing capacities for observation of the writers.

Ewers' description of the hoop-and-arrow game strongly alludes to its possessing a ceremonial role, as a game between members of different age-graded societies[2]. The hoop-

[2] Details of age-graded societies are discussed at length in Ewers (1958), Grinnell (1892), and other ethnographic works of the Siksikaitsitapi.

and-arrow game is still remembered through its association with the Beaver Bundle, one of the principal ceremonies still practiced by the Piikáni today. This association is not hinted at in the available literature, but indicates the considerable cultural and ceremonial significance of the game. As explained by Allan Pard, a transferred holder of the Beaver Bundle ritual:

> **AP:** I thought of the hoop-and-arrow game well, when I was first told the story of *Napi*'s gambling ground. This was back when I was little, a child. And then later on in life, one of my relatives was fixing a hoop-and-arrow game for the buffalo jump [Head-Smashed-In Buffalo Jump] to be displayed. And that's when he explained to me how the game was played, specifically at that time. And that's how I seen it, and then later on, as I got [*clears throat*] transferred into the Beaver Bundle, my relative, he was the last key Beaver Man. His name was Mike Swims Under. His Indian name is *Akkakinnum*. 'Many Lights'. He taught me about how the hoop-and-arrow came to be in the Beaver Bundle, and the hoop is kept in the Beaver Bundle to reaffirm the story of the gambling area and how it's associated to our people. So spiritually speaking, that's how the hoop-and-arrow game is kinda maintained, it's always in the Beaver Bundle.

Describing how the game was played, Mr. Pard explained:

> **AP**: Basically the hoop was made, and it's almost like a medicine wheel how it's fixed. There's different colours and at the center there's a little area almost like the main target. And each one of those, if your arrow came or spear came closer to one of those colours, that's how they would mark. The closer you were to the centre, you were declared the winner.

Further details of the game explained by Mr. Pard include that the hoop was rolled with an underhand motion, and contestants would wait for the hoop to nearly stop rolling before casting their arrows with an overhand motion. Finally, regarding the hoop, it possesses four spokes, and was quite small:

AP: I would say, almost a... four-**finger** hoop... you'd almost measure it with four fingers

GY: Four fingers width, I get it, OK.

AP: Yeah, yeah, yeah. We always measured with our fingers or our hands. So if you were going to talk about the length of the arrow or the spear, you'd use your hand motions – this is how many hands it was.

Elsewhere, functional hoops and darts have been reported as key elements of Ghost Dance (Culin 1907:437-438; Mooney 1896:915, 1064, 1075) and Sun Dance (Culin 1907:438-440; Dorsey 1903:12) rituals. It is quite probable that the records of the hoop-and-pole game for any given group have been filtered by informants to include only that which it was felt appropriate to tell. It is fair to assume that some aspects of the hoop-and-pole game and the objects associated with it have deliberately been left understated, belonging to a class of knowledge for which its custodians are obligated not to disseminate indiscretely. The hoop's inclusion in the Beaver Bundle, coupled with Ewers's description of ritualized challenges by age-graded societies and reference to the hoop-and-arrow game in the Siksikaitsitapi Sun Dance (see Chapter II), all serve to demonstrate the game's enduring ceremonial significance.

The game among other groups

Only a few of the sources so far discussed were known to Stewart Culin. While his work remains an authoritative source on the hoop-and-pole game, by no means is it complete. Indeed, of the three other peoples besides the Piikáni known from historic accounts to have been at Old Man's Playing Ground, that is, the Ktunaxa who met Fidler there in 1792 and the Nakoda and Nehiyaw who guided Dawson and Tyrrell in 1883 (Dawson 1886), only one is recognized by Culin to have played hoop-and-pole, when in fact all three had the game.

The one mention about these peoples in Culin's work came from MacLean, who merely noted, "The Stoneys have several games similar to the Blackfeet, including the hoop and arrow game" (Culin 1907:502; MacLean 1896:26). Henry Holloway expressed familiarity with the game, but had never seen it played:

> **HH**: I've heard of it, but I've never seen it done. I've never seen it, the hoop-and-arrow game, how it was played, or how they played the game. I've never learned it, but I've heard that that game existed by my grandpa. But I was very young at the time and I never asked how it was played, you know, "How do you play it?" I just heard it, the hoop-and-arrow game, but I've never seen it demonstrated.

While it no longer seems to be played, he did suggest that there may still be elders in the Nakoda community who know the rules of the game.

In his *Ethnography of the Kutenai*, Harry Turney-High (1941) made extensive note of the hoop-and-arrow game, a highly regarded pastime among the Ktunaxa.

> Shooting at the hoop was a favorite game. The same loop was used in this as in the ball game [played only by men, with a 2½ inch hoop of rawhide-bound beaver teeth] but, for purposes of testing marksmanship, seven beads of different colors…were

> sewed into the central hole with a buckskin string. The contestants by agreement either hurled arrows at the hoop by hand or shot them with the bow. The bow shot was commonest. When the contestants were in position, an umpire rolled the small hoop towards a goal line, and the marksman had to discharge his arrow before it crossed the line. The distance of the marksman from the line of the hoop's travel was not set but determined for the occasion. This shooting was for points. To miss the hoop or merely to hit it counted nothing. To drive the arrow through the loop counted one point invariably. To knock out a bead counted a higher score, depending on its color. There was no set rule for evaluating the beads. This was determined for each game. Whichever color seemed luckiest at the time was given the highest rating. In any event, there were seven beads with seven different values. A marksman could also "call his shot" for a particular bead just before he shot. If he succeeded in knocking out that one and only that one, he got the highest possible score for a single shot, this counting one point higher than that determined for the most valuable bead. The marksman whose turn it was stepped to position and declared himself ready. The hoop was then rolled. If he made a score he got a free shot. This kept up until he missed, and his opponent came to the shooting position. If the first man missed, and the second did likewise, they kept alternating until someone made a score. The winner of each match stayed in and was challenged by another player. The top man stayed in the game until he was shot out. Sometimes teams were chosen to shoot against each other for the bulk score.

Here we can see some obvious parallels to the hoop-and-arrow game among the Siksikaitsitapi, particularly in the version of the game in which arrows are hurled. The scoring system, while modified, still involves beads of different values set in a small hoop, and like in Ewers' (1958) account, players have the option to call their shot. The majority of Turney-High's account focuses on the variant more popular among the Ktunaxa, however, in which players shoot the arrow from a bow, one at a time, from a stationary position. There are reasons to doubt the archery variant game was played at Old Man's Playing Ground, not least of which is it is not in agreement with Fidler's account, wherein arrows were thrown rather than shot; no

explanation is offered for the marker cairns along the sidelines if a single firing position was used and shots were taken in turns; and further, if breakable stone-tipped arrows were used, firing them at a small target rolling on the ground would likely prove to be a wasteful practice.

The Nehiyaw are not listed by Culin among the First Nations who played the hoop and pole game, and in her ethnographic research among informants from either side of James Bay, Regina Flannery (1936:54) reported that there was no knowledge of it. As with the absence of Canadian historic records in Culin's research, this may reflect only limited investigation of the area. The Canadian Museum of Civilization holds a hoop for a hoop-and-pole game in its collections from the Nehiyaw, dated to 1897 and with a provenience of the west shore of Lake Winnipeg, Manitoba (cat. no. A-10, D2002-013549, CD2002-266). The specimen is made of a willow hoop with bark netting.

> [The game] was played in the spring after the snow had melted, but while the ground was still hard. The hoop was a netted wheel, about a foot in diameter, made of a willow twig bent into shape and netted with rawhide thongs. A circular opening was left in the centre. Each player was equipped with a dart, a three-foot pointed stick with a small projection near the tip. Six or eight men played on a side. Each side lined up in turn and a player of the opposing side sent the hoop rolling past them. They threw their darts at it. When a player made a hit, he seized the hoop and ran after the players of the opposite side. If he succeeded in hitting one of them with the hoop, that player retired from the game. It seems that one player from the side of the man who had scored also retired from the game, although this is not certain. The last man to be touched with the hoop lost the game for his side. A hit through the centre opening was called 'heart'; if the dart caught in the mesh, it was called 'claws' [Harlan Smith, cited in Canadian Museum of Civilization 2005].

At least to the Nehiyaw of the plains, the hoop-and-pole game was known. However, this version is with the larger netted hoop reminiscent of what Ewers (1958) referred to as a boys' game among the Siksikaitsitapi; the three foot hooked stick is not familiar to the Northwest

Plains. In the Nehiyaw variant, the game appears to have been a team sport rather than paired competition; the practice of trying to hit opponents with the hoop after a successful throw is also unfamiliar to those accounts already discussed.

Not mentioned in historic accounts of the playing ground are the Tsuut'ina; the hoop-and-arrow game, however, is well known to them. Terms related to the game appear in Tsuut'ina word lists, for instance "hoop, ringlike object; hoop used in hoop and pole game" (Hoijer and Joël 1963:66) and "to pierce with a long pointed object, to play the hoop-game" (Li 1930:21). In 1888, E. F. Wilson described the variant played by the Tsuut'ina as follows:

> In my report of the Blackfeet last year I mentioned the use of a little hoop or wheel for gambling purposes. I find that the Sarcees also use this, and two of them showed me how they play the game. A little piece of board, if procurable, or two or three flattened sticks, laid one on the other, are put for a target, at a distance of eighteen or twenty feet from the starting-point, and the two players then take their places beside each other; one has the little wheel in his left hand, an arrow in his right; the other one has only an arrow. The play is to roll the wheel and to deliver the two arrows simultaneously, all aiming at the mark which has been set up. If the wheel falls over on one of the arrows, it counts so many points, according to the number of beads on the wire spoke of the wheel that touch the arrow. Nothing is counted unless the little wheel falls on one of the arrows. The articles for which they play are valued at so many points each. A blanket is worth, perhaps, ten points, a pony fifty, and so on [Wilson 1888:246].

Again, reference is made to a two-player variant of the game involving a small hoop and arrows, with a short playing field using a wooden backstop. Bruce Starlight explained that among the Tsuut'ina, the game is part of the Black Soldier society, one of the age-graded societies adopted from the Siksikaitsitapi, but that "it's such a fun game, everyone played it, and gambled" (Bruce Starlight, personal communication, July 2011). Like the Siksikaitsitapi variant, then, there is a ceremonially proscribed version associated with age-graded societies, and a more

mundane version with which gambling is a major part.

A nuanced account was provided for the hoop-and-arrow game among the A'aninin (Gros Ventre) of Montana by Regina Flannery and John Cooper (1946:395-402). Culin (1907:447) noted the presence only of a netted hoop in the game as played by the A'aninin; however, Flannery and Cooper's fieldwork from 1939 to 1945 demonstrated the importance instead of the game using a 3-5" spoked wheel set with numerous coloured beads. The game was played by two players, throwing arrows as darts, on a 25-30' playing field with a log laid at either end (Flannery and Cooper 1946:395). Descriptions of this game match exactly those of the Siksikaitsitapi; the story of a warrior encountering a Snake Indian in a cave while alone on the warpath (see story related by Allan Pard, Chapter II) was even told. Striking, too, is the explanation of the summoning of "wish-power" while playing the game not by appeals to a supernatural source gained through fasting and visions, but through a focus on "the player's previous war exploits" (Flannery and Cooper 1946:397) in a manner reminiscent of that recounted for the Southern Piikáni by Ewers (1958:156-157).

With the exception of the Nehiyaw, repeated reference appears in the ethnographic literature of the Northwest Plains to a form of hoop-and-arrow game that involves a small ring (less than six inches in diameter) with beads either set on spokes or in the ring itself. The co-occurrence of a small beaded hoop, thrown arrow or pointed dart, and playing field with logs at the end also extends deep into the Interior Plateau. Canadian artist Paul Kane recorded the following account after his visit to the HBC's Fort Colville, near Kettle Falls on the Columbia River:

> The principal game played here is called *Al-kol-lock*, and requires considerable skill. A smooth level piece of ground is chosen, and a slight barrier of a couple of sticks

Figure 3.4: *Chualpays Playing at Alcoloh***, ca. 1851-1856, by Paul Kane (National Gallery of Canada 2010)**

> placed lengthwise, is laid at each end of the chosen spot, being from forty to fifty feet apart and only a few inches high. The two players, stripped naked, are armed each with a very slight spear about three feet long, and finely pointed with bone; one of them takes a ring made of bone, or some heavy wood, and wound round with cord; this ring is about three inches in diameter, on the inner circumference of which are fastened six beads of different colours at equal distances, to each of which a separate numerical value is attached. The ring is then rolled along the ground to one of the barriers, and is followed at a distance of two or three yards by the players, and as the ring strikes the barrier and is falling on its side, the spears are thrown, so that the ring may fall on them. If only one of the spears should be covered by the ring, the owner of it counts according to the coloured bead over it. But it generally happens, from the dexterity of the players, that the ring covers both spears, and each counts according to the colour of the beads above his spear; they then play towards the other barrier, and so on until one party has attained the number agreed upon for the game [Culin 1907:457; Kane 1859:310].

A painting by Kane depicting this game among the Chualpay is at the National Gallery in Ottawa (Figure 3.4).

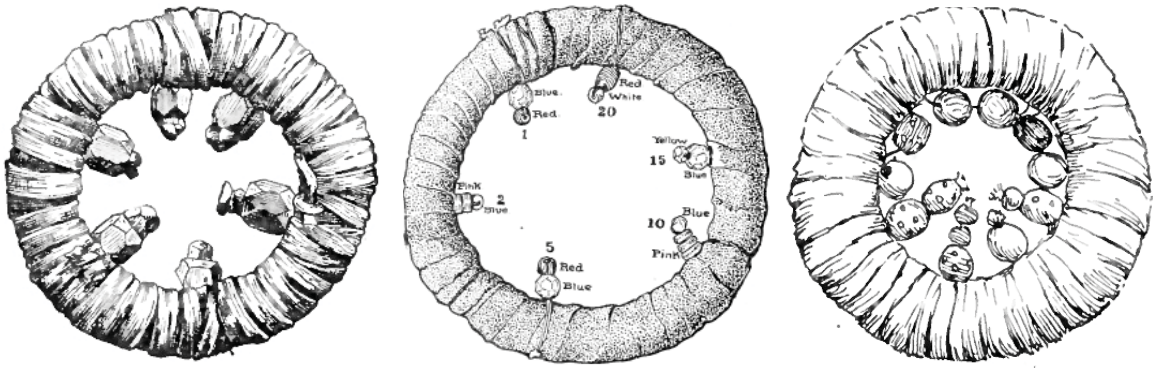


Figure 3.5: Ntlakyapamuk gaming hoop, 2-4½" diameter, (left; Culin 1907, fig. 641), Umatilla gaming hoop, 4" (centre; Culin 1907, fig. 645), and Apsáalooke gaming hoop, 2½" (right; Culin 1907, fig. 663)

Kane also noted that this same game was common to all peoples on the upper Columbia River (Kane 1855:276), and indeed, variants of the game involving a small beaded hoop and a dart or arrow, usually with boards or logs laid out at the ends of the playing field, are known from the Kalispel (Culin 1907:490), Secwepemc (Shuswap) (Boas 1891:641; Culin 1907:491), Ntlakyapamuk (Thompson) (Culin 1907:491-492; Teit 1900:273), and Ktunaxa, as already discussed. The Umatilla used a small beaded hoop, but long poles were thrown (Culin 1907:493-494); a small beaded hoop was also collected from the Apsáalooke on the upper Missouri River, but in their case a forked stick was used (Culin 1907:502; Hayden 1862:408). Despite these subtle differences in play, drawings of the hoops used by the Ntlakyapamuk, Umatilla, and Apsáalooke suggest that these were essentially the same game (Figure 3.5).

A Northwest Plains/Interior Plateau variant

A review of the ethnographic and historic sources compiled in Culin's (1907) work shows that the use of a small beaded hoop is not the norm for North America as a whole: elsewhere, the hoop-and-pole game frequently involves a much larger hoop (often in excess of 12 inches), one that features a netted mesh instead of spokes, or a disc made of stone. Those

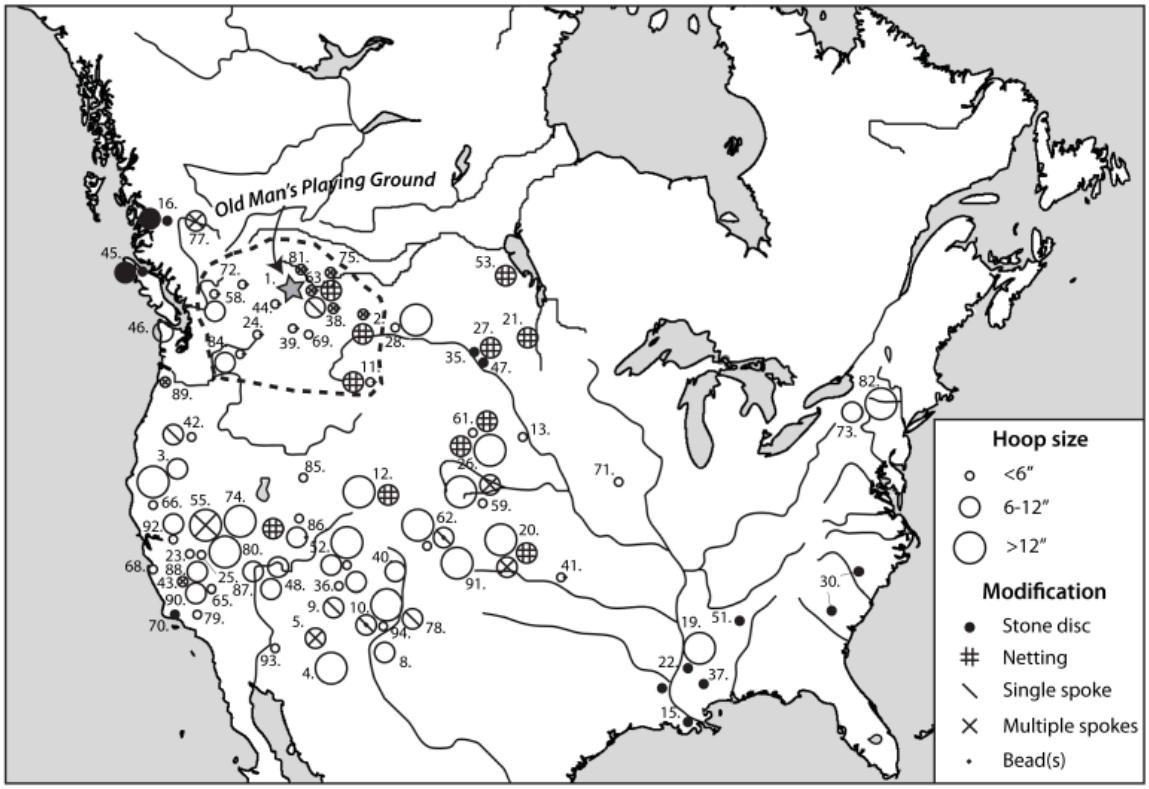


Figure 3.6: Geographic distribution of hoop styles from historic and ethnographic accounts of the hoop-and-pole game, following DeBoer (2001); numbers reference cases listed in Appendix B. Regional variant involving a small, beaded hoop is indicated with dashed outline.

groups observed to have played the hoop-and-pole game are listed in Appendix B, together with a condensed trait list of type of hoop they are reported to have used; additional sources beyond those known to Culin are included as available. DeBoer (2001, fig. 2) has previously shown, using data from Culin's work, that dice game variants trend regionally. Similar regional trends can be observed for hoop game variants: their geographic distribution is mapped in Figure 3.6.

A netted hoop variant seems best expressed from the Great Basin through the Central and Northern Plains. A wide array of unadorned and often large hoops appear in the South-west, along with, occasionally, a single-spoked form. Two regions in which stone discs were used are apparent: the Northwest Coast, where occasionally quite large discs of volcanic rock

were used (Culin 1907:489-490, 519-521; Hunt 1902:295), and the American Southeast and Mississippi basin, where the game's prehistoric popularity can be seen in the occurrence of ubiquitous polished "chunkey stones" (De Boer 1993; Pauketat 2004). A variant involving a small hoop with beaded rim or spokes occurs in a limited range in the Northwest Plains and eastern portion of the Interior Plateau, with Old Man's Playing Ground near its centre.

This is but a small subset of the data available for the hoop-and-pole game. Additional variability exists, also possibly trending by region, for instance in the type of dart used, the number of players involved, and the nature of the field on which the game was played. The area of northeast Washington, southeast British Columbia, northern Idaho, western Montana, and southern Alberta represents the full range of where the combination of a beaded hoop and log endboards in which two contestants pursue a rolled hoop was played; an arrow was the most common projectile in this variant. In addition to the previously mentioned groups, also sharing this game variant are the Salish—though the details of the hoop they used cannot be clearly discerned, a sketch by artist Gustavus Sohon from 1854 shows two contestants pursuing a small hoop towards wooden endboards (Ewers 1948, pl. 7; Figure 3.7).

It is probably not a coincidence that Old Man's Playing Ground, nestled in the Front Range of the Rocky Mountains, lies on the natural frontier between these Interior Plateau and Northwest Plains groups who share such similar variants of the hoop-and-pole game. The location of the playing ground corresponds with the mutual ethnographically attested territorial boundary of the Piikáni and Ktunaxa (Yanicki 1999:41-46); this analysis provides considerable insight into who the "different nations whom [Napi] wished to meet here annually & bury all animosities betwixt the different Tribes" (HBCA E.3/2, fo. 17) could have been. The similari-

Figure 3.7: *Flathead Indians Playing Ring, a Popular Men's Gambling Game***, ca. 1854, by Gustavus Sohon (Ewers 1948, pl. 7)**

ties in gaming traditions over such a wide area, and the historically and ethnographically attested existence of a meeting place at which gaming (and by extension, gambling) could occur have interesting implications for the nature of pre-contact First Nations trade, a theme which will be explored further in Chapter VII.

The only outlier of a small beaded hoop in Culin's compiled ethnographic accounts is a noteworthy one; this comes from the Kiowa, far removed from the Northwest Plains and Interior Plateau in modern-day Oklahoma (Figure 3.6, *41*). Ethnographer James Mooney reported that the Kiowa did not play a game in which two contestants threw sticks through a rolled hoop (Culin 1907:442; Mooney 1896:994). Instead, "Warriors or hunters purchase the privilege of throwing a dart at the ring, and derive auguries from success or failure in send-

ing their darts through the circle" (cited in Culin 1907:478). This description, very different from accounts of the game as it is played to the north, is also at odds with the presence of the rolled hoop game in the oral traditions of the closely affiliated Kiowa Apache (Shaman 1966:41-43). Both the Kiowa and the Kiowa Apache share a mutual oral tradition that places them at the headwaters of the Missouri, in southwestern Montana, until the 1700s (Loendorf 2004; Mooney 1895; Scott 1911). Their migration coincides with the introduction of the horse to the area (Nabokov and Loendorf 2002:56-61); one compelling possibility is that they were displaced by another group or groups in the Protohistoric period, and that the small beaded hoop, a vestigial aspect of the northern variant of the hoop-and-pole game, was transported with them.

The Kiowa Apache and Jicarilla Apache share a myth about the hoop-and-pole game in which it is forbidden to ever roll the hoop towards the north (Cremony 1868:302; Culin 1907:449-450; Shaman 1966:41-43); the reason for this proscription is not clear, but particularly in the ethnographic literature of the Southern Dene peoples, cardinal orientation of the playing field is a significant concern. Other Southern Dene peoples such as the White Mountain Apache and Navajo of Arizona and New Mexico have strong traditions of carefully prepared playing fields for the hoop-and-pole game, always aligned due north and south (Culin 1907:454-456, 459-460; Matthews 1897: note 76, 1902:15). And, though the rules of how the hoop-and-pole game is played are quite different, it is in the American Southwest, again among the White Mountain Apache, that the playing fields for the hoop and pole game take some of their largest forms—up to 36 yards, comparable to Old Man's Playing Ground in size (Culin 1907:454-456). Other commanilites can be found: the unusual 12" hoop with a single spoke

dividing it in the photograph from the Southern Piikáni by Walter McClintock (1910:393) is the type universally used by the White Mountain and San Carlos Apache (Culin 1907:450-457). Even such an innocuous comment as that each contestant in the southern Albertan variant of the game would stand his spear on end and tap it on the ground (Stow 1923:46), not noted by any other observer in the area, finds a parallel solely among the White Mountain Apache, where the poles are "stood on end upon the ground for a moment only" before being hurled again (Albert B. Reagan, personal communication cited in Culin 1907:456).

It is difficult to judge what bearing such commonalities between groups geographically quite far removed could have on the more enigmatic aspects of Old Man's Playing Ground, such as its unusual size, or its cardinal orientation, neither of which correlate with the gaming traditions of the modern peoples of the Northwest Plains and Interior Plateau. These could, perhaps, refer back to a time when Southern Dene ancestors, through a long process of migration from the Canadian Subarctic to the Southern Plains and American Southwest, were more closely affiliated with the region that is now southwestern Alberta (Ives 2003).

Reinventing the wheel game

Unfortunately, in his 1792 visit to Old Man's Playing Ground, Peter Fidler was not ideally positioned to write a comprehensive account of how the hoop-and-arrow game was played. With his limited command of *Siksikaitsipowahsin* and only the stories told to him about the place by his Piikáni guides, Fidler was left to sketch and muse about what he saw at the site. Nevertheless, it does seem possible that the bulk of the rules of the game played at Old Man's Playing Ground can still be puzzled out. Accounts from both the Northwest Plains and Interior Plateau show strong concordance in the use of a small hoop, as described by Fidler, but

set with coloured beads—positioned either on a number of spokes, with a small hole left at the center of the wheel, or as a single bead affixed within the rim of the wheel itself. Further, the hoop was not only rolled, as Fidler describes, but it was most likely a two-player game in which the contestants ran with the hoop or chased after it from a prescribed distance.

The asymmetrical north-south orientation of Old Man's Playing Ground is problematic in comparison to other accounts from the region, in which logs were set out as backstops, and the game could proceed in alternating directions. The scale of the playing ground in Fidler's sketch is also unprecedented in the area—while other accounts speak of distances for gaming fields of twelve to thirty feet, Fidler's sketch shows a field 45 yards (135 feet) in length. The playing ground's width is more comparable to the size of fields used in accounts from the Northwest Plains and Interior Plateau, but it is highly doubtful that gaming occurred along this lateral orientation: much of the space available is blocked by what looks like a directional arrow within the enclosed area of the playing ground in Fidler's sketch (Figure 3.8).

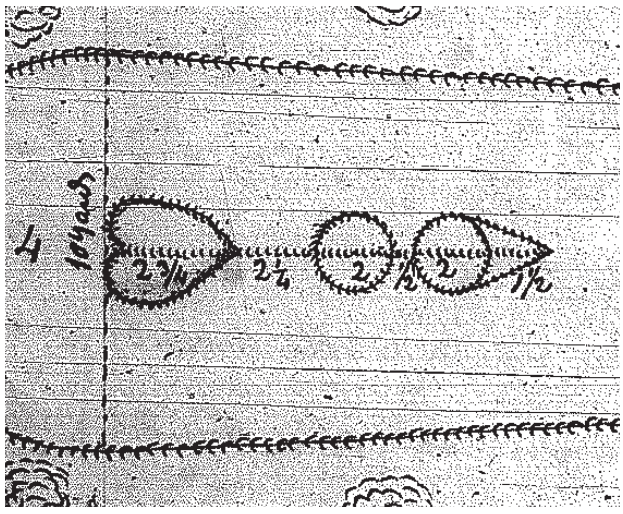


Figure 3.8: Detail of Fidler's sketch of Old Man's Playing Ground showing the effigy of a fletched arrow passing through a small, spokeless hoop (HBCA E.3/2, fo. 17)

This is in fact a carefully measured effigy of a dart or arrow, 11 feet in length, passing through the center of a hoop, two feet in diameter. The whole arrangement is outlined with the same semi-circular lines Fidler used to denote the fist-sized cobbles that frame the playing field itself, lending credence to its identification as a boulder effigy. With this construct pres-

ent at the playing field's south end, the game could only be played from south to north or vice versa. Fidler's sketch (Figure 1.1) also shows a pile of rocks within the enclosed space at the north end; this would seem to be more effective as a backstop than the hoop-and-arrow effigy which bifurcates the southern end of the field; the effigy may then be considered to have served as a directional arrow, indicating the direction of play: from the south end of the field to the north.

The presence of a hoop-and-arrow effigy is enlightening in other respects—the hoop, for instance, is not a spoked wheel. The effigy also appears to be of an arrow, replete with feathered fletching, a broad-bladed tip, and even the merest hint of a nock, and not a dart, at least in the sense of a projectile thrown in conjunction with an atlatl. The size of the projectile can be estimated from its length in proportion to the size of the hoop, which is a known variable: with the exception of a boys' game which used a larger hoop, and the photograph by McClintock (1910:393), accounts of the Siksikaitsitapi hoop-and-arrow game are quite consistent in describing a hoop about four inches (or, as explained by Allan Pard, four finger widths) in diameter. Following the proportions in the effigy, where the projectile is 5.5 times as long as the hoop, a four-inch (10.2 cm) hoop would correspond with a 22-inch (55.9 cm) projectile. This is far too short to represent an atlatl dart: the lengths of these, reconstructed from measurements of fragments recorded by Hattori (1982:112-120), Aikens (1973), Grange (1952), and Cosgrove (1974), probably fell within a range of about 55.9 inches (142 cm) to 65 inches (165 cm) (Raymond 1988:163-164). On the other hand, the length of a Historic-period metal-tipped Siksikaitsitapi arrow was approximately 22 inches (Pyszczyk 1999:172; Wissler 1910:157). A prehistoric Siksikaitsitapi stone-tipped arrow recorded by Thomas (1978:462)

had a shaft approximately 24 inches long; even with a reed (*Phragmites australis*) foreshaft and point tip combining to about 100 mm that should be added to the total length of the arrow (Pyszczyk 1999:172), this measurement still compares favourably with the length of the arrow effigy in Fidler's sketch.

A surprising, albeit incidental conclusion of this calculation is that the playing ground contained its own built-in temporal diagnostic. A long-established convention in Northwest Plains archaeology is to use the replacement of atlatl and dart technology with bow and arrow technology as the hallmark of the shift from the Middle Prehistoric to the Late Prehistoric period. The transition was complete by the time of the Avonlea phase, ca. 1,350 to 1,100 BP (Peck 2011). Granted, this is hardly ironclad proof of the site's age. Arrows were probably in use even earlier, for instance durng the Besant or Sonota phases prior to 1,500 BP (Peck 2011); the effigy was probably periodically maintained or even reconstructed, allowing opportunity for modification of the effigy's shape; and also, shortened darts could even have been specially made for the game irrespective of the dominant projectile technology in use at the time. However, this interpretation is one indicator that can be checked against other data, for instance the archaeo-

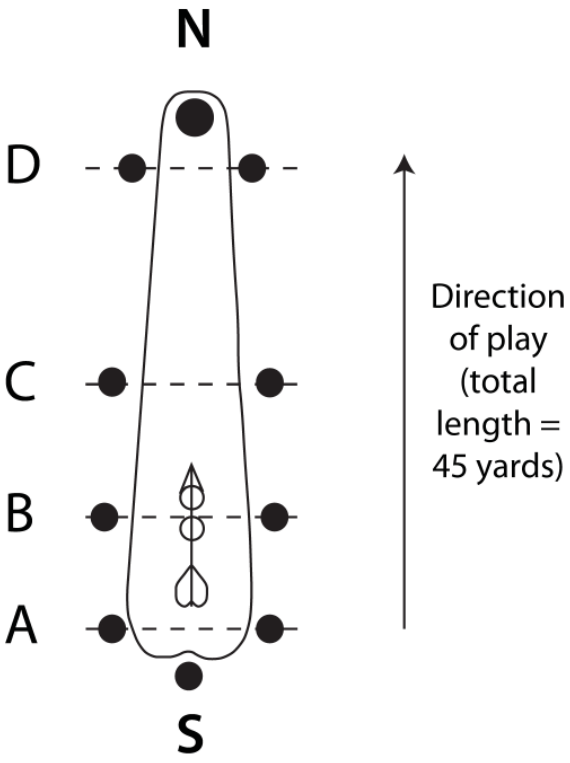


Figure 3.9: Conceptualization of Old Man's Playing Ground, following Fidler's 1792 sketch, where parallel cairns on sides of field possibly relate to adjudication of the rules of play

logical record, as such data become available.

The piles of rocks spaced around the playing ground's periphery remain somewhat of a mystery. Fidler was correct in his guess that there were umpires to the game; following Ewers (1958), they would have been stationed at the end of the course at which the hoop fell—that is, unless there were other aspects of the game which could also require adjudication. Stow's (1923) account is intriguing in this respect, for she says the two contestants began running after the hoop once it had rolled about halfway; Fidler's sketch shows two cairns parallel each other at the playing field's halfway point (Figure 3.9, C). There were also parallel cairns at the south end, about one third of the way from the south end, and near the very north end (Figure 3.9, A, C, and D, respectively). While these may have been pertinent to the game's rules of play, without further data, their function remains a matter of pure speculation.

Discussion: Archaeological visibility of the hoop-and-arrow game

The rock alignment and cairns described by Peter Fidler and George Dawson could be expected to have left a considerable archaeological footprint; attempts to detect these stone features, through archaeological survey and subsurface testing, are discussed in Chapters IV and V. However, other traces of the hoop-and-arrow game, particularly as it was played in the Northwest Plains and Interior Plateau, can also be expected. These relate to the game's age and to evidence of long-distance trade, given the strong association between gambling and the gaming said to have taken place at the site.

Antiquity of the hoop-and-pole game

As noted by Allan Pard, the hoop-and-arrow game "was always referred to as an an-

cient game" by the Piikáni. McClintock (1910:392) also noted the game's ancient origins, and the theme resurfaces in the writings of James Mooney, who noted that it "was practically obsolete among the Prairie tribes, but... it was a favorite game with the men in the olden times" (Mooney 1896:994). Just how far back in time these statements could refer to is a question open to further discussion.

The most abundant prehistoric evidence for the hoop-and-pole game comes in the form of small, rounded stone or molded clay discs, also referred to as discoidals, often with cup-shaped depressions on either face (Pauketat 2004:63). These stone discs were mentioned in some of the earliest observations of the hoop-and-pole game, referred to as as *tchung-kee* among the Mandan (Catlin 1841:132; Figure 3.1) and *chunkey* by the Eno (Lawson 1714:57). Peoples from the Atlantic and Gulf coasts through to the middle Missouri River played this game, often in village plazas, as noted by Adair (1775:401), Brackenridge (1814:255), Lewis and Clark (Lewis 1814:143), and many others. The oldest discoidals in the area in which this variant of the game is historically known to have been played date to about AD 600 from sites in southwestern Illinois and eastern Missouri. These are associated with the Late Woodland antecedents to the mound-builders of Cahokia (Pauketat 2004:64-65). By AD 1050, the stones were less ubiquitous, found only in the major towns of the Mississippian culture area.

In his work on the Hohokam, a non-Puebloan society in the Sonoran Desert of southern Arizona, Emil Haury (1976:290-291) reported 28 stone rings, mostly of vesicular basalt. Haury noted a similarity between these and lava rings used as gaming hoops in the Pacific Northwest (Culin 1907:490, 521; Haury 1976:291; Figure 6.28), although he cautioned that specimens between 3.4 and 8.6 cm could have been used "as a sheller of corn" (Haury

1976:291). However, one excellently worked seven-inch diorite disc with a cone-shaped hole through the center and numerous abrasions indicating that something was thrust through it led Haury (1976:290-291) to speculate that this and other biconcave stone discs from around Arizona were larger versions of the "chunkee stones" found at Mississippian sites. The majority of these specimens, including the large diorite discoidal, were convincingly associated with the Sedentary Period/Sacaton Phase (Haury 1976:290-291), ca. AD 950-1150 (Bayman 2001:264; Deaver 1997:459). The dates for these specimens fall well within the range of the discoidal stones from the Mississippian culture area.

As can be seen in Figure 3.6, the ethnohistorically attested geographic distribution of the hoop-and-pole game as played with discoidal stones is largely restricted to southeastern North America. Archaeological evidence is exceedingly limited for the myriad other forms of the hoop-and-pole game which involved the use of materials such as wood, sinew, feathers, corn husks, and bark. It seems unlikely that much could be preserved beyond those objects maintained in ceremonial bundles or stored in museum collections. However, at least two archaeological sites have produced evidence of these more perishable variants of the hoop-and-pole game. A six-inch sinew-netted hoop made from a bent sapling was recovered at Promontory Cave 1 on the north shore of the Great Salt Lake in Utah, together with a number of feathered wooden darts (Steward 1937:24, Plate 6). Sinew from this hoop (42B01 10360) yielded an AMS ^{14}C date of 733 ± 24 B.P. (OxA-23882; John W. Ives, personal communication, November 2011). A similar netted hoop was found at Franktown Cave in Douglas County, Colorado; wood from the hoop produced an AMS ^{14}C date of 798 ± 30 B.P. (Gilmore 2005:6, fig. 19). Netted hoops of this type are distributed from southern Utah through much

of the Central and Northern Plains (Figure 3.6). The hoop from Franktown Cave is unique in being less than 9 cm (3.5") in diameter (Gilmore 2005, fig. 19); no netted hoops smaller than 15.2 cm (6") are reported in the ethnographic and historic literature. The hoop from Promontory Cave 1 is also small, though, being exactly 6" in diameter (Steward 1937:24).

Collectively, this material shows the hoop-and-pole game to be of considerable antiquity, both with the stone disc and netted hoop variants. The earliest archaeological evidence for the game, discoidals from southwestern Illinois and eastern Missouri, date to 1,350 BP (AD 600), corresponding neatly with the date Peck (2011) gives for onset of the Late Prehistoric period on the Northwest Plains. Any archaeological signature of the hoop-and-arrow game at Old Man's Playing Ground, then, should not be expected prior to the onset of the Late Prehistoric. Further, the archaeologically attested presence of gaming paraphernalia in styles not historically or ethnographically observed in their respective areas—stone discoidals in the Southwest and a very small netted hoop in Colorado—serves as a reminder that the rules of the game were as subject to the vagaries of style as any other aspect of material culture over time.

Gambling and trade

Of final note in this brief discussion of archaeological evidence for the hoop-and-arrow game is the association between gambling and long-distance trade. Both Warren DeBoer (2001) and Joel Janetski (2002) have independently noted a tendency by archaeologists to focus on descriptions of the material evidence for trade, particularly exotic goods, while overlooking the mechanism by which that transfer of goods occurred, or what the implications of such trade would be for understanding the relations between prehistoric societies. In both authors'

estimation, gambling would have played a principal part.

Exemplifying the archaological focus on exotics in a discussion of long-distance trade in British Columbia, Carlson (1994:309) identifies obsidian as the best material for demonstrating trading patterns. Other commodities, Carson (1994:308) notes, including "slaves, furs, eulachon oil, elk hides, dried clams, goat wool blankets, names, songs, and the many other commodities and prerogatives exchanged ethnographically are rarely preserved archaeologically"; to infer trade, durable and desirable goods must be recovered far from their original source. This and other papers in *Prehistoric Exchange Systems in North America* (Baugh and Ericson 1994) discuss directional "flow of commodities" and "overall pattern of trade, exchange, and distribution" (Ericson 1994:4-5), "long-range trade" (Bourque 1994:23), "social interrelationships and population movements", and "prehistoric transportation systems" (Wright 1994:57); however, the specific activities involved are rarely discussed. Gambling and gaming are not mentioned in Baugh and Ericson's (1994) book.

One might assume direct bartering to have been the driving mechanism for much prehistoric exchange—barter, gift, and theft have been identified, for example, as the means by which the horse made its way to the Northwest Plains (Bastien 2004:14; Potvin 1966:12). However, Bourque (1994:40) has noted "widespread skepticism about the utility of historical data as analogues for prehistory." Some historically observed aspects of social complexity may be the product of European contact, not prehistoric practice (Bourque 1994:40; Fried 1975). As discussed in Chapter II, bartering in particular may represent a facet of the "rapid and complex series of modifications in native cultures [which] accompanied the European invasion of America" (Potter and Waselkov 1976:15).

Janetski (2002) has instead emphasized sharing and gambling as key mechanisms for the prehistoric social redistribution of commodities. In the Southwest, Ford (1983) argued that the mode of trade was determined by the relationship of the trading parties, for instance, between members of a single community, between affiliated communities, or between different tribes. A system of trade fairs in which bartering was a significant mode of exchange in the Southwest was influenced in part by Spanish efforts to intensify economic output (Janetski 2002:347; Levine 1991); while bartering in this region may have had a prehistoric precedent, it was restricted to intergroup trade, and was not practiced between households of individual communities (Ford 1983; Janetski 2002:348). Even at trade fairs where intergroup bartering took place, Janetski (2002:361) notes, "Nearly all accounts of festivals or gathering include references to gambling activity." This significance extends to intergroup social gatherings on the Plains, where Ray Wood (1980:106) has noted, "Gambling at trade fairs was rampant." In the Interior Plateau, gambling was such "a major part of special occasions such as inter-group economic gatherings" and "central central enough to social life that it should be considered a cultural theme" (Brunton 1998*b*:573).

The reasons for gambling not being favoured on an intragroup level were explained by Henry Holloway:

> **HH:** You'd never see two families going at it at each other, or bet or compete against each other. That was always prevented because they always wanted to prevent fighting amongst each other. But if, **if** it was another tribe, then the competition falls in place.

The homonymy of the *Siksikaitsipowahsin* terms for 'gambling' and 'warfare' (see Chapter II)

also alludes to the preference to choose gambling partners from outside one's close social group who could as easily be foes as allies. Flannery and Cooper (1946) noted a reluctance among the A'aninin to gamble with close friends or family members; in such cases, sharing and altruism were the normative behaviours. A more distant sphere consisted of enemies against whom only outright hostility was warranted. An in-between category of "enemy-friends" existed with whom gambling could take place, usually between different communities, and often intertribally (DeBoer 2001:232; Flannery and Cooper 1946:414). This concentric model of social relationships, in which gambling becomes more acceptable with increased social distance from the individual, "can be usefully extended to all gambling games... throughout North America" (DeBoer 2001:232). Marshall Sahlins modeled precisely this when he included gambling in his scheme of increasingly less-balanced reciprocity with increased kinship distance (Sahlins 1974, fig. 5.1).

Janetski (2002:349) has presented a simple model for the archaeological implications of gambling-affiliated trade, drawing from Renfrew's (1977) definitions of down-the-line and directional trade (Figure 3.10). Down-the-line trade, according to Renfrew, reflects the simple principle of distance-decay, in which a material's frequency decreases in a linear relationship with increased distance from its source; such linear progressions

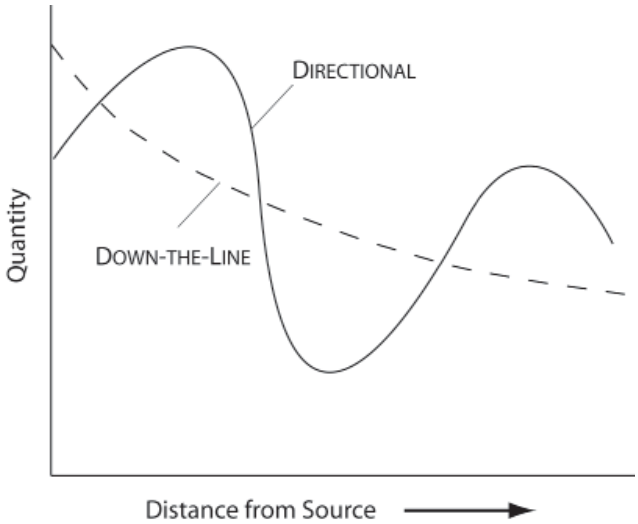


Figure 3.10: Predicted distribution of commodities by down-the-line and directional trade (after Janetski 2002; Renfrew 1977)

would indicate little social or economic elaboration on the distribution of goods. Aberrations from this "monotonic decrement", on the other hand, demonstrate the concentration of commodities in central locations, bypassing more minor settlements. A festival or trade fair model could be argued for a place when significant departures from a decremental falloff curve and gambling paraphernalia are both in evidence (Janetski 2002:349).

Referring to the Interior Plateau, Galm (1994) describes four localities which show abundant evidence of prehistoric trade and commerce. Two, Lytton-Lillooet and Dalles-Deschutes, occupy major trail routes into the Interior Plateau and exhibit an extraordinary number of complex sites attesting to their prehistoric significance. Two other inland locales, Kettle Falls and Wenatchee, are described as secondary trading centers, which "ultimately evolve as the loci of interregional trade and exchange networks" (Galm 1994:295-297). Based on historic accounts of Old Man's Playing Ground being a meeting place for multiple groups where both trade and gambling occurred, evidence of both long-distance trade and intragroup exchange would be expected in this locale. It may be fair to describe it as a festival/trade fair location; however, Carlson (1994) correctly cautions that such an assessment should only be made after archaeological remains have been sufficiently investigated. The numerous historic and ethnographic sources discussed in this chapter provide invaluable insight into gambling activity at this locale, a key point of access between the Interior Plateau and Northwest Plains. However, "Only after valid temporal, spatial and associational contexts have been established can indication and analogy be used to draw inferences" (Carlson 1994:309, citing Thompson 1958:1-8) regarding its prehistoric role as a locus of trade. The archaeological assessment of these contexts is a primary focus of the following chapters of this study.

Chapter IV
-
Landform Identification &
Geomorphic Assessment

The reasons for the abandonment of Old Man's Playing Ground are complex—disease, changing patterns of warfare, and the imposition of the reservation system in the 19th and 20th centuries all likely had a role to play (see discussion in Chapter II). Due to this process of abandonment, the location of the site is only generally known in First Nations communities today. Oral traditions are quite consistent in pointing to the headwaters of the Oldman River in the vicinity of the Gap, but specific details remain vague. Questions of abandonment may be moot, however, in explaining why the playing ground's exact location is unknown. The consensus among researchers of the past half-century is that the site has not only been lost, but destroyed, either by road building equipment (D. King, field notebook, 16 June 1960, p. 16, G M2105-4) or floodwaters of the Oldman (R. Forbis, field notebook, 16 June 1960, p. 6, GA M2105-4; MacGregor 1966:76).

What follows is a summary of attempts to identify the landform on which the playing ground was once found, beginning with a review of the historic accounts by Peter Fidler in 1792 (HBCA E.3/2, fo. 17) and George Dawson in 1881 (Dawson 1886:60) and detailing their firsthand observations of the site's location. These accounts provide a refined set of parameters for the playing ground's location, and from which more recent scholarly attempts to relocate the site (Forbis 1960, GA M2105-4; MacGregor 1966; Reeves and Dormaar 1972; Yanicki 1999) have been based.

While previous researchers have been pessimistic about the probability of any trace of

the rock alignment observed by Fidler and Dawson remaining intact, the landform examined in these studies—a treed and partially bulldozed terrace five meters above the Oldman River's banks—does not compare favourably with the historic descriptions of the site's location. On more careful reading, a potentially matching landform can still be seen today. This low-lying flat in the middle of the Oldman Gap is clear of the road construction that marks the terrace above it; a review of the available hydrologic data for the Upper Oldman basin to evaluate local flood frequency, severity, and processes of landform formation suggests this to be a floodplain where slackwater sediments are deposited during overbank events. If located on this landform, it is possible that rather than being washed away, the playing ground could instead have been buried. This low terrace has, however, not previously been archaeologically tested.

To help demonstrate the antiquity of this landform, or conversely to demonstrate its recent origin, a geomorphic pilot study was conducted in the fall of 2009 focusing on the collection of buried plant macrofossils and charcoal for ^{14}C radiometric analysis. The results of this pilot study, also discussed in this chapter, indicated the possible presence of strata on this landform of sufficient age to contain a pre-contact archaeological site, and warranted further investigation. The methods and results of the subsequent archaeological testing of this landform undertaken in the summer of 2010, which proved negative for prehistoric cultural materials, and possible causes of error in this earlier geomorphic analysis, are presented in Chapter V.

Historic descriptions of site location

Of the two firsthand historic observations of the playing ground, the more comprehensive of the two is Fidler's account (HBCA E.3/2, fo. 17). Chapter II has detailed Fidler's

training and capacity as a surveyor and the cultural context of his journey from *Spitcheyee*, the Highwood River, to *Naw peu ooch etay cots*, the Oldman River, on December 30 and 31, 1792, in the company of a Piikani trading party, having learned that a band of Ktunaxa was camped in the mountains there. Following the Oldman River up to the feet of the Livingstone Range and into the heart of The Gap, Fidler's account is filled with topographic references aimed at specifying the precise location of the playing ground.

> Starting from his party's arrival on the Oldman's north bank, Fidler wrote:
>
> We then crossed over the river to the South side, as it was not possible any farther on the North on account of the high hills & woods. When we crossed over the river, which was not froze over ... we set off altogether to [the Ktunaxa's] tents which was upon the Bank of this river a little way within the Mountain. At the side of the river at the entrance into the Mountain very high, steep perpendicular rocks. Went along the South side of the river within the Mountain WSW ½ mile & took Sextant reading. Then continued our way close along the bank of the river which is very rocky but a narrow bare pass Betwixt the water & the high perpendicular rocks of the Mountain, S 1/3 of a Mile. A place here called Naw peu ooch eta cots [Old Man's Gaming Place]… This is on a fine level grass plain very little bigger than the enclosed space. One side is within 10 yards of the river & the direction of this curiosity is directly one North & South [HBCA E.3/2, fos. 16-17; spelling and punctuation from the original].

Fidler's sketch of the playing ground (Figure 1.1) provides dimensions—45 yards long and almost 15 yards wide—as well as a graphic depiction of the rock alignment's perfect condition at the end of 1792 with which to compare future observations. Both his sketch and notes provide valuable clues as to the site's eventual disposition.

Dawson's visit to the site (Dawson 1886:80) took place while he was mapping the headwaters of the Oldman River, then known as the South Fork (the Castle River), the Middle Fork (the Crowsnest River), and the North Fork (what is referred to today as the Oldman

proper) through the mountains. Describing the route of the North Fork, he reported:

> The Livingstone Range, where cut through by the North Fork, is quite narrow and abrupt…'The Gap' of the North Fork…is a narrow, rugged gorge crossing the range with a double curve somewhat in the shape of the letter S, and about a mile and a half in length...The trail follows the south side of the stream, at first at a considerable elevation above it, but toward the west end, coming down to its level. Near the east end are three cairns…On a narrow piece of flat open ground, a short distance further on, are the obscure remains of a couple of rectangles formed of larger stones. This place is well known to all the Indians, and named by them the "Old Man's playing ground" [Dawson 1886:80].

Other published references to the site are rare. Anecdotally, historian James MacGregor (1966:76) noted, "Many old-time ranchers were familiar with the Old Man's Bowling Green. Unfortunately, a few years ago, high water in the Old Man River swept it away." Yet despite the paucity of historic observations, a detailed list of conclusions can be drawn about the playing ground's location, while also providing some insight into why it cannot be seen today:

1. The site was on the south bank of Oldman. Both Fidler (HBCA E.3/2, fos. 16-17) and Dawson (1886:80) mention being on the river's south side when they viewed the playing ground.
2. The site was downstream from the confluence of the Oldman River and Racehorse Creek. Dawson (1886:80) defines the Gap as bounded by Racehorse Creek (what he termed the South-west Branch of the North Fork) at its southwest end and includes Old Man's Playing Ground in his description of the Gap proper rather than in the Livingstone Trench beyond. Though the position of the confluence is not necessarily static, at present it is located more than a mile upstream of the eastern mouth of the

Gap. Peter Fidler did not mention crossing this significant tributary of the upper Oldman, presumably because he did not travel far enough upstream to see it.

3. The site was located somewhere within the Gap proper, that area described as an "S-curve" of the Oldman River as it passes through the Livingstone Range by Dawson (1886:80). Dawson is vague, saying only that it is "a short distance further on" from three cairns at the east end of the Gap. Unfortunately, these cairns are no longer visible today and were probably destroyed during construction of the gravel road that now passes through the Gap (see discussion below). Fidler (HBCA E.3/2, fo. 17) is quite specific, however, in measuring a distance of five-sixths of a mile – half a mile west-southwest and one-third of a mile south – from the "very high, steep perpendicular rocks" beside the river at the east end of the Gap. It is somewhat problematic to identify which cliff or outcrop Fidler landmarked to trace his route from, but following the river upstream into the Gap, the Oldman's winding course goes roughly west and then south as Fidler described. The distances do not measure up – orienting from a map, it is difficult to see how one could go half a mile west into the Gap before turning south – but personal experience dictates that it is easy to lose one's sense of direction in this winding canyon. Significantly, at its southernmost end, the course of the river turns west again; shortly beyond this bend is the confluence with Racehorse Creek. Each of the major bends in the S-curve is quite pronounced, and as with Racehorce Creek, Fidler did not describe traveling the final westward leg. The playing ground was therefore most likely at the south end of the stretch of river that runs south-to-north through the Gap; not coincidentally, the distance to this last bend

Figure 4.1: The foothills meet the Livingstone Range in an abrupt transition at the east end of the Oldman Gap (left photo: view northeast across river from modern road). Depending on which "very high, steep perpendicular rocks" Peter Fidler (HBCA E.3/2, fo. 17) landmarked to measure from (1) and how accurately he figured the distance traveled (2), Old Man's Playing Ground was located about five-sixths of a mile within the Oldman Gap, before its final westward leg (3). Distance of path from A1 to A2, B1 to B2 = 4400 feet (five-sixths of a mile).

is slightly more than five-sixths of a mile from the prominent cliffs depicted in Figure 4.1, the total distance Fidler says he traveled.

4. The site was situated on a narrow, level, and treeless landform. Dawson (1886:80) described it as being "on a narrow piece of flat open ground", while Fidler (HBCA E.3/2, fo. 17) described it as being on "a fine level grass plain".

5. The landform was little bigger than the playing ground itself. Describing the grass plain, Fidler (HBCA E.3/2, fo. 17) said it was "very little bigger than the enclosed space." Here "enclosed space" should be interpreted to mean the area enclosed by the alignment of fist-sized cobbles depicted in his sketch of the playing ground. By extension of this reasoning, the landform would presumably mirror the playing ground in shape, being narrow (an observation independently made by Dawson, as noted in

point 4 above), elongate, and wedge-shaped.

6. The site and the similarly sized landform were oriented north-south. Dawson is silent in this regard, but Fidler (HBCA E.3/2, fo. 17) states specifically that "the direction of this curiosity [the rock alignment] is directly one North & South." Based on the statement that the landform was little bigger than the alignment, it is expected that the landform would be similarly aligned.
7. The landform was probably close to river level. Fidler (HBCA E.3/2, fo. 17) reported, "One side is within 10 yards of the river." Dawson (1886:80) meanwhile observed the trail on the south side of the river descending to river level as one proceeded through to the west end of the Gap, with the implication that Old Man's Playing Ground was towards the latter end.
8. The site was subject to flooding. In 1792, Fidler (HBCA E.3/2, fo. 17) described the playing ground as completely intact, with rows of cobbles spaced at even height along the ground "so as to appear one entire ledge of stones" and 11 neatly piled cairns spaced around it, as well as a distinctive hoop-and-arrow effigy within it. Fidler did not see the hoop-and-arrow game actually played – as discussed in Chapter II, direct bartering had become the accepted convention for trade by 1792, but the strong cultural memory of the gaming that took place there, and the structural integrity of the site, suggest that if the process of abandonment was underway, it had begun only recently (Yanicki 1999:38-41). Some 90 years after Fidler's visit, Dawson (1886:80) observed only "the obscure remains of a couple of rectangles formed of larger stones." This feature is a stark contrast to the carefully built alignment previously observed by Fidler.

Conspicuously, though he was in the habit of mentioning cairns where present, Dawson noted none at Old Man's Playing Ground. Some process, be it an act of man or of nature, had wreaked destruction on the site. MacGregor's (1966:76) note is instructive in identifying the culprit: floodwaters were reported by local residents to have completely eradicated any visible trace of the site sometime before 1966.

Previous research in the Gap

This section reiterates much of the summary of archaeological work conducted in the Gap that was previously given in Yanicki (1999:14-17); aside from the present work, no archaeological activity has been conducted in the vicinity since this earlier study (Joan Damkjar, personal communication, 2011). Details pertinent to the archaeological search for the rock alignment reported by Fidler and Dawson are presented here, while additional archival materials have since become available, resolving some questions in the earlier work.

The earliest prehistoric research in the Gap area was conducted by Richard G. Forbis for the Glenbow Foundation Archaeological Survey in 1958 and 1960 (Archaeological Survey of Alberta [ASA] 2011). The 1958 visit led to the identification of several archaeological sites in the Gap, but nothing related to the playing ground was reported. On the June 16, 1960, visit, Forbis was accompanied by Donald King, Dave Quapp, and Hugh Dempsey; a typed manuscript of Forbis, King, and Quapp's field notes from this visit is kept at the Glenbow Archives in Calgary (GA M2105-4), as well as a collection of photographs (GA B147-A/1-4; GA C140/2 and 7-11). Dempsey's notes from this visit reside in his personal collection (Hugh Dempsey, personal communication, November 2009).

King's notes mention that they were looking for "Old Man's Bowling Green" (King

1960, p. 16, GA M2105-4), and a six-meter high terrace at the south end of the Gap was identified as the landform which most likely once bore the site. This landform had been bulldozed, with the top inches of soil removed and a wide area to the west of the road and up to the rocky cliffs overlooking the river recently used by road building crews as a camp (Forbis 1960, p. 6, GA M2105-4). According to Quapp's notes (D. Quapp, field notebook, 16 June 1960, p. 14, GA M2105-4), the area was "searched for signs of the bowling green reported by Fiddler [sic], the explorer. No evidence found. It is possible that the road now runs through the place of the bowling greens."

Based on the 1960 fieldwork, two archaeological sites were recorded on the six-meter-high terrace: DlPo-7, "a collection of surface features including rocks arranged in lines and rectangles with depressions within" (Yanicki 1999:15) and DlPo-8[1], a subsurface campsite with Middle and Late Prehistoric affiliation, based on analysis of projectile point styles (ASA 2011). Neither site was reported as being associated with the playing ground, and in fact the stone features of DlPo-7, which were deemed of Historic period origin on the site record form, are not mentioned in the Glenbow Archives records at all, nor have they been observed in recent years.

Several artifacts were collected during this visit, mostly from a 10'-by-5' excavation block dug to the bottom of the earth zone in the area that had been partially disturbed by road

[1] DlPo-8 was named the Gap Site by the 1960 Glenbow Foundation researchers (ASA 2011). Confusion exists between this and DlPo-20, the Gap Buried Site, also reported by the Glenbow team in 1960. In their article on their 1968 excavations at DlPo-20, Reeves and Dormaar (1972) refer to it as the Gap Site instead. DlPo-20 continues to be referred to by this name (cf. Peck 2011). For clarity's sake, the term is avoided here, and only the site's Borden designation is used.

building machinery (ASA 2011). A total of 27 artifacts were collected from the excavation area; these are probably the materials labeled Test Pits A and B that now reside in the collections of the Department of Archaeology at the University of Calgary (Yanicki 1999:15, 86). Many more were surface collected, and those artifacts "from the higher ridge at the road's edge were kept separated from those found at the lower level" (Quapp 1960, p. 14, GA M2105-4). It is unclear precisely what Quapp meant by these two levels; possibly it is in reference to the difference of topsoil accumulation between the east side of the gravel road on the high terrace, which has apparently gone undisturbed, and the west side of the road, where bulldozers had been active and the surface remains visibly lower (Yanicki 1999:16). Alternately, the ridges to which Quapp refers could have been the high terrace that had been affected by road construction and an unspecified lower terrace; however, none of the other visitors that day noted the presence of cultural material on any other landform (Hugh Dempsey, pers. comm. November 2009). In a subsequent analysis of the DlPo-

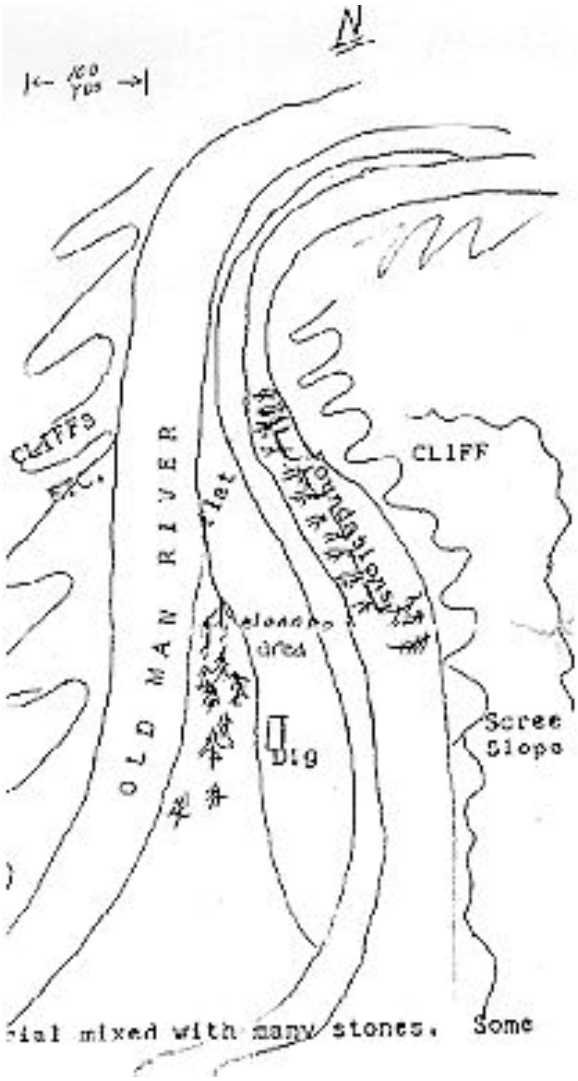


Figure 4.2: Donald King's sketch map of the area examined by the Glenbow Foundation Archaeological Survey in 1960 for traces of the playing ground (King 1960, p. 16, GA M2105-4). Note the area marked "Dig" denoting the 5-foot by 10-foot excavation area at DlPo-8, and an area labeled "flat" to the north and west of the cleared and disturbed area.

8 collections at the University of Calgary (Yanicki 1999), the segregation of surface collected materials noted by Quapp was not observed; trays are instead sorted by material type.

Forbis's excavation area is depicted in a sketch map from King's field notes (Figure 4.2). A photograph of the work (Figure 4.3) shows Forbis digging in the bulldozed area on the high terrace, just beyond a treeline that had remained intact in 1960, as depicted on King's sketch map. Other photographs in the Glenbow Archives show the full extent of the disturbed area in 1960, and the intact treeline running across the landform at the south end of the high terrace (Figures 4.4, 4.5). Based on a later assessment that the bulldozers had left at least part of this landform intact, it was recommended that this remaining undisturbed area be extensively excavated (DlPo-8 site record – add ref.; Reeves 1971; Yanicki 1999:15). This same treeline exists today, consisting now of stands of old-growth lodgepole pine; investigation of

Figure 4.3: Richard Forbis excavating at DlPo-8 in 1960 (GA C140/2).

Figure 4.4: Bulldozed high terrace at the south end of the Gap in 1960, view south. Note the treeline in the background demarcating the extent of the disturbed area (GA C140/9).

Figure 4.5: Surface disturbance on the high terrace in 1960, view north. The low flat is situated below the visible terrace edge (GA C140/11).

this intact portion of DlPo-8 comprises a significant portion of the present study (see Chapter VI).

Forbis's sentiments on this fieldwork were that he may not have been looking in the right place:

> We went both ways according to the directions given by Fidler, and are fairly certain that we were within 0.1 mile of the location of the Bowling Green (unless we are in the wrong region altogether). The campsite [DlPo-8]... is completely torn up by machinery in use at present in construction of a new road through the Gap to Land Creek, and possibly the site lost there, although it does not fit the description exactly. Supposedly it is a small level plain very little larger than the Bowling Green itself (10 x 45 yards)... It also bothers me that we were not at the exact spot described by Fidler, being about one or two fourths miles too far north [Forbis 1960, p. 6, GA M2105-4].

Instead of the high terrace, Forbis considered "the best possibility" for the location of the playing ground to be "a small flat where the river makes a bend from going east to north," at the very southernmost end of the Gap. "It is only slightly south of the campsite, Hugh [Dempsey] investigated this area with negative result. It is presently being eroded considerably, and I wonder whether the Bowling Green has not gone down the drain" (Forbis 1960, p. 6, GA M2105-4). Only a scant slump block is evident at this location today, where the high energy of the Oldman River as it turns a sharp bend is actively eroding at the steep, high riverbank.

Curiously, almost no comment is made in any of the notes from the 1960 visit about the flat to the north, adjacent to the river and north of the bulldozed terrace, that appears in Don King's sketch of the site area (Figure 4.2; King 1960, p. 16, GA M2105-4) except that "we selected the area above the flat on a gentle slope beside the road for our test [excavation]" (King 1960, p. 17, GA M2105-4). The lower landform was not investigated; given Forbis's predisposition to look southward, it was probably deemed too far north.

In 1965, Brian Reeves, William J. Byrne, and Ronald Getty from the University of Alberta at Calgary (now the University of Calgary) visited the Gap on behalf of what was then the National Musem of Canada (now the Canadian Museum of Civilization) to assess the impact of a proposed dam at the mouth of the Gap. In the subsequent report of this survey, Richard Forbis (1966:25) noted that some portions of DlPo-8 "found... to be relatively rich... remain relatively undisturbed and should produce a good sample of material culture." Though Fidler's observations from the Gap were not explicitly referred to, "no sites of the first magnitude were located" (Forbis 1966:28) during this survey. Echoing his earlier suspicions on the fate of the playing ground, Forbis lamented that "it is inevitable that many remains (some of prime importance) will be unwittingly and needlessly destroyed by the construction of highways, dams, pipelines and other things" (Forbis 1966:29).

These early visits were in part the result of a surge in interest in the travels of Peter Fidler as his long-neglected journals, kept in the Hudson's Bay Company Archives, became more widely known. Later that decade, Albertan historian James MacGregor wrote *Peter Fidler: Canada's Forgotten Surveyor 1769-1822* (MacGregor 1966), a biography intended to bring Fidler into the public consciousness in a way that could rival David Thompson, Fidler's better-known contemporary. Fidler's visit to the Gap makes a brief entry in this larger account. While MacGregor does not provide citations of his sources, his anecdotal report from "old-time ranchers" (MacGregor 1966:76) of floodwaters washing away the site suggests that he did make some attempt to inquire about the condition of the playing ground.

Dave Quapp revisited DlPo-8 in 1968 (DlPo-8 site form, ASA 2011); it was probably at this time that the Test Pit X listed on the DlPo-8 site form was excavated, from which six

additional artifacts were recovered (Yanicki 1999:15, 86).

Also in 1968, Brian Reeves and Johann Dormaar conducted salvage excavations at the Gap Site, DlPo-20, situated on a 30-m high terrace above the confluence of Racehorse Creek and the Oldman River (Reeves and Dormaar 1972). This study, currently the only published work on the archaeology of the Oldman Gap, described cultural occupations dating from the final stages of glaciation in the valley, ca. 6000 B.C., through the mid-Holocene dry period ca. 4700-4000 B.C.; pedological analysis meanwhile demonstrated stabilization of the modern climatic regime ca. 2800 B.C. (Reeves and Dormaar 1972:334). Two projectile point fragments straddling deposits of Mazama Ash were diagnostic of Mummy Cave sequence occupation, while a projectile point found in sediments disturbed by road construction was probably Agate Basin in origin, and was believed to be from the living floor dated to 6000 B.C. (Reeves and Dormaar 1972:333).

Reeves and Dormaar made passing reference to Peter Fidler's visit to the Gap and cited MacGregor's (1966) term for the playing ground ("Bowling Green"), also used by Forbis and the Glenbow Foundation survey team around the same time, in their observation that "grasslands within the Gap are restricted to a small open glade, known as the Bowling Green... It is situated on a low terrace, northeast of DlPo-20" (Reeves and Dormaar 1972:328). It is unclear how the authors arrived at their identification of the site's location—MacGregor did not specify a landform for the playing ground in his work, and Forbis had only speculated on the fate of the site. Nevertheless, their description of a "small open glade… on a low terrace" appears quite consistent with the available historic data, as detailed in the previous section of this chapter.

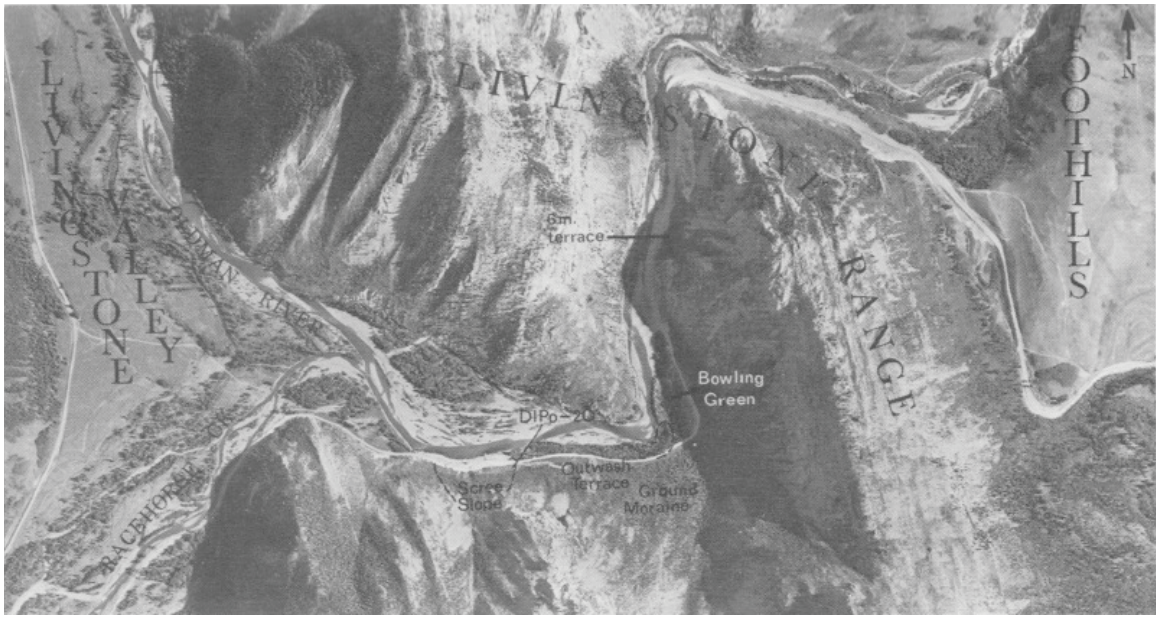


Figure 4.6: Aerial view of The Gap of the Oldman River (Reeves and Dormaar 1972: fig. 2; Alberta Government Photo 1388- 4938/4808-83); location of the Bowling Green is shown as the cleared area west of the road on the 6-m high terrace at the south end of The Gap.

Problematically, the authors' illustrations of the area identify two separate landforms as the location of the "Bowling Green". One is the cleared and bulldozed area visited by Forbis, King, Quapp, and Dempsey in 1960 (Figure 4.6). The other (Figure 4.7) is, upon closer inspection, the slope between this disturbed upper terrace and the low flat to the north that is mentioned in King's notes but was not investigated. The discrepancy between the two locations is on the order of about 100 yards.

Since the passage of the Alberta Heritage Act in 1973, several archaeological studies have been conducted in vicinity of the Gap in consultation for proposed industrial developments (Balcolm 1989; Brumley 1985; Gryba 1982, 1998; McFee 1978; Reeves 1975). These studies did not include a focus on the landforms at the south end of the Gap or the possible location of the playing ground.

Only a modest amount of research unrelated to development consultation has been

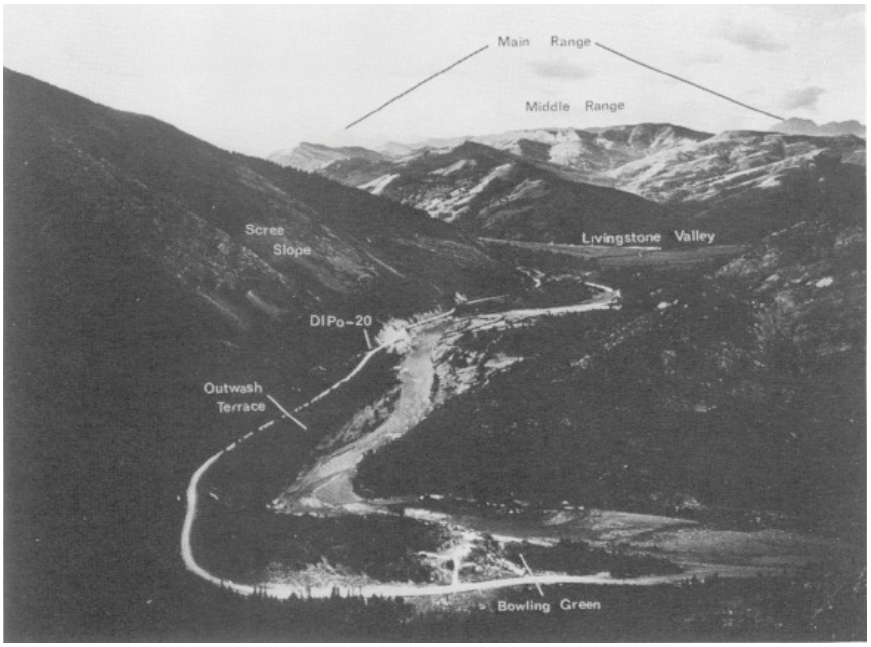


Figure 4.7: Gap of the Oldman River. View west from Thunder Mountain (Reeves and Dormaar 1972: fig. 3). The Bowling Green here is placed on the slope between the cleared terrace examined by Forbis in 1960 and the low flat indicated in King's sketch (Figure 4.2) but not otherwise described in the Glenbow Foundation survey's records.

conducted in the area since the initial surveys of the Glenbow Foundation and the work of Reeves and Dormaar (1972) in the 1960s. Russell Brulotte, an MA student at the University of Alberta, excavated at the confluence of Daisy and Racehorse creeks (DlPo-4), just west of the Gap (Brulotte 1983). Substantial amounts of lithic and faunal materials were recovered; while this study focused on climate interpretation through zooarchaeological remains, the collected lithic "material types hint that complex interactions with environments and/or other human groups were occurring on a north-south (mainly south) axis, rather than east-west trans-mountain affiliations" (Brulotte 1983:87). This observation was derived from the presence of obsidian exclusively from a quarry in Yellowstone National Park (Brulotte 1983:35). No further analysis was offered to explain the suggested interpretation, which runs counter to the expected lithic material distributions for a major east-west transportation corridor through

the Rocky Mountains, despite an abundance of material from other sources, including quarries west of the Rockies, being present at the sites.

Most recently, in 1998, the author of the present study reexamined the landform visited by the Glenbow Foundation in 1960 for any traces of the playing ground as part of research for an Honour's thesis in archaeology at the University of Calgary. The ensuing work, *Old Man's Playground: Contexts of Rediscovery and Interpretation* (Yanicki 1999), is inappropriately named, for though the Gap has been examined by archaeologists now for more than 50 years, remnants of the playing ground have never been rediscovered.

That is not to say there are no tantalizing traces. Forbis's excavated materials and surface finds from DlPo-8, which went unreported but were examined by Yanicki (1999), included three cobble artifacts with symmetrical lateral notches removed by pressure flaking, known as net sinkers (Borden 1956:85; Taylor 1973:105; Yanicki 1999:85). Such artifacts are well attested from such Interior Plateau groups as the Ktunaxa, in which

> an extra heavy rope was tied securely to a tree on a bank. From this rope were suspended a series of smaller lines about three feet long and about four feet apart. A bone cross [fishhook] was attached to each of these. The other end of the rope was tied to a large stone sinker and ferried by canoe to a spot near the other bank, and sunk [Turney-High 1944:46].

Among the Siksikaitsítapi, a strong aversion to eating fish, on the order of a culturally-proscribed taboo, has often been noted (Henday 1907-8:38; Kidd 1986:107). Evidence of past fish harvesting activity in the Gap can be interpreted as evidence of the presence of ancestral Ktunaxa (King 1960, p. 17, GA M2105-4; Yanicki 1999:85) or other peoples from west of the Rockies at DlPo-8.

Red and yellow ochre pellets, found in abundance in Forbis's 1960 test excavations

but absent from nearly all other archaeological site in the area—the exception being DlPo-4, where three pieces were found (Brulotte 1983:42)—are perhaps indicative of a ceremonial significance to the high terrace (Yanicki 1999:85). Also, two styles of projectile points—Tobacco Plains and Cayley series, or Old Women's—were present (Yanicki 1999:86-88). Both are typical of the terminal Late Prehistoric in southwestern Alberta, and a formal analysis of their significance from a Direct Historical perspective has yet to be attempted, but the difference in styles has been tentatively attributed to the ancestral Ktunaxa and Piikani, respectively (Loveseth 1985:10-11).

Yanicki's (1999) analysis of the DlPo-8 assemblage also included a statistical comparison of lithic raw material use from DlPo-8 to other sites within a 30 km^2 radius. Top-of-the-World chert, a vitreous, waxy, translucent grey-blue cryptocrystalline material quarried from a source area on the Bull River in southeast British Columbia (Kooyman 2000:26; Loveseth *et al.* 1979:89), and black pebble chert, quarried from Tertiary gravels in the east-central Alberta near Consort (Steuber 2008) and possibly in the foothills of Kananaskis Country southwest of Calgary (Gryba 1983), were found to be negatively correlated throughout the study area as a whole. Coupled with opposing patterns of directional decay for the two materials and the respective falloff curves for both materials being almost absolute beyond the medial axis of the study area, centered on DlPo-8, Yanicki (1999:105) suggested that the two materials were deposited in the archeological record by different cultural groups, possibly the ancestral Ktunaxa and Piikani. These spatial distribution patterns suggest that the Gap served as a cultural boundary (Yanicki 1999:106). And yet despite the overall negative correlation between Top-of-the-World chert and black pebble chert in the study area, these two materials together

dominated Forbis's DlPo-8 assemblage. If they were deposited by two different groups as the regional record suggests, then the high terrace at the south end of the Gap could represent a meeting place where the groups could gather (Yanicki 1999:103-104).

Indications of the presence of ancestral Ktunaxa and Piikani at a single site in the heart of the Gap, the presence of red ochre possibly associated with ceremonial activity, and the proximity of DlPo-8 to historic descriptions of the location of the playing ground all allude to the prehistoric significance of the high terrace. Unanswered questions from previous work owing to such factors as the limited scope of past excavations, an absence of radiocarbon dates, and an unclear chronological sequence of occupation led Yanicki (1999:107) to recommend that further work be conducted at the site, and have served as an impetus for the present study.

The claim in past work that the high terrace could have been the location of the rock alignment observed by Fidler and Dawson (Forbis 1960, p. 6, GA M2105-4; King 1960, p.16, GA M2105-4; Quapp 1960, p. 14, GA M2105-4; Reeves and Dormaar 1972; Yanicki 1999) is probably erroneous, however. This landform does not exhibit a definably enclosed space on which the rock alignment could have been placed. As noted by Forbis:

> There is enough area undisturbed that I feel we should have seen some vestige of the Green if it had been there, and it is much larger than the Green, although when Fidler visited the site it is entirely possible that the area he referred to was a clearing and not the total extent of this small and, now, largely tree-covered plain [Forbis 1960, p. 6, GA M2105-4].

Even if a clearing existed on the high terrace, it would be difficult to envision where it could be located within 10 yards of the river, as described by Fidler. Large bedrock outcrops mean that there are no clear, level spaces near the terrace edge most proximate to the river chan-

nel. Meanwhile the height of the terrace, well above the zone of impact from floodwaters on the Oldman River as evidenced by logs and other rafted debris on the riverbank, is difficult to reconcile with the changed state of the playing ground between Fidler's and Dawson's accounts—even before the era of road construction through the Gap, it had undergone substantial alteration.

Modern stone features in the Gap

While investigating the high terrace for traces of the stone features described by Fidler and Dawson, considerable attention was given by Yanicki (1999:62-64) to a partially buried rock alignment and possible cairns in a clear area east of the gravel road that cuts through the landform. Yanicki recommended that these features be investigated further to determine if they are of prehistoric origin, but verification that they are in an undisturbed context, for instance through subsurface testing, was not attempted in the 1999 study.

To resolve the question of these features' antiquity, Alberta One Call performed a line locate of buried utilities on this landform in October 2008 at the author's request. The results (Figure 4.8) show that this alignment conforms exactly with the location of a buried telephone cable running immediately adjacent to the road through the Gap. Previous communication with Telus Corp. indicated that the line was buried 10 to 30 feet from the east side of the road (Telus Corp. Crowsnest Pass Office, personal communication, 1999, cited in Yanicki 1999:55) and thus could have left the observed rock alignment unimpacted. Instead, the plow shear used to bury the phone cable (Yanicki 1999:55) likely created the observed linear stone feature.

This alignment is meanwhile located more than 100 m from the river's edge; it does not fit the observation from Fidler's account that one side of the playing ground was within 10

Figure 4.8: Utility box (1), pin flags (2) and spray paint (3) marking location of a buried phone cable. The buried cable runs between the east side of the road and a historic cairn known locally as the "Lantern Tree" (4), parallel to or beneath a rock alignment (5, highlighted in red) observed by Yanicki (1999).

m of the Oldman. Given its distance from the river's edge and its proximity to buried utilities, further investigation and subsurface testing of this area was not undertaken during the course of this study. No further insight can be added here on the presence of a deeply buried cairn within one meter of this linear feature or other scattered rock clusters nearby (Yanicki 1999:58-59).

A large cairn near the south end of this disturbed rock feature, distinct for being constructed around a lodgepole pine that was 50 years old in 1999 and containing historic debris such as a broken brick and metal tin (Figure 4.9), was also examined by Yanicki (1999:59-61).

Figure 4.9: Cairn and modern debris at the base of the Lantern Tree.

This feature has been identified by local resident Tony Pomahac (personal communication, August 2010) as "the Lantern Tree," a local landmark which in the late 1950s or early 1960s consisted of no more than a pine sapling growing up through the globe of an old lantern. According to Pomahac, no cairn existed around the tree at the time; this feature has been built up in the intervening years.

The dimensions of the cairn today, a scatter of approximately 6 m, were remarked on by Yanicki (1999:60) as comparable to another grouping of stone features that once existed in the Gap, as reported by Dawson:

> Near the eastern end [of the Gap] are three cairns; the first, a wide mound, about eight feet high, composed of stones and small boulders, and evidently very oId, the two others smaller. As these are of no use as landmarks, they have probably been

> formed in the course of years by the addition of a stone by each Indian entering the mountains by this route, 'for luck' [Dawson 1886:80].

A brief passage in the autobiography of Doris "Babe" Burton, who ranched with her husband Ed Burton upstream of the Gap from 1927 to 1938, alludes to the largest cairn's probable fate:

> There was also a pile or [sic] rocks half way in, where it was said the Chief of any tribe passing through added a rock to the heap, so my Dad added one in solemn tribute to the legend. In the dirty thirties, they had Relief Crews here and there to help penniless men. One crew built a better road into the Gap and I told Eddie to warn them about the Chief's rock pile. He did, but not before they'd taken one scoop of rocks off of it. However one half of it was still visible the last time that I checked [Burton 1995:48].

Road construction, then, had by the 1930s impacted the large cairn.

Forbis also reported a group of cairns in the Gap as site DlPo-18, at the south end of the Gap where the road, and the river, turn westward. These, he said, were "five in number and partially destroyed" (Forbis 1966:23). Whether Forbis, Dawson, and Burton were referring to the same site is difficult to ascertain—Dawson and Burton reported a large cairn to which stones were continually added; Burton and Forbis refer to the cairns' partial destruction. The numbers of cairns they report do not correspond, however, nor do their locations. Dawson said the cairns were at the eastern end of the Gap, Burton said they were halfway in, and Forbis located them nearer the western end of the Gap.

Whatever the case, no trace of them remains today at the locations, or with the dimensions, numbers, and condition described. Even if they were eradicated entirely by later phases of road building activity, the appearance of the existing cairn around the Lantern Tree suggests that the custom of adding rocks to a pile in the Gap has continued until quite recently.

There is no reason to suspect Burton was aware of Dawson's rather obscure report. Rather, the commonality in their accounts may stem from independently learning of the same First Nations tradition—as discussed in Chapter II, Dawson probably had Nakoda and Nehiyaw guides, while Burton recalled meeting "a big camp of the Stoney Tribe on their way out of the Gap" in 1923 (Burton 1995:7).

The low terrace

A more likely candidate for the location of Old Man's Playing Ground than the high, rocky, tree-covered terrace at the south end of the Gap can still be seen today. The narrow, triangular terrace immediately to the north of the higher landform, noted in King's sketch (Figure 4.2) and obscurely visible in aerial photographs of the Gap (Figures 4.6 and 4.7), is

Figure 4.10: LiDAR-generated DTM of the Oldman Gap showing high terrace (1), low flat to the north (2), and actively eroding bend in river (3) that Forbis felt to be the most probable location of the playing ground (DTM courtesy Robin Woywitka, Archaeological Surey of Alberta)

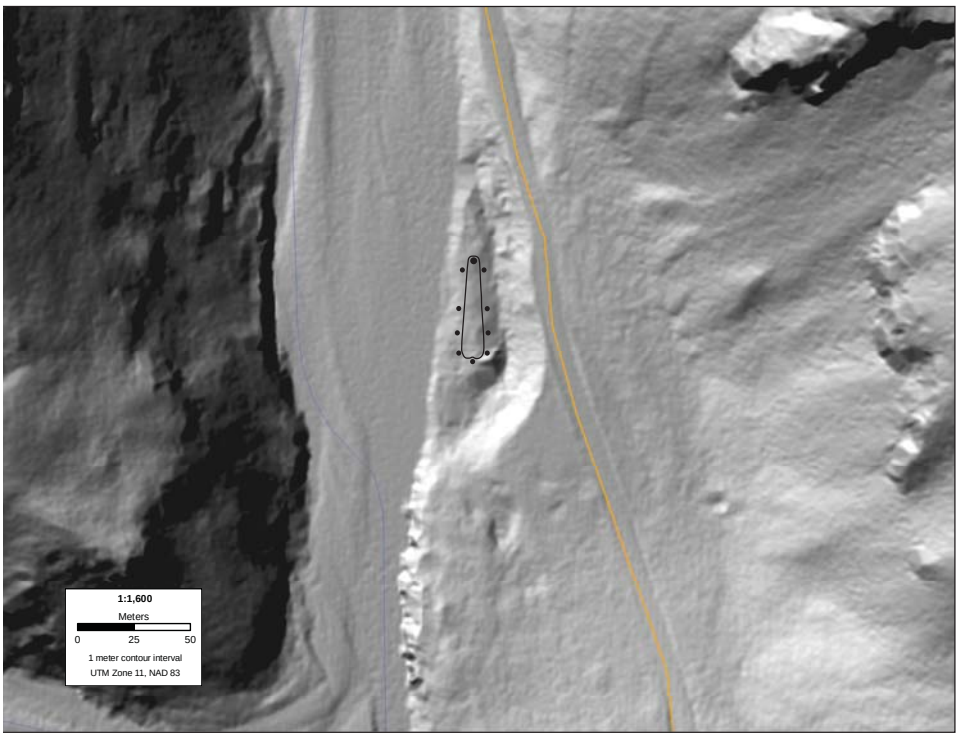


Figure 4.11: DTM of low terrace with Fidler's sketch of Old Man's Playing Ground overlain to scale (yellow line denotes road, blue line denotes river; DTM courtesy Robin Woywitka, Archaeological Surey of Alberta)

quite pronounced in digital terrain models (DTMs) which have recently become available for the area (Figures 4.10 and 4.11), generated using Light Detection and Ranging (LiDAR).

With LiDAR imaging, rapid pulses from an airborne laser scanner are used to measure distances from the laser to the ground. The resulting data points can be filtered to remove high pulse strikes from vegetation cover, resulting in extremely accurate (~10 cm root mean squared error) 3D terrain maps representing actual surface contours (Kraus and Pfeifer 2001; Raber et al. 2002). Alberta Sustainable Resource Development (SRD) has in recent years used LiDAR to generate DTMs for areas affected by mountain pine beetle (*Dendroctonus ponderosae*) infestations, including the Gap (Alberta Government, SRD 2008). Copies of the DTM for this area were made available for use in this study by the Archaeological Survey of Alberta.

Figures 4.11 and 4.12 show how, unlike the high terrace or river bend to the south, the low flat very closely conforms with the previously described criteria laid out in Fidler's and Dawson's accounts of the playing ground's location. The landform is on the south bank of the Oldman, downstream of the confluence with Racehorse Creek; it is along the southward course of the valley as one enters the Gap, within approximately five-sixths of a mile from the entrance to the Gap; it is narrow, level, and treeless, covered mostly with willows and grasses; its size and shape mirror that of the playing ground in Fidler's sketch; the flat is enclosed on the east and south by steep slopes to the terrace above; it is aligned north-south; the west side of the flat comprises the modern riverbank, and a rock alignment of the playing ground's dimensions would be within 10 yards of the river; finally, the flat is covered in fine sandy silt, deposition of which likely occurs on this landform during sporadic flood, or overbank, events.

Figure 4.12: View north of low flat from edge of high terrace, October 2008

Historic images from SRD's Forest Protection Image Library (Figures 4.13 and 4.14) show that the low terrace is stable and has held its present position in equilibrium with the

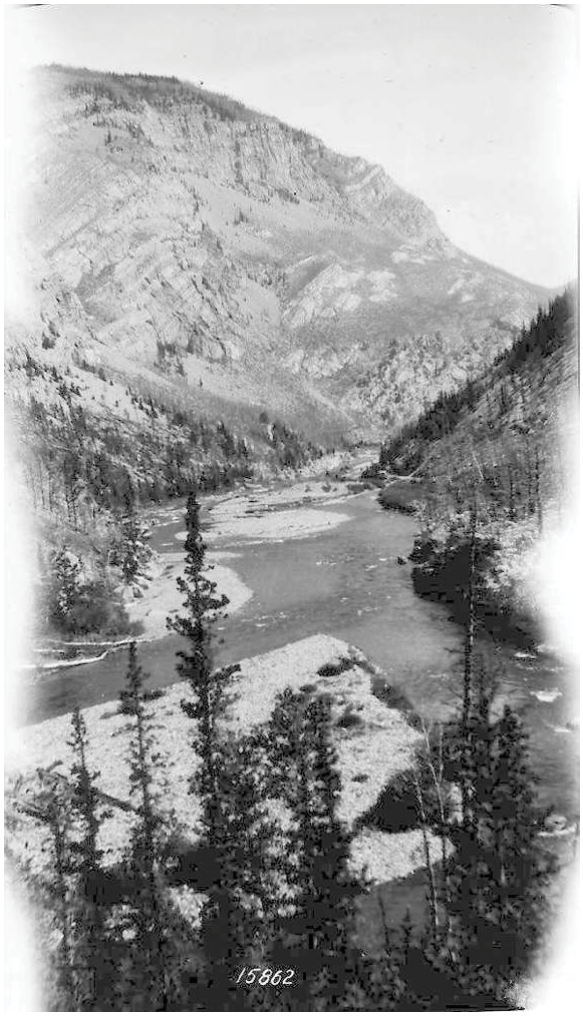


Figure 4.13: "Looking Down the Livingstone Gap. Oldman River," 1922. Low terrace visible in middle right, while river in foreground closely follows modern channel (Alberta Government, SRD 2011a)

Figure 4.14: "The Gap Years Ago," 1926. Low terrace, in middle right, can be seen in condition similar to today (Alberta Government, SRD 2011b)

Oldman River at least through most of the past century. The course of the river, meanwhile, has also remained fairly constant—compare, for instance, the gravel bar and main channel of the river in the foreground of the photo taken in 1922 (Figure 4.13), to that shown in the DTM of the river bend at the south end of the Gap (Figure 4.10). *Pace* Forbis, it is unlikely that a stable landform has existed at this latter location, at least within the timeframe suggested by MacGregor's claim that floodwaters had swept it away "a few years ago" (MacGregor

1966:76).

Hydrographic data

In spite of the evident stability of the low flat, its composition of sandy silt, anomalous in a river channel otherwise characterized as an armoured stream of cobbles or even exposed bedrock, suggests that it has been formed by flood activity. A review of the hydrographic record for the Oldman River shows that overbank events occur on the upper Oldman with regular frequency, and understanding their severity is key to determining whether a prehistoric cultural site could have once existed on this landform.

A lack of local reporting makes a recent flood record for the Gap difficult to determine, but hydrographic records for the nearest measuring station on the Oldman River, downstream of the Gap near Waldron's Corner (station 05AA023), show daily discharge peaks in excess of 150 m^3/s in 1981, 1991, 1995, 1998, 2005, and 2008 (Environment Canada 2006). These do not all necessarily represent floods in the Gap; however, at very least the event in 1995, described as "the flood of the century" by Rood et al. (1998), likely resulted in an overbank event. Peak flow at Waldron's Corner during the 1995 flood has been estimated at 1,320 m^3/s (Alberta Government, Environment 2009).

Reviewing the flood history of the Oldman basin as a whole, Mustapha et al. (1976:101) reported that while snowmelt is generally the main contributing factor to spring runoff, it "is not a major contributing factor to the highest flood peaks." Overbank events in 1894, 1908, 1916, 1927, 1938, 1948, 1953, 1964, and 1975 were instead associated with unusually high rainfall during the spring runoff in May and June.

Archived rainfall records for Maycroft, just east of the Gap, exist for the years 1911

Table 4.1: Winter snowfall and May rainfall volumes for Maycroft, Alberta 1912-1939

Year	Winter Snowfall, October-May (cm)	May Rainfall (mm)	Flood Year? (Y/N)
1912	134.3	26.9	N
1913	212.1	48.3	N
1914	142.2	30.7	N
1915	189.6	105.2	N
1916	170.0	68.6	Y
1917	151.6	98.3	N
1918	160.0	39.9	N
1919	101.9	28.2	N
1920	260.4	46.7	N
1921	172.8	26.4	N
1922	159.1	19.8	N
1923	166.9	176.3	N
1924	136.7	19.6	N
1925	238.5	26.9	N
1926	88.4	7.6	N
1927	141.3	123.4	Y
1928	155.9	15.2	N
1929	146.9	50.0	N
1930	154.5	56.6	N
1931	96.6	38.4	N
1932	131.6	35.3	N
1933	135.9	20.6	N
1934	388.5	25.1	N
1935	N/A	29.0	N
1936	N/A	11.2	N
1937	N/A	36.1	N
1938	N/A	59.4	Y
1939	N/A	40.6	N

to 1939 (Environment Canada 2008). Table 4.1 shows that the flood years of 1916, 1927, and 1938 experienced three of the six highest May rainfalls in the period recorded; there were meanwhile ten non-flood years in this span in which snowfall between October and May was

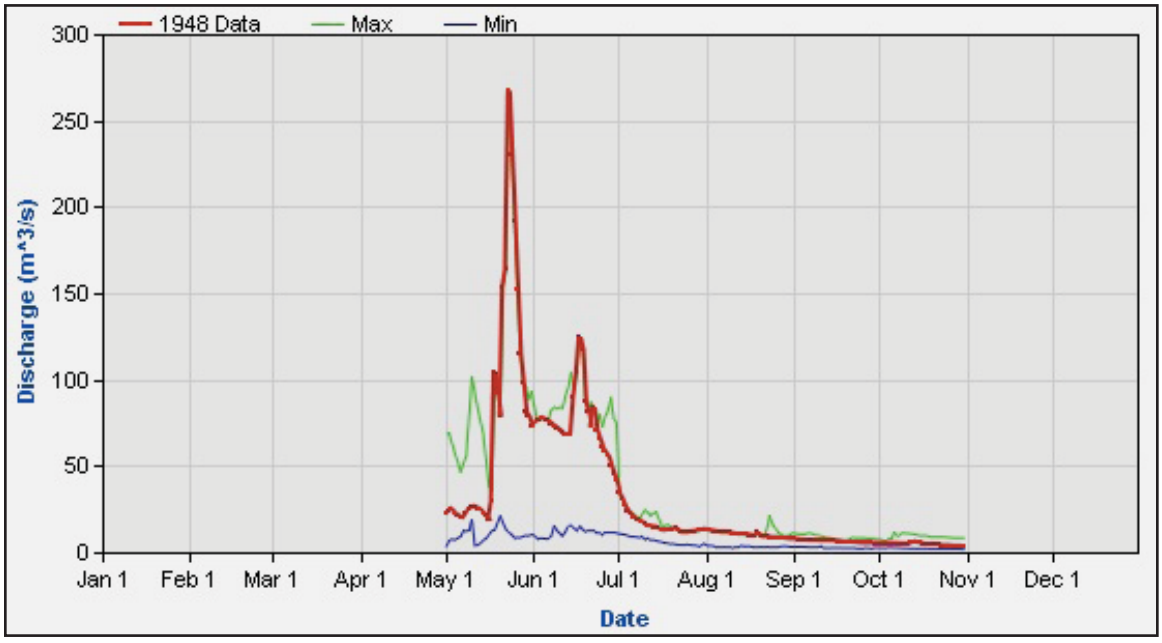


Figure 4.15: Daily discharge for the Oldman River at the Gap (measuring station 05AA021); the green line shows maximum values for the 1944 to 1949 period; the blue shows minimums. The red line shows 1948 vaules.

higher than preceded the 1916, 1927, and 1938 floods. It is possible that some localized flood events occurred in the Gap that were not reported for the Oldman basin as a whole by Mustapha et al. (1976); however, the flood peak pattern they described appears to hold true on this local scale.

Daily discharge rate records for the Oldman River at the Gap (measuring station 05AA021) were recorded between 1944 and 1949; these captured the water levels for the 1948 flood (Environment Canada 2006; Figure 4.15), showing a peak discharge of 268 m^3/s on May 23, 1948. While rainfall data for Maycroft was not recorded that year, Pincher Creek reported 47.2 mm of rain between May 19 and 22, immediately before the peak discharge in the Gap (Environment Canada 2008).

The 268 m^3/s peak daily discharge in the 1948 flood is higher than other recorded peaks during the spring runoff period of May through June, which from 1941 to 1949 aver-

aged around 100 m^3/s. Daily discharge rates through the remainder of the year are even lower, between 10-20 m^3/s. These three values roughly describe the three stages of the Oldman River. From midsummer until snowmelt begins in late spring, the Oldman is in its low water stage, with flows of ~10-20 m^3/s. Each year from May through June, snowmelt bloats the river; daily discharge rates of ~100 m^3/s during this period represent the river's bankfull stage. Sporadically, and probably triggered by high rainfall during the snowmelt period, discharge rates increase even further, representing the river's overbank stage. The river overflows its banks and spills out onto a broader floodplain, ephemerally represented in the Gap by such landforms as the low terrace.

Geomorphic assessment: Methods

It is unclear from surface inspection whether the low terrace has developed through repeated aggradation during overbank events or a cyclical sequence of erosion and redeposition. A program of research was therefore devised to: a) characterize the nature of deposition on this landform and b) obtain accelerator mass spectrometry (AMS) ^{14}C radiometric dates for the deposited sediment. To meet these objectives, soil profiles on the landform were examined, and soil samples were collected. Fieldwork was conducted on October 17, 2009, while the Oldman River was in its low water stage.

During this preliminary geomorphic assessment of the landform, only sections where soil profiles had already been exposed in the existing cut bank were cleaned and photographed; three such sections (Figure 4.16, Profiles A, B, and C) were prepared for photography by shovel-shaving a vertical soil profile with a width of 30-40 cm, removing about two to three centimeters of soil from the exposed surface of the profile. Soil samples were collected from

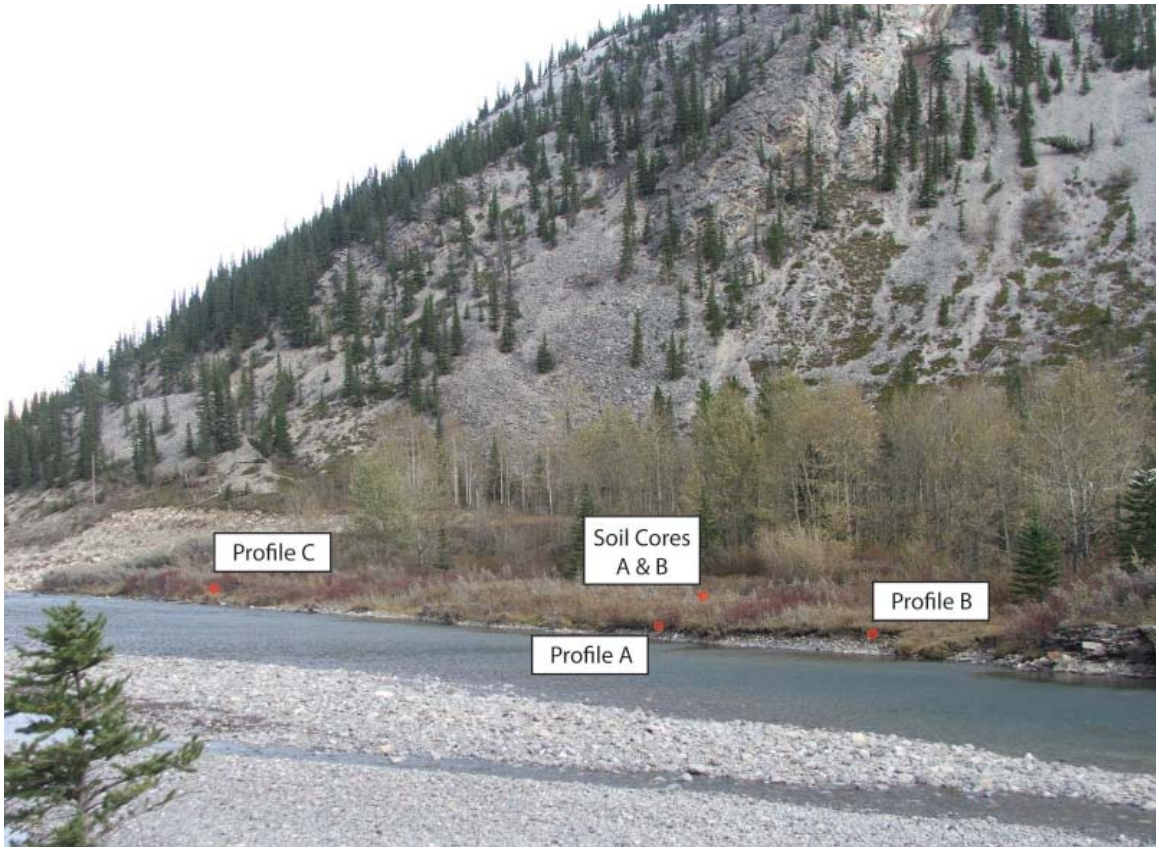


Figure 4.16: Location of soil profiles and boreholes made during October 2009 geomorphic assessment

buried strata in these exposures using a clean blade and sterile plastic bags. Two boreholes were also drilled with a 3" diameter hand auger (Figure 4.16, Soil Cores A and B), one to a depth of 15 cm and the other to a depth of 35 cm; soil samples were taken from the base of each of the extracted cores. No cultural materials were observed during the course of this testing program.

Sediment samples were screened in the laboratory through fine mesh with purified water to remove finer grain sizes. Screened samples were examined under a stereoscopic microscope for organic material such as leaves, seeds, needles, wood fragments, or charcoal; organics collected from each soil sample were placed in sterile vials filled with deionized water and a few drops of HCl.

To remove accumulated natural residues on these samples, they were pretreated following the acid/base/acid protocol recommended by the W. M. Keck Carbon Cycle AMS Laboratory at the University of California, Irvine (UCI KCCAMS 2008). Samples were placed in sterilized test tubes and given an initial wash in 1N HCl for 30 minutes at 70˚C to dissolve carbonates and iron oxides. This process was followed by a sequence of base washes in 1N NaOH, each for one hour at 70˚C, to remove soluble humic substances; this step was repeated four times, so that the NaOH solution in the test tubes was clear rather than brown after the final wash. A second wash in 1N HCl for 30 minutes at 70˚C was done to dissolve any atmospheric carbon absorbed during the base washes. Finally, samples were repeatedly bathed in distilled water for five minutes at 70˚C until the pH of the solution was neutral. At each stage, fluid was removed with a pipette stored in its own test tube, one for each sample, to prevent cross-contamination. After the final rinse, excess fluid was removed, the test tubes were sealed and freeze-dried, then shipped to the UCI Keck lab for AMS dating.

Geomorphic assessment: Results

The first soil profile, Profile A (Figure 4.17), is located midway along the length of the flat; on the date of testing, river level was about 80 cm below the cut bank; the exposure is created through lateral shear by the river at bankfull stage. A sequence of *facies*, visually distinct sedimentary units consisting of different grain sizes, was evident; these facies reflect different depositional conditions, but do not necessarily represent individual depositional events. A base of coarse river gravels (Facies I) is overlain by unsorted sandy silt of approximately 25 cm depth (Facies II). The surface is well vegetated, with a root mat of approximately 5-10 cm depth. The surface of the landform slopes downwards towards the exposed cut, with deposi-

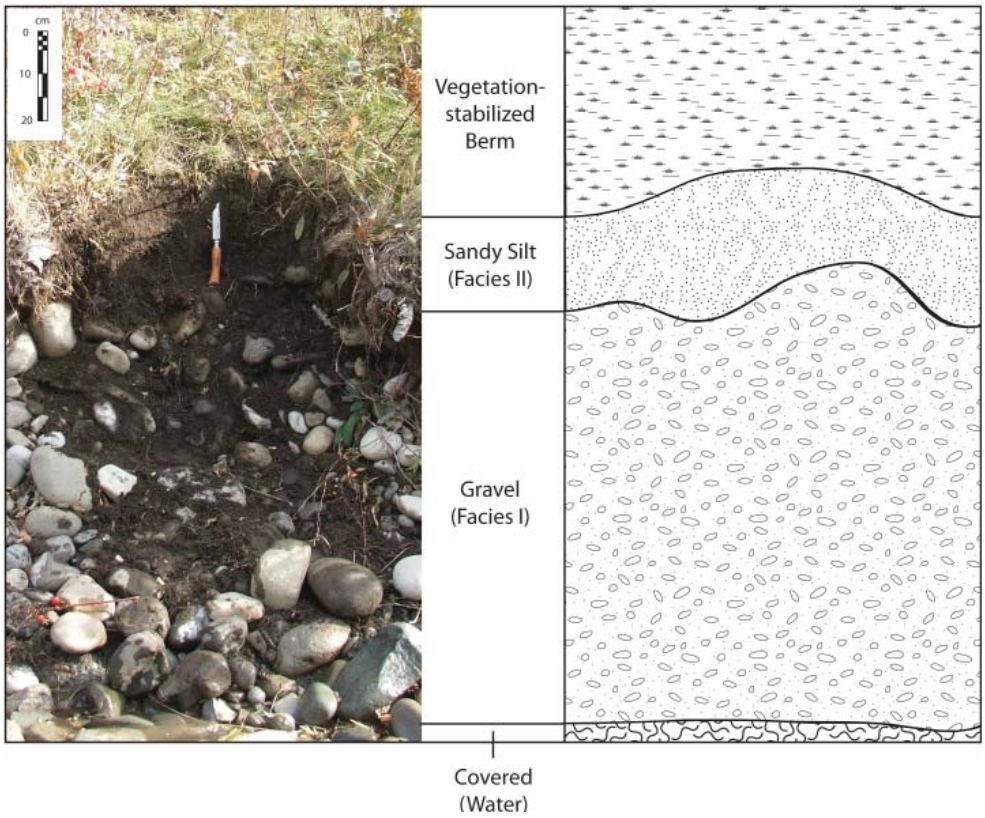


Figure 4.17: Profile A, soil exposure from river cut at midpoint of landform; Profile B was indistinguishable in composition and form

tion deeper towards the center of the flat. Soil samples were collected from five points in this profile. No organic samples suitable for radiometric dating were identified.

A second profile was cleaned at the south end of the flat (Figure 4.16, Profile B), about 20 m from Profile A. This exposure was nearly identical to Profile A, consisting of 20 cm of unsorted sandy silt directly overlying coarse riverbed gravels; however, soil here appeared finer and more compacted than at Profile A. This exposure also represents bankfull stage, with the cut bank being formed by entrainment of the fine-grained sediment through laterally acting forces of lift and drag by river flow (Thornes 1990:126). In both these exposures, deeply penetrating rootlets from the established vegetation cover serve to reduce the river's erosive effect (Thornes 1990:137-138). Four soil samples were taken from this profile; no identifiable plant

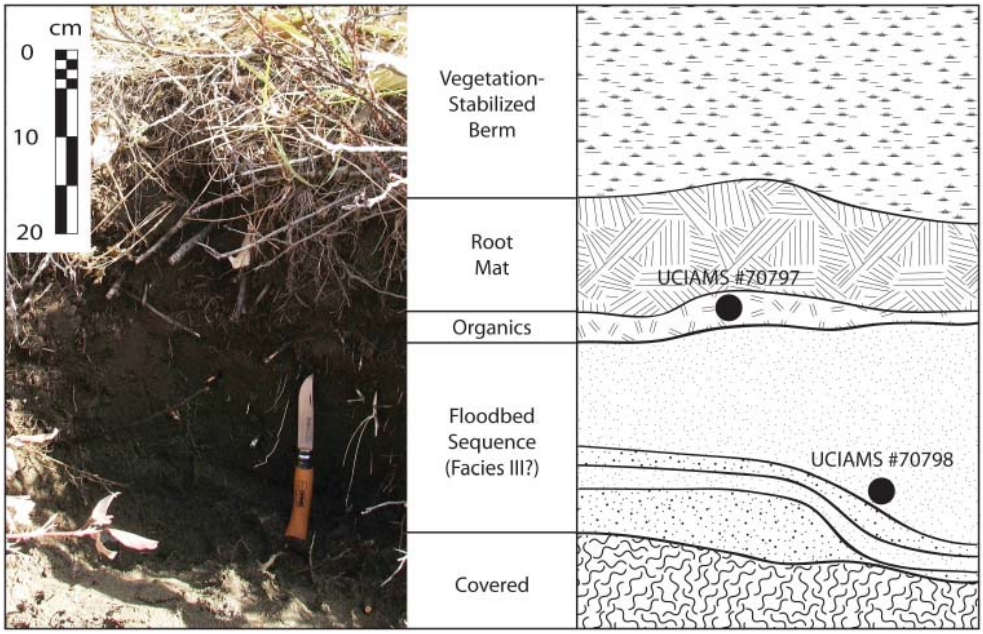


Figure 4.18: Profile C, soil exposure from river cut at the north end of the landform; coarser-grained deposits in the Facies III floodbed sequence are depicted with coarser stippling, finer grained deposits with finer stippling (locations of dated samples are indicated)

macrofossils were recovered for AMS dating.

The third soil exposure, Profile C, was identified at the north end of the flat (Figure 4.18). This exposure is removed by about 5 m from the water's edge, and is cut into sediments at a slightly higher elevation than Profiles A and B. Cross-bedded light, coarse-grained sand and dark, organic-rich sand were observed at the base, representing deposition from a sequence of overbank events. The full depth of this profile could not be revealed without excavation, and it was not demonstrated whether these cross-bedded sediments overlay river gravels or the mixed sand and silt seen in Profiles A and B. They are here tentatively defined as Facies III. Overlying this facies, at a depth of 15-20 cm below surface, a band of buried organic material, Facies IIb, was observed, mostly consisting of spruce needles (*Picea* sp.). The abundance of spruce needles was especially conspicuous given the paucity of spruce trees on

the landform, none being within 25 m of the profile. A 15 cm root mat with intermixed sandy silt, Facies IIa, overlies this organic band.

Five soil samples were taken from Profile C: one from the spruce needle-rich organic layer, two from the coarse-grained cross-bedded layers of sand in Facies IIa, and two from the organic-rich layers of silty sand in Facies IIa (one from the upper, and one from the lower). Of these, viable quantities of organic material for radiocarbon dating were identified in two samples. Ten spruce needles selected from the needle layer produced a conventional age of -895 ± 20 ^{14}C yr B.P. (UCIAMS 70797), while six weathered spruce needle fragments found at the bottom of the uppermost strata in Facies III produced a conventional age of -1055 ± 20 ^{14}C yr B.P. (UCIAMS 70798). Both samples from Profile C contain enriched levels of ^{14}C, likely a result of mid-twentieth century atmospheric nuclear weapons testing (John Southon, personal communication 2009).

A calibrated age of samples containing modern carbon can be derived from F^{14}C and uncertainty in F^{14}C values using the CALIBomb Radiocarbon Calibration program (Reimer and Reimer 2005). Table 4.2 shows calibrated ages for these samples, using default smoothing and resolution values and the Northern Hemisphere Zone 1 dataset (Hua and Barbetti 2004).

Table 4.2: Calibrated ages of modern carbon samples from Profile C

Sample	14C Age (yr. B.P.)	Calibrated Age, 1σ	Calibrated Age, 2σ
UCIAMS #70797	-895 ± 20	Oct. 1993 - Feb. 1994 (0.248) Sep. 1994 - Nov. 1995 (0.746) Nov. 1996 (0.006)	Jun. 1957 - Dec. 1957 (0.076) Oct. 1993 - Jan. 1996 (0.861) Jun. 1996 - Nov. 1996 (0.063)
UCIAMS #70798	-1055 ± 20	Jan. 1991 - Jul. 1991 (0.361) Sep. 1991 - Jan. 1992 (0.217) Apr. 1992 - Nov. 1992 (0.414) May 1993 (0.009)	Nov. 1957 - Apr. 1958 (0.082) Nov. 1990 - Jul. 1993 (0.916) Oct. 1993 (0.002)

As can be seen from these results, the carbon samples collected in Profile C were deposited very recently. There is a 74.5% probability that the needle-rich layer situated near the top of this profile was deposited between September 1994 and November 1995, a period which includes the "flood of the century" in June of 1995. The sample collected from a lower provenience is older, with a 91.6% probability of dating between November 1990 and July 1993. Notable in this range is a 36.1% probability of having been deposited between January and July of 1991; unusually high daily discharge rates were reported in June of 1991 at the Waldron's Bend hydrographic recording station (Environment Canada 2006), and this sample could represent an overbank event in the Gap that year.

Of the two adjacent sediment samples collected from boreholes near the center of the landform, Soil Core A, from a depth of 15 cm, consisted mostly of rootlets from the present vegetation cover and was deemed unsuitable for further processing. The sample from Soil Core B, however, taken from a depth of 35 cm, contained a high concentration of charcoal fragments; charcoal was not observed in any other soil sample. An approximately 0.5 g aliquot of these fragments was submitted for AMS dating, returning a conventional age of 790 ± 20 ^{14}C yr. B.P. (UCIAMS 70799), or 1217 to 1271 cal. AD (2σ) using OxCal v4.1.3 and the IntCal 04 calibration curve (Bronk Ramsey 2009; Reimer et al. 2004; Figure 4.19).

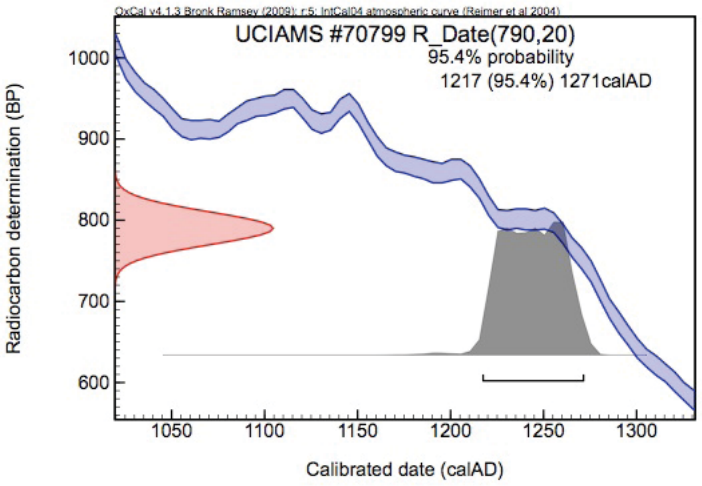


Figure 4.19: Calibrated plot for date from charcoal of 790 ± 20 ^{14}C yr. B.P. retrieved from Soil Core B at a depth of 35 cm in center of flat

Discussion

Spruce needles collected from soil samples at the north end of the flat, from depths of 15 and 40 cm in a profile exposed by lateral erosion, date from the 1990s, while charcoal collected about ten meters from the landform's margins at a depth of 35 cm dates from the thirteenth century. Consideration of the fluvial processes that have been shaping this landform throughout the Holocene can be of some value in interpreting these results, but the discrepancy of an older date from a shallower depth on a relatively level landform is indicative of a problem of greater complexity than can be fully explained through such a preliminary analysis.

Profiles A and B both show that the surface of the landform slopes downward toward the erosion-exposed river cut, with exposed sediment appearing unsorted; this shape represents the toe of an advancing berm, with sediment added to the basal area occurring in a disturbed state (Thornes 1990:131-132). The laminated structure of Profile C, on the other hand, demonstrates a rapid rate of sequential vertical floodplain aggradation. Erosion acts principally on the landform's river-facing margin, but in recent overbank events, including the massive flood event of 1995, the floodwaters on this spot do not appear to have possessed sufficient energy to reduce the landform vertically. Even in a very short amount of time, substantial deposition has accumulated on this part of the landform.

A cross-section of the river valley drawn across the middle of the flat (Figure 4.20) shows, at least in part, how this pattern of deposition can occur. At low water stage, the river is an armoured stream, its erosive activity minimal as the water comes in contact only with massive gravels transported by more powerful stages. At bankfull stage, volume is increased

considerably while still being constrained within a relatively narrow channel. At this time, the river approaches the limits of its banks, and the higher energy brought about by increased discharge causes erosion through lateral shear, the water coming in contact with finer-grained material at its margins so exposed only for a short part of the year. During overbank events, the river is at its maximum erosive potential—the armoured channel of the stream can be reworked as large materials are moved. But the energy of the river can also be dispersed as it spreads over a much broader floodplain, causing transported load to be dumped as the flow suddenly slackens (Brakenridge 1988:139).

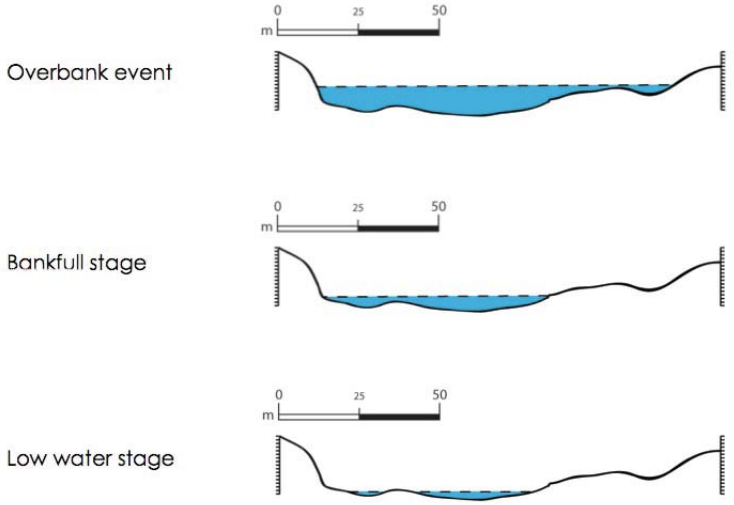
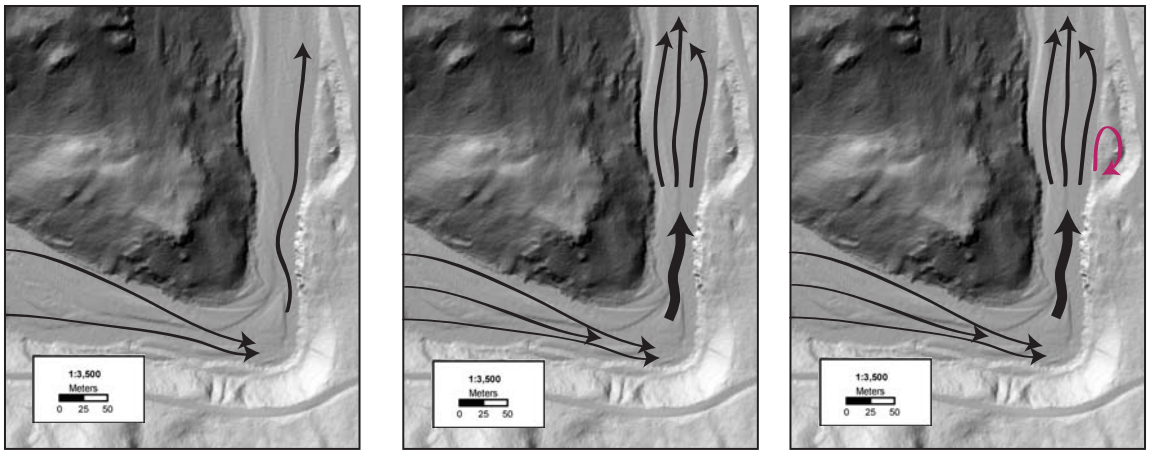


Figure 4.20: Cross-section of Oldman River across landform (right), drawn from LiDAR contour map, showing progressive stages of discharge

Two additional factors enhance this slackwater effect on the flat in the Gap. One is the dense vegetation that covers its surface. Shrubs, and even grasses, can play a dramatic role in reducing floodwater's erosive potential, greatly lowering uptake of sediment and also causing load to fall out of suspension. Even at extreme flood stages that otherwise flatten vegetation, and where no deposition is occurring, plant roots have a tremendous capacity to bind together soil and resist erosion. Further, if the surface vegetation is buried by new deposition, established roots quickly grow through the accumulated sediment, stabilizing surfaces that are subject even to annual flood cycles (Thornes 1990).



A) Low water stage B) Bankfull stage C) Overbank stage

Figure 4.21: River flow at the south end of the Gap at successive stages; during recent overbank events (C), the sudden increase in river width and surface area likely result in the a slackwater pool over the low flat, coupled with dumping of sediment load

The other factor leading to a reduction in the river's energy is that in addition to expanding over an increased surface area as the river level rises, the valley also expands laterally at the flat (Figure 4.21). Immediately prior to this point, the converging flows of the Oldman River and Racehorse Creek round the 90° bend at the south end of the Gap, then run through a narrow bedrock-lined passage; the bottom and sides of the channel are scoured by the high energy waters. In an overbank event, floodwaters emerge from this bottlenecked channel into a greatly widened floodplain. Coupled with the sudden increase in surface area and the presence of vegetation, the effect on rate of flow would be dramatic: the area of the flat would become a slackwater pool where large volumes of sediment are dropped out of suspension.

This has probably not always been the case, as armoured mountain streams have a tendency to meander more over time (Brakenridge 1988). The steep, rounded slopes that frame the low flat on its south and east sides were likely shaped by a previous course of the Oldman River; the low flat possesses a levee-type structure with a swale, or derelict channel, at the toe of this slope. The channel has shifted away from this bend over time, possibly a result of the

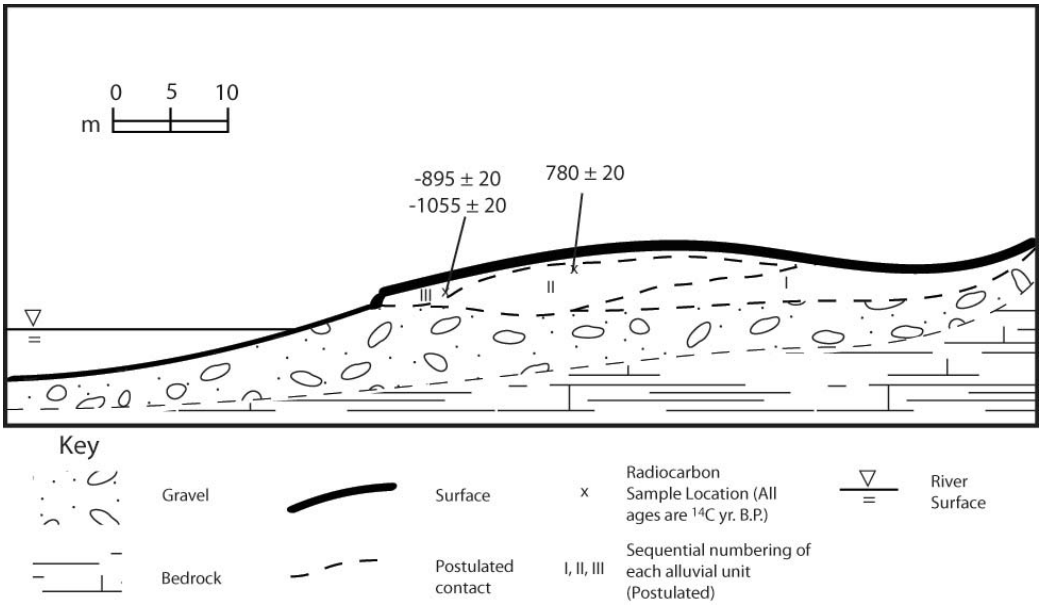


Figure 4.22: Postulated composite cross-section of floodplain stratigraphy across low terrace (following Brakenridge 1988:147)

river's action in shaping the sharp bend just to the south. Through the south-to-north stretch of the Oldman through the Gap, the river has deflected west to its present course, the hollow of its former channel filling with slackwater deposits to create the landform we see today.

As presented in Figure 4.22, a stratigraphic cross-section of the flat would be expected to reveal a basal layer of bedrock, representing the channel's most distant incarnation as the former bend in the river was being shaped. As this direct, high-velocity current decreased, the channel bed filled with the large, rounded gravels typical of a meandering mountain stream—these gravels are seen to underlie the landform in Profiles A and B. Eventually, the channel migrated to such a point that the former bend was filled with water only in flood stages; increasingly younger material has been deposited on top of older deposits in successive over-bank events. The effects of shear stress from the river at bankfull stage have also been laterally migrating westward, originally shaping the steep banks that now frame the landform, and on a lesser scale probably resulting in a series of cuts, now buried, that have filled with younger

sediment, in the profile of the low flat istelf. The radiocarbon dates from Core B and Profile C demonstrate this cut-and-fill process, with very young dates being obtained from comparatively great depth immediately adjacent to the river cut. Older buried strata would then be expected at some distance from the landform's edge.

This rudimentary model for the low terrace's formation, however, would require further testing to verify. No data were collected during this preliminary geomorphic assessment to allow speculation on the earliest age of the low terrace. Radiocarbon dates from Profile C show that as an active floodplain, the landform is still in the process of being created. Shear erosion is evident in all three profiles, but as a whole, the landform stands in equilibrium with the current river channel. How long the landform has been stable could not be determined, but the date of 790 ± 20 ^{14}C obtained from buried charcal provided a compelling reason to sample this landform more exhaustively in field work undertaken in the summer of 2010.

Chapter V
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Archaeological Assessment of the Lower Landform

As detailed in the previous chapter, the concentration of charcoal fragments recovered from a sediment core at the south end of the low flat at the south end of the Gap provided an encouraging AMS ^{14}C result, the interpretation of which could suggest that a surface dating to the thirteenth century AD may be buried there intact. This finding was equivocated, however, by AMS ^{14}C results from plant macrofossils, namely spruce needles, from strata at similar depths elsewhere on the low flat which showed only recent deposition.

To better understand these findings, an archaeological testing program was undertaken to confirm or refute the presence of an ancient buried surface on this low terrace. Given the landform's strong correlation with historic descriptions of the location of Old Man's Playing Ground, the identification of the disturbed remains of the rock alignment described by Peter Fidler in 1792 and by George Dawson in 1883 would be a possible result of this testing program, but by no means a guaranteed one. The absence of cairns at the site by the time of Dawson's visit, for example, serves as a strong indication that flood events on this landform could have more complex effects than the observed rapid aggradation of sediment in recent flood events would suggest. The recovery of any prehistoric cultural material from this landform, however disturbed, and especially of carbon samples from bone, charcoal, or other materials that would allow a reliable chronology for occupation of the site to be derived, would greatly enhance our knowledge of the site even in the absence of remains of the rock alignment.

Pursuant to the regulations for archaeological research in Alberta's Historic Resources Act (Alberta Government 2008), the Archaeological Survey of Alberta granted a research per-

mit (#10-141) to test both the lower and higher terraces in July, 2010. Because these landforms are within the boundaries of Bob Creek Wildland Provincial Park, Alberta Parks Division also issued a Parks Research and Collection Permit (#10-129) at this time. Given that Old Man's Playing Ground is a site with high cultural sensitivity, efforts were taken to limit any impact to verification of the site's presence rather than extensive excavation. Details of the testing program on the lower terrace are presented in the following sections, while assessment of the higher terrace is presented in Chapter VI.

The results of the testing program on the low terrace were negative. No traces of a buried rock alignment were observed, nor were any cultural materials recovered. Subsurface testing, including trenching, shovel tests, and probing, revealed the presence of buried cobbles representing the bed of the former river channel at much shallower depths than anticipated and the accumulated sediment of only recent flood events above this. Fragments of charcoal were frequently observed during excavation, but those pieces that were macroscopically visible were rounded and smoothed, suggesting fluvial transport from other locations. It is likely that the charcoal sampled in the preliminary testing was similarly transported; such fragments are unreliable as indicators of the age of the deposits from which they are recovered.

While the model prepared from the initial geomorphic assessment (Figure 4.22) predicting older sediments at greater depths and farther from the current river edge is essentially correct, the time span represented by the sediments exposed is far less than expected. Revision to the model is therefore required: while recent overbank events have resulted in rapid aggradation of small-grained sediment, some flood events on the Oldman appear to be of such magnitude that the low terrace undergoes significant erosion prior to redeposition, with

transported sediment load over the flat in such cases being of cobble size or greater. The age and frequency of such catastrophic flood events could not be determined in this study, but their occurrence negates the possibility of ancient surfaces surviving intact on this landform.

Archaeological assessment: Methods

The low terrace runs a total length of nearly 90 m from north to south, and is widest near its south end. A low swale, five to ten yards in width, runs along the toe of the slope that frames this landform to the south and east; sediment deposition appears greatest on a gently sloping plane from the river's edge to the margin of the swale. Figure 4.11 shows how the playing ground as sketched by Fidler could have been accommodated by the level space available on this portion of the landform.

Of concern in devising a sampling methodology to adequately assess this landform was the risk of failing to observe cultural materials, particularly if they are present, but scarce. In traditional shovel-testing survey methodology, probability of site detection is directly related to the intensity of shovel test arrays, but regardless of intensity, the risk of non-detection remains (Krakker et al. 1983). Geophysical methods such as ground-penetrating radar (GPR) can be effective in detecting subsurface anomalies, but they are costly, and would still require ground-truthing through excavation, given the ambiguity of the resulting readings. As an alternative to shovel-testing or GPR, trenching can more efficiently and effectively intercept linear archaeological features (Verhagen and Borsboon 2009) such as the rock alignment described by Fidler and Dawson. Trial trenching, or machine-assisted excavation (i.e., backhoe testing), would not be practical on the low flat for a number of reasons: inaccessibility to machinery, ecological sensitivity, cost, and the potential for excessive disturbance to a significant cultural

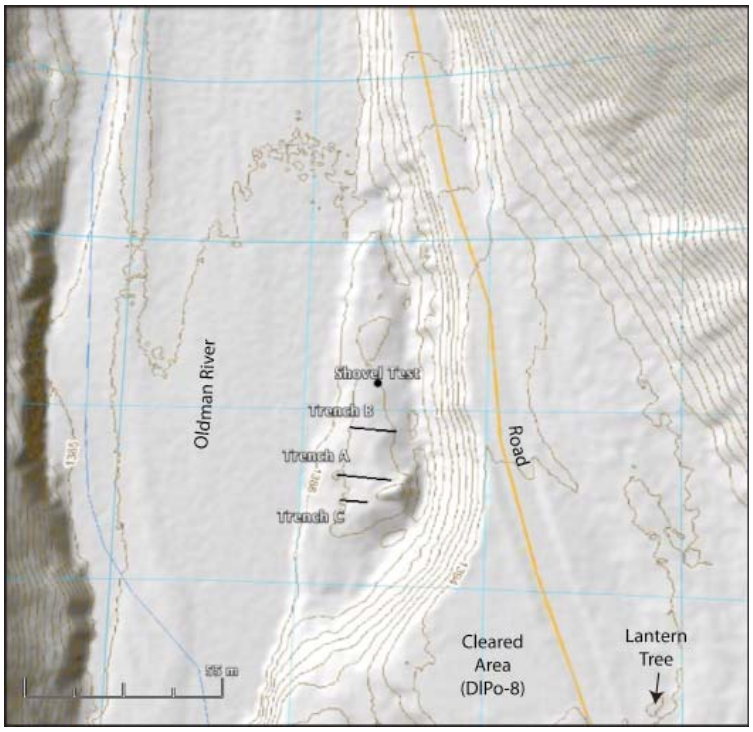

Figure 5.1: Location of trenches and shovel tests excavated on low terrace (contour map courtesy Robin Woywitka, Archaeological Survey of Alberta)

site. Instead, based on the success of shovel-excavated trenches in detecting structures at the Batoche National Historic Site (Ives, personal communication 2010), hand-excavation of a series of trenches was selected as the sampling strategy for the low flat.

Running as transects from west to east, three trenches (identified as Trench A, B, and C; Figure 5.1) were excavated across the flat, up to the edge of the swale. The swale was not excavated, as it was a deeply eroded side channel. Given that the overall length of the landform is nearly three times as long as the 35 meter-long feature described by Fidler, any single trench running from east to west could entirely miss intercepting a buried north-south oriented rock alignment, if present. The trenches were therefore positioned so as to have a high likelihood of intercepting the rock alignment even if it was located closer to the landform's northern or

southern end.

Trenching was conducted between July 29 and August 5, 2010. It was anticipated that the sediments on the flat would overlay a basal layer of river cobbles similar to the streambed of the river proper; excavation therefore aimed to reach this basal layer, with the depths each trench was to reach being open-ended. While excavating, particular attention was placed on spotting buried cobbles that could form part of a larger alignment *in situ*; should any cobbles be identified in this fashion, the trench would be expanded into a grid of 1-m-x-1-m units with greater control for recording their provenience. All excavated sediment was passed through a 6.35 mm (1/4") wire mesh screen to ensure that smaller cultural materials would be identified and collected.

As in the earlier geomorphic assessment, soil profiles were cleaned and photographed once trenches were fully excavated, and soil samples were collected in sterile bags from identifiable strata, and from various depths. In the laboratory, soil samples were examined for plant macrofossils and charcoal samples; samples were pretreated following the UCI KCCAMS (2008) protocol (see discussion of methods in Chapter IV).

Archaeological assessment: Results

Trench A

The first lateral transect of the low flat, Trench A (Figure 5.2), was positioned 32 m from the south end of the landform. The surface was first cleared of vegetation and was noted to undulate slightly. Only that portion of the low flat that was relatively level was cleared; where the flat slopes off more steeply within five meters of the river's edge on the west was

Figure 5.2: Trench A, view east across flat (left); depth of west side of buried gravel bar (top right); detail of buried cobbles at top of gravel bar (bottom right)

not excavated, nor was the trench extended beyond one meter of the edge of the swale at the east end. In total, the trench was between 20 and 30 cm wide and ran a total length of 16.5 m.

Excavation of this trench led to the immediate identification of a paving of buried stones ranging in size from pebbles to fist-sized and larger. Rather than being a cultural feature, however, these proved to be the uppermost surface of a buried gravel bar with a rounded top cresting at a depth of 22 cm below surface (b.s.) near the middle of the flat, and with shoulders steeply sloping to depths greater than 140 cm to both west and east. To the west, the slope of this buried gravel bar indicates that it is a continuation of the armoured stream bed of the current river channel itself. To the east, excavation proceeded to a depth of between 75

cm b.s. and 120 cm b.s.; the excavated depth in this portion of the trench was at least parallel to the crest of the buried gravel bar, and as the surface of the landform slopes gently upward from the river's edge, depth of the trench increased eastward.

Given the narrow width of this first trench, hand excavation beyond 80 cm b.s. was found to be impracticable. A 60 cm-long metal rod was used to probe into the sediment below the maximum excavated depth, a method which confirmed the continuing presence of the gravel bar at increasing depth eastward. An attempt was made to excavate through the top of the gravel bar, but upon removal of the upper paving of fist-sized cobbles, larger stones the width of the trench or greater were exposed. Between both excavation and probing, no buried rocks were discovered other than those making up the gravel bar, and no cultural materials were observed, either *in situ* or in the screen.

Trench B

Positioned as a lateral transect of the low flat 25 m north of Trench A, Trench B was excavated to a width of between 30 and 40 cm, and to a length of 14 m (Figure 5.3). A paving of smaller gravels was soon exposed, with smaller grain sizes than observed in Trench A. Also unlike the first trench, the surface of these gravels did not significantly increase in depth to west or east, but stayed fairly uniformly level, tapering off entirely to the east. This gravel lens was excavated through in a section of trench widened into a roughly 1-m-x-1-m unit, and at a depth of 85 cm b.s., a gravel bar with cobble sizes similar to those exposed in Trench A was exposed. As with the first trench, attempts to excavate through the gravel bar exposed cobbles of even larger diameter; a maximum depth of 140 cm b.s. was reached. The remainder of the trench could not safely or conveniently be hand-excavated to this depth; a maximum depth of

Figure 5.3: Trench B, view east across flat (left); Trench C, view west across flat (right)

120 cm weas reached at the east end of the trench where the surface of the flat rose highest, and probing beyond this depth did not indicate the presence of buried cobbles unassociated with the deep gravel bar. As with Trench A, no cultural materials were observed, either *in situ* or in the screen.

Trench C

In keeping with the original study design, a third trench was also excavated across the low flat. The decision of its placement presented a problem, however: trenches A and B, transecting the level portion of the flat where it is widest, effectively covered the ground where a rock alignment of the dimensions sketched by Peter Fidler could best have fit. North of Trench B, the landform narrows considerably, though this area could accommodate the narrow northernmost tip of the rock alignment. South of Trench A, the level surface of the

flat is also narrower, being interrupted by the wide swale, or derelict river channel, that winds along the base of the slope to the next terrace. Being closer to the location of the borehole that yielded a prehistoric radiocarbon date from charcoal in the initial geomorphic assessment, Trench C was placed 6 m south of Trench A, there being a possibility of an intact prehistoric surface in the vicinity.

Trench C was excavated with a width of 40 cm and a total length of 8 m (Figure 5.3). Cobbles forming the crest of a buried gravel bar were encountered at a very shallow depth, only 18 cm b.s.; as in Trench A, the west and east margins of the gravel bar sloped steeply downward; the gravel bar at this location occupied most of the width of the trench, and depths of only 60 cm were reached. No cobbles positioned out of association with the gravel bar were found, no cultural materials were observed i*n situ* or in the screen, and no attempt was made to excavate through the gravel bar.

Screening of all three trenches, though failing to produce cultural materials, did result in the observation of numerous fragments of charcoal. These fragments were invariably smoothed and rounded, having the appearance of stream-worn pebbles rather than angular pieces of wood that had been burned and buried *in situ* (Figure 5.4). Though their exact provenience was uncertain, and hence they were not submitted for AMS dating, they do show how a date of of 790 ± 20 ^{14}C could have been obtained during the initial geomor-

Figure 5.4: Charcoal fragments from Trench B; rounded shape indicates fluvial transport

phic assessment: pieces of charcoal are evidently transported by the river and deposited on the low flat during overbank events. Having washed into the river and floated in from other locations, they do not serve as a reliable indicator of the landform's age. Though the characteristic rounding was not noted for the pieces submitted for dating during the initial assessment, those fragments were found using a stereoscopic microscope and could have been broken from a larger piece during collection with the handheld auger. It is highly probable that they were deposited by the same process as the screened charcoal fragments.

Subsurface probing and shovel testing

Following the completion of the trenching, the 60 cm metal probe was used to expediently map out the extent and depth of the shallowly buried gravel bar observed in Trenches A and C, and to test whether any outlying buried stones could be identified that might not a part of that natural feature and had been missed during trenching. Based on the trenching results, the gravel bar appeared to occupy much of the level space on the low flat where the rock alignment was anticipated—that is, following Fidler's description, and assuming some stability to the landform, within 10 yards of the river's edge. Given the limited space en-

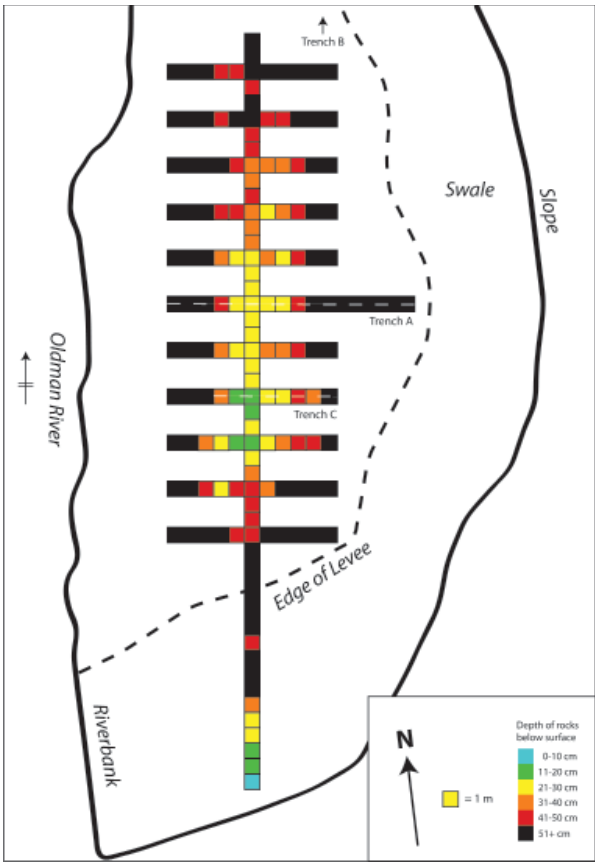

Figure 5.5: Heat map showing depth of buried gravel bar on low flat; landform contours redrawn from LiDAR-generated DTM

closed by the low flat, there is little room beyond this area where the structure could have fit.

Figure 5.5 shows the results of this subsurface probing; a baseline was positioned to run longitudinally down the flat approximately 10 m from the river's edge; depth of buried stones was measured at one-meter intervals along the length of this baseline to a distance of 50 m from the south end of the landform. At three-meter intervals, lateral transects were walked, with depth of buried stones again measured at one-meter intervals; trenches A and B were included as transect lines.

Through most of the south end of the low flat, the gravel bar is only shallowly buried, in some places less than 20 cm deep. Its arcing, crescent shape follows that of the slope that frames the landform itself, and reflects the course floodwaters would take over this surface during a high-energy overbank event. This buried gravel bar lies under much of the most level part of the landform: its western edge slopes steeply down, presumably as an extension of the current armoured stream bed. To the east, the back end of the gravel bar descends to an indeterminate depth; excavation and probing did not fully sound out the depth of the gravel bar in this direction. The gravel bar gradually decreases in depth to both north and south; at the south end of the flat, probing found buried gravels and possibly bedrock to be continous with the exposed bedrock on the slope leading up to the higher terrace.

Figure 5.6: Shovel test at north end of low flat showing gravel layer detected with subsurface probe

Only the southern portion of the flat was systematically probed, this area being of sufficient width to accommodate the rock alignment as sketched by Fidler. North of Trench B, where the landform progressively narrows, the probe was used to verify the continuation of the gravel bar at irregular intervals. About 15 m north of Trench B, on the highest part of the levee adjacent to the back swale, probing detected a broad concentration of shallowly buried cobbles; none were observed near the swale in any of the trenches. A single 40-cm-x-40-cm shovel test was excavated to expose these buried rocks (Figure 5.6); they were found to be a paving of gravels and cobbles. The concentration in this area is another high crest of the natural gravel bar that underlies the low flat.

Soil profiles and dating

A detailed wall profile was made for a one-meter portion of the completed Trench A (Figure 5.7), 10 m from the west end of the trench. At the base of the trench, fine-grained silt overlaid the sloping east edge of the gravel bar. The full surface of the gravel bar was not exposed, but probing demonstrated that it continued eastward. Overlying the gravel bar was a layer of fine grained silt (Facies Ia) that increases in thickness to the east; this layer was in

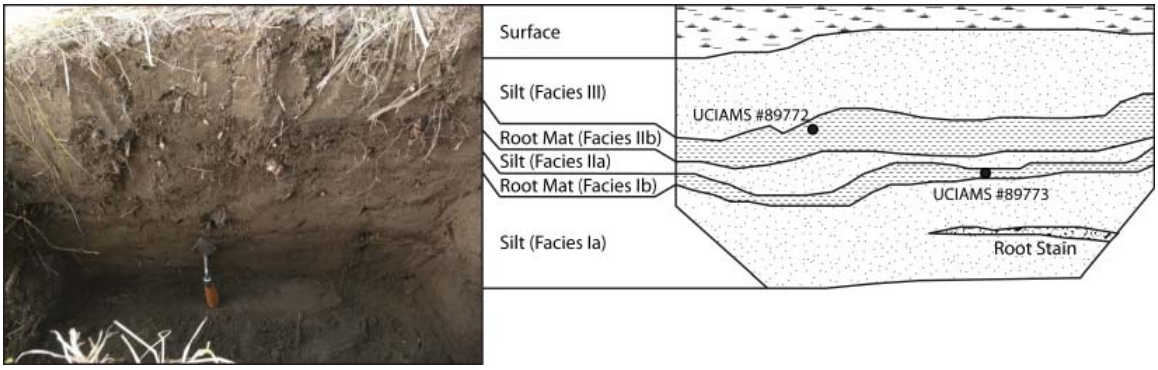

Figure 5.7: North wall profile of medial section of Trench A; total depth 65 cm. Note sloping gravel bar at bottom left of photo

contact with the gravel bar, where the latter was exposed. The silt was undifferentiated in grain size and colour, with the exception of discontinuous dark-stained patches identified during excavation as decomposed vegetaton, probably roots. Overlaying this silt was a faintly visible, organic rich dark band still containing clusters of rootlets and varying in thickness between one and five centimeters (Facies Ib), representing a former surface that was inundated during a low-energy overbank event. This root mat became buried by a thin band of fine-grained silt (Facies IIa) similar in colour and grain size to the lower Facies Ia, but lacking vertical development—the sediment layer varied in thickness between 3 and 10 cm. Overlaying this second silt layer was another root mat, well defined and 10-15 cm thick (Facies IIb). A 15-20 cm thick band of fine-grained silt (Facies III) overlies Facies IIb, upon which the modern vegetated surface is growing.

Each silt layer (Facies Ia, IIa, and III) represents the deposition of load from slow-moving water during the subsidence of an individual flood event. In the case of Facies IIa and III, the force of the flowing water was not sufficient to erode the existing surface vegetation, which instead became buried. Facies Ia, however, is underlain by a gravel bar composed of fist-sized or larger cobbles, and with an uneven upper surface. It is unlikely that this gravel bar is built upon further aggradation from earlier flood events: floodwaters with discharge rates sufficient to move cobbles of this diameter probably possess sufficient energy to first wash out existing vegetation and sediment from the surface of this landform before slackening enough to deposit first large cobbles, and then progressively finer sediment. At least three overbank events are therefore represented by these strata, the two most recent featuring low-energy deposition characteristic of a slackwater pool, and the third, oldest, having had volume

and energy catastrophic to the depositional integrity of the landform.

Soil samples were collected from each of the five identifiable strata in the Trench A profile. Two of these produced plant macrofossil specimens viable for AMS ^{14}C radiometric dating; after pretreatment (see Chapter IV: Methods), these were submitted to the W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory at the University of California, Irvine, in January 2011. As both samples came from root mats, caution was exercised not to submit roots as carbon samples, for there could be no certainty that inundated subsurface vegetation did not continue to survive by growing through newly accumulated sediment. Three spruce needles were recovered from the upper root mat, Facies IIb, at a depth of 25 cm b.s.. These yielded a conventional of age of -1385 $\pm$ 20 ^{14}C yr B.P. (UCIAMS 89772). A leafy plant bud of indeterminate species, recovered from a depth of 37 cm b.s. in the lower root mat, Facies Ib, provided a conventional age of -760 $\pm$ 60 ^{14}C yr B.P. (UCIAMS 89773); the broad margin of error is due to a small sample size, only 0.033 mg of carbon. As with the plant macrofossils recovered during the preliminary assessment, enriched levels of ^{14}C in these samples are likely a result of mid-twentieth century atmospheric nuclear weapons testing (John Southon, personal communication, 2011).

Table 5.1 shows calibrated ages for these samples, using CALIBomb and the Northern Hemisphere Zone 1 dataset for smoothing and resolution values (Hua and Barbetti 2004; Reimer and Reimer 2005). The spruce needles in Facies IIb are quite young, with a 61.2% probability of dating from March 1986 to January 1987, a time span which includes the May-June flood season for 1986; there is a 33.3% chance that they date to a time span that includes the flood season for the following year. No flood data are available for the Gap to confirm

Table 5.1: Calibrated ages of modern carbon samples from Trench A

Sample	^{14}C Age (yr. B.P.)	Calibrated Age, 1σ	Calibrated Age, 2σ
UCIAMS 89772	-1385 ± 20	Feb. 1959 - Mar. 1959 (0.029) Nov. 1985 - Dec. 1985 (0.026) Mar. 1986 - Jan. 1987 (0.612) Apr. 1987 - Oct. 1987 (0.333)	Oct. 1958 - Mar. 1959 (0.081) Jan. 1960 (0.006) Apr. 1960 (0.0003) Jan. 1961 (0.0003) Oct. 1985 - Jan. 1988 (0.902) Jul. 1988 - Aug. 1988 (0.009)
UCIAMS 89773	-760 ± 60	May 1957 - Aug. 1957 (0.116) Apr. 1995 - Apr. 1995 (0.008) Jan. 1996 - Jul 1997 (0.877)	Dec. 1956 - Nov. 1957 (0.196) Nov. 1993 - Dec. 1993 (0.009) Mar. 1995 - Jul. 1997 (0.796)

whether there was a flood in either of those years. Daily discharge rates from the Waldron's Corner recording station, downstream of the Gap, do not show unusually high water levels between 1981 and 1991 (Environment Canada 2008). It is possible that the spruce needles collected in this sample survived a few seasons before being buried in an overbank event.

The date for the sample from the lower root mat, Facies Ib, poses an interpretive challenge. Owing to the precipitous increase in atmospheric ^{14}C levels during the peak of nuclear weapons testing in the 1950s and 1960s, it can be difficult to isolate calibrated dates from this era using CALIBomb. The more gradual decrease in atmospheric ^{14}C skews results to the more recent end of the calibration curve (Figure 5.8). Thus the calibrated age of the sample from Facies Ib shows an 87.7% chance of dating to between January 1996

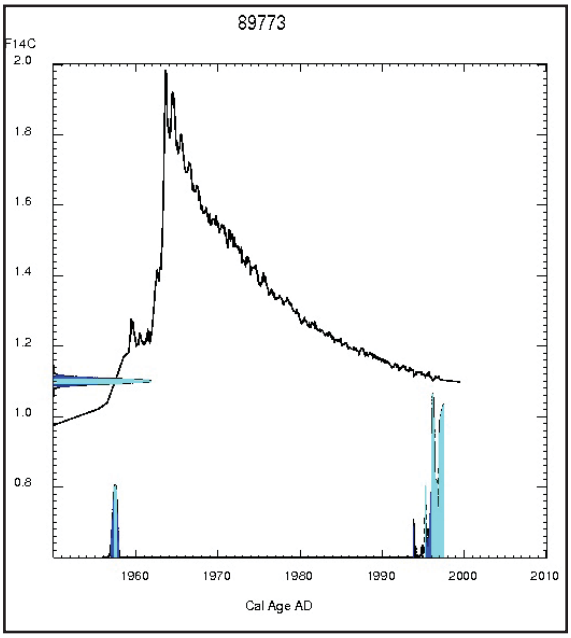

Figure 5.8: CALIBomb calibration of sample UCIAMS 89773 showing early and late curve intercepts (Reimer and Reimer 2005)

and July 1997, problematically younger than the stratigraphically superimposed spruce needles in Facies IIb. This sample, however, possesses an unusually high probability of dating to an earlier time range, between December 1956 and November 1957 (19.6% at the 2σ confidence interval). Should this earlier date range accurately reflect when the lower root mat was buried, then it is intriguing to consider the possibility that an overbank event had preceded, by only a short time, the 1960 Glenbow Foundation team's visit. The presence of recently deposited sediment on the low flat, accompanied by only limited vegetation growth, could certainly have contributed to Forbis's disregarding the possibility of the low flat having been the location of the playing ground.

In Trench B, a one meter section of the north trench wall was cleared at the midpoint of the trench (Figure 5.9). The base of this trench section, 85 cm b.s., consisted of a paving of medium-sized cobbles representing the top of a buried gravel bar, probably continuous with that identified in trenches A and C. The gravel bar was subsequently excavated at this spot to a depth of 140 cm b.s.; no additional strata were identified. Above the cobbles, a thick band of coarse sand, gradually transitioning to finer silt, was observed (Facies Ia/Ib). This deposit was superimposed by a very well-defined, organic rich root mat (Facies 1c), possibly representing a

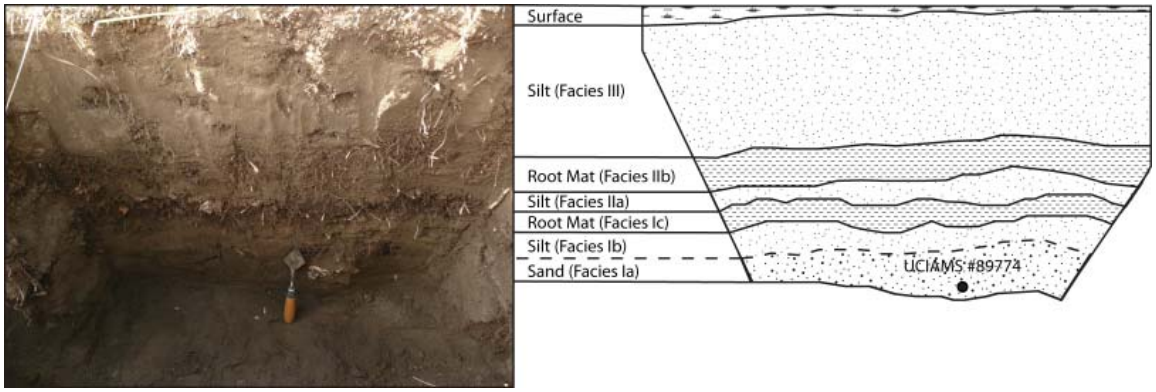

Figure 5.9: North wall profile of medial section of Trench B; bottom depth is upper surface of gravel bar, 85 cm b.s.

surface that had been stable for some time. Another band of fine silt (Facies IIa) and a thick, but poorly defined root mat (Facies IIb) probably represent a subsequent overbank event and period of landform stabilization. The uppermost strata consists of fine silt underlying the current vegetated surface. As in Trench A, this sequence demonstrates a series of three overbank events, the most recent two of which led to aggradation, but the earliest of which was likely accompanied by considerable erosion and reshaping of the landform.

Six soil samples were taken from the Trench B wall profile, and their depths and association with individual strata were recorded. However, subsequent inspection for the majority of these samples found no plant macrofossil or charcoal samples viable for submission for AMS ^{14}C radiometric dating. A single badly degraded spruce needle, found in a soil sample from the coarse sand of Facies 1a, did not survive the pretreatment process; a charcoal fragment was recovered in another soil sample from Facies 1a at a depth of 85 cm b.s., immediately above the gravel bar. This returned a conventional age of 260 $\pm$ 15 ^{14}C yr. B.P. (UCIAMS 89774). However, as already discussed, charcoal fragments do not appear to be reliable as indicators of the age of associated flood sediments on this landform. Taking into consideration the charcoal date obtained in the preliminary assessment of 790 $\pm$ 20 ^{14}C yr. B.P. from sediment at 35 cm b.s., their age and deposition appears to be random.

With the gravel bar at the south end of the landform being buried quite near the surface, Trench C was excavated only to shallow depths. Aggradation of individual strata was not evident in wall profiles from this trench, and soil samples were not collected.

Discussion

As postulated in the preliminary geomorphic assessment, trenching of the low flat confirmed that lower-energy flood events have left older surfaces intact: trenches A and B

both showed two root mats representing former vegetated surfaces progressively buried under layers of silt deposited during single overbank events. That these accumulated fine-grained sediments would overlay the larger stones of the former river channel at this location was also anticipated; that these cobbles would be so shallowly buried was not. The continuous curvature of the gravel bar, as indicated by subsurface probing (Figure 5.5), indicates it was deposited in a single event; its variable depth suggests that when deposited, the vertically accumulated finer sediment that can be seen today was not present. The gravel bar is evidence of a type of flood event that can occur at this locale with much higher energy than would allow for the aggradation associated with the two buried root mats; at least one such event, probably the third most recent, possessed sufficient energy to erode a substantial portion of the low flat, if not the entire flat completely.

The presence of this natural feature effectively negates the possibility of undisturbed, intact cultural materials being present on the low flat: floodwaters with the force to move stones of that size would also have the force to wash away any finer-grained sediments already present. Washed out with those finer-grained sediments would be any loosely arranged stones of the rock alignment as observed by Fidler and Dawson, as well as any other trace of cultural occupation, including smaller lithic or faunal artifacts. The possibility is quite remote that an intact surface would occur beneath this gravel bar, and attention during excavation remained focused on the laminated sediments of more recent, low-energy flood events stacked above, despite these being less extensively developed than expected.

Not anticipated from the preliminary assessment was the very short time span that these sediments would represent: carbon samples from the two root mats in Trench A were

both modern, at oldest dating to around 1957. Though deeper sediment was observed beneath the lower root mats in both Trench A and Trench B, its structure, from coarse- to finer-grained in Trench B, suggests that it was deposited in a single overbank event. Unfortunately, carbon samples were not collected during excavation that would allow this flood event to be dated; charcoal samples collected during both stages of assessment are demonstrably unreliable as indicators of the landform's age.

There are several reasons to believe that this catastrophic flood event was fairly recent. Stones, but not cairns, were still visible on the surface during Dawson's 1881 visit (Dawson 1886:80), and historic photos show the landform to be intact and well vegetated as late as the 1920s (Alberta Government, SRD 2011a, 2011b). With this record of flood erosion and redoposition on the landform, MacGregor's (1966:76) claim that the site had been washed away in a flood that occurred within the living memory of some more elderly locals cannot be disputed. Although disappointing as a research result, the conclusion is that Old Man's Playing Ground is no more.

There are two caveats to this conclusion: first is that this assessment is based on the correct identification of the landform; however, if the site was indeed located on another landform (cf. Forbis 1960, p. 6, GA M2105-4), that landform does not appear to exist today, and the conclusion remains the same. Second is that the absence of cultural features on the low flat has only been demonstrated to the depth of the exposed gravel bar. While my reasons for doubting that an intact surface could be found beyond this depth have been stated here, further time and resources, presumably involving excavation across the trench to the depth of the water table, would be required to prove this possibility more conclusively.

Chapter VI
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Archaeological Assessment of DlPo-8

Several principal study objectives of this research program could not be addressed through the archaeological assessment of the low terrace at the south end of the Gap. Trenching proved negative for a rock alignment or any other cultural material, resolving the question of whether any trace of Old Man's Playing Ground might remain intact, but other questions such as the age of the site, cultural affiliation, and the circumstances of its eventual abandonment remain unanswered. Indirectly, however, much of that information might be obtained through an investigation of DlPo-8, the archaeological site situated on the higher terrace directly above the flat.

DlPo-8 is an alluring target for further investigation. Following Fidler's (HBCA E.3/2, fo. 17) directions, several researchers have previously suggested that this high, disturbed area might even have been the location of Old Man's Playing Ground (Forbis 1960, GA M2105-4; King 1960, GA M2105-4; Reeves and Dormaar 1972; Yanicki 1999). Though, as I have explained in Chapter IV, this is not likely the case, there is no reason to doubt that the site was situated, at the very least, in extreme proximity to it. The collections of the Glenbow Foundation team in 1960 reveal the site to be a rich one, and my previous analysis of this assemblage, coupled with a statistical comparison to other sites in the surrounding area, suggest it to have been the meeting place for at least two distinct groups, one from either side of the Front Range (Yanicki 1999). It is not a great leap of logic to associate this activity with the playing ground, where gambling and the exchange of goods were the ethnographically attested activity up until Protohistoric times.

Archaeological investigation of DlPo-8 was therefore proposed as part of the permitted research undertaken at the Gap in the summer of 2010, to be conducted in the event that the playing ground itself was found to have been destroyed. Given their mutual proximity and archaeological evidence for their association, this stage of research sought to investigate whether the record at DlPo-8 can provide insight into aspects of the playing ground that are no longer otherwise available.

Methods

Field

Given the very limited records of past work at DlPo-8—no catalogue of the collections from the original 1960 field work appears to have been made, while descriptions of activity at the site are limited to the field notes in the Glenbow Archives (GA M2105-4) and the archaeological site inventory form (ASA 2011)—much about the site is essentially unknown. For instance, Dave Quapp wrote on the site form that in terms of dimensions, DlPo-8 "covers all area between [the] river and the mountain to the hind" (ASA 2011). This statement leaves a great deal of area to be explored, but the grounds for this broad assessment are unclear. If based on surface finds, the Glenbow Foundation team found artifacts on the surface "by the road" (King 1960, p. 16, GA M2105-4), in a campsite that "is completely torn up by machinery" and "in the road cut" (Forbis 1960, pp. 6-7, GA M2105-4), and "from the higher ridge at the road's edge" and "the lower level" (Quapp 1960, p. 14, GA M2105-4)—aside from the cryptic reference to artifacts from a "lower level", previously discussed in Chapter IV, the site's dimensions were based on discovery of artifacts in areas disturbed by road construction.

Test excavation, too was restricted to this disturbed area:

> We selected the area above the flat on a gentle slope beside the road for our test. Set up the machine and screened a few inches of a 5'x 10' unit, recovered numerous chips. We reasoned that all material derives from the same level, even though we excavated in two thin levels. There appears to be nothing below the immediate surface soil [King 1960, p. 17, GA M2105-4].

An additional test pit, labelled Test Pit X in notes accompanying the collection at the University of Calgary's Department of Archaeology, was probably excavated by Dave Quapp in 1968 (Yanicki 1999:15). Although these excavated materials were sorted by arbitrary level, and rudimentary sorting of artifacts and materials can be derived from them, the available data do little to resolve questions of the integrity of the site's stratigraphy, including depth of deposition and changes in site use over time (Yanicki 1999:86-87).

Site dimensions, depth and integrity of deposits, and chronology of occupation were therefore treated as lacunae in the available data for DlPo-8 for the purposes of this study. A testing strategy consisting of the excavation of a 10 m^2 area, coupled with shovel testing and limited surface collection, was devised to address each of these unknowns

Since 1960, the site has been subjected to continued disturbance, including the installation of utility cables (power and phone lines) and random camping, the latter prohibited since the founding of Bob Creek Wildland Provincial Park in 1999 (Alberta Government, Parks 2003). Artifacts can today be found on the surface in the cleared area originally observed by the Glenbow Foundation team, as well as along trails and campsites developed since that time. During this assessment, surface finds were noted and GPS coordinates taken, but artifacts were not collected unless diagnostic of a particular cultural occupation.

In excavating a series of 40-cm-x-40-cm shovel tests, an effort was made to examine

areas not previously investigated. While these, together with past site reconnaissance, serve as an aid in determining more accurate boundaries of the site, a fully stratified sampling of this landform was deemed outside the scope of this research project, and would require more time and resources than were available. Instead, shovel tests were dug at irregular intervals around the landform in areas deemed to have highest potential for yielding intact, deeply buried deposits. Test pits were excavated in approximately 10 cm levels, with sediment from each level being screened and associated artifacts bagged separately. Contents and soil profiles of the shovel tests were assessed in the field to determine areas of deeper deposition and more intense site occupation, which could be expanded into excavation units.

Excavation units were arranged on a 1-m-x-1-m grid, with surface depths for each corner measured from an arbitrary fixed datum. Within each unit, depth measurements were recorded using a string and line level from that unit's southwest corner; depths below datum were adjusted for during subsequent analysis. Excavation proceeded in 10 cm levels, with excavated levels conforming to natural surface contours. Care was taken to identify artifacts *in situ* whenever possible. Three-point provenience (northing, easting, and depth below surface) was recorded for all lithics and historic debris, as well as for faunal remains that could be identified by taxon and/or element; provenience for unidentifiable, fragmentary faunal remains was only recorded for pieces larger than 5 cm. Fire-broken rock (FBR) larger than 5 cm in diameter was mapped, and all FBR from each 10 cm level was collected; provenience details were not recorded for individual pieces. Excavated sediment was passed through a 6.35 mm (1/4") screen, and artifacts found in the screen were bagged by unit and level.

A unique record was made by the excavator for each level. Level records included a

map of artifacts found *in situ*, provenience information for each artifact, and other comments such as sediment characteristics. In addition to proveniencing and collection of individual artifacts, care was taken to identify larger cultural features such as hearths, boiling pits, and FBR concentrations. When such a feature was identified, the full feature was exposed within that unit and photographed, with details of the feature's size and depth noted on the relevant level record. When merited by distinct changes in soil character—for instance, dark or reddened staining suggestive of a hearth—soil samples were collected in sterile bags for further analysis. During excavation, distinct changes in soil colour were noted using a Munsell soil colour chart.

Laboratory

Four classes of artifact were collected that required additional analysis in the lab: lithics, faunal remains, FBR, and historic material. Artifacts were cleaned and then catalogued in spreadsheets generated using Microsoft Excel. Descriptions were written for all formed tools and cores (see Appendix IV), accompanied by line drawings and photographs in accordance with the regulations for archaeological permit holders in Alberta (Alberta Government 2008). As part of the cataloguing process, artifacts were assigned unique catalogue numbers and individually labelled in preparation for final curation with the Royal Alberta Museum.

Cataloguing procedures consisted of the recording of a series of metric and non-metric attributes, which varied according to material type. For lithics, a classificatory scheme used by the University of Alberta Department of Anthropology 2010 field school was used (Rawluk et al. 2011; Soucey et al. 2009:31), drawing from Andrefsky (2005) and Le Blanc (1994). Attributes recorded for every piece included flake, tool, or core type; size; weight; Munsell colour; and material type. For debitage, additional flake attributes recorded included

the amount of cortex and number of dorsal scars present. For tools and cores, additional metric attributes included length, width, and height, while non-metric attributes included a summary of the portion of the tool represented (i.e., complete, distal end, edge fragment, etc.), and a detailed description. Further detail was recorded for projectile points: 17 metric and 20 non-metric attributes ranging from blade length and notch width to body shape and shoulder angle were catalogued, following a classificatory system used by Varsakis (2006:118-126) and modeled after Ramsey (1991) and Hjermstad (1996).

Faunal remains were identified with the aid of the comparative skeletal collection at the Department of Anthropology, University of Alberta. Specimens were identified according to taxon, element, section, and side insofar as possible, and quantified following Head, Unfreed, and Gorham (2003). Weight of individual specimens were recorded, as were taphonomic alterations such as burning, calcination, and cut marks. Comminuted pieces were sorted by size class, with counts and weights for each size class recorded for each level and provenience unit.

Following Dau (1988:8-9) and McParland (1977), the term fire-broken rock (a term used interchangeably with fire-cracked rock) refers to stones which show the effect of being heated and then rapidly cooled. Attributes recorded for FBR included weight and count of size-classed specimens, sorted by material type and fracture type. This classificatory system follows McParland's (1977:32) experimental observations that rocks fracture differently depending on whether they are exposed to heat alone, producing cortex spalls and planar fractures, or heated and then immersed in water, which produces angular, crenellated fractures. Dau (1988:9) meanwhile noted that stones often were subjected to repeated use, and were

discarded only after fracturing into pieces too small to be used.

Finally, given that the Gap has continued to be visited and used for a wide variety of purposes including forestry, oil and gas, road construction, ranching, and recreation for more than a century, it is to be expected that material would be recovered dating from the Historic period. Potentially useful as an indicator of surface disturbance should they be found intermingled with prehistoric materials, or of the integrity of buried deposits should they be stratigraphically separate, these items were counted, weighed, and described.

Radiocarbon sample selection and pretreatment followed the same procedures as described in Chapter IV, with an emphasis on recovering charcoal from man-made features. In addition, AMS ^{14}C dates could be obtained from bone collagen. A faunal sample selected for dating was brush-cleaned, and an approximately 5 g sample was cut from the piece using a Dremel rotary tool. These samples were submitted directly to the W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory at the University of California, Irvine, for in-house pretreatment and collagen extraction.

Site Description

The high terrace that DlPo-8 is situated on stands 8 m above the lower flat and occupies most of the south end of the Gap. The terrace can be followed from above the north end of the low flat, where it is no wider than the gravel road that cuts across it, with the scree slope of the Livingstone Range forming its eastern edge. It widens out adjacent to, and south of, the lower terrace, the road following the terrace edge along the lower terrace's length. East of the road, the flat is covered by a mix of poplar and spruce forest up the to base of the Livingstone Range, while to the west, once the low flat is passed, stands the clearing remarked upon by the

1960 Glenbow Foundation survey team (GA M2105-4). The clearing, which extends about 50 m south from the south end of the low flat, is covered with limestone gravel. Several modern hearth features in this cleared area that consisted of rings of cobbles, observed in earlier reconnaissance of the site (Yanicki 1999:57-58), were not present at the time of the 2010 field work; lithic flakes and other artifacts can still be found in this disturbed area.

The clearing does not represent the only disturbed area on the high terrace. The road continues another 200 m south, then bends westward through the final leg of the Gap. Adjacent to this area, on the west side of the road, a 20-m-wide span has been cleared for a power line. On the east, a phone cable is buried within meters of the road (see discussion in Chapter IV). The remainder of the landform, though, is undisturbed, with stands of poplar, spruce and lodgepole pine visible in historic photographs of the area (Figures 4.3. 4.4, 4.7, 4.13, 4.14) still standing today, extending south from the cleared area on the west side of the road, and continuing southward up increasingly steep slopes to Thunder Mountain, the dominant landform to the south. The forest itself is fire successional, having been burned repeatedly in the late 1800s and early 1900s (Reeves and Dormaar 1972:328; a photo in Burton [1995:26] shows this landform shortly after a fire).

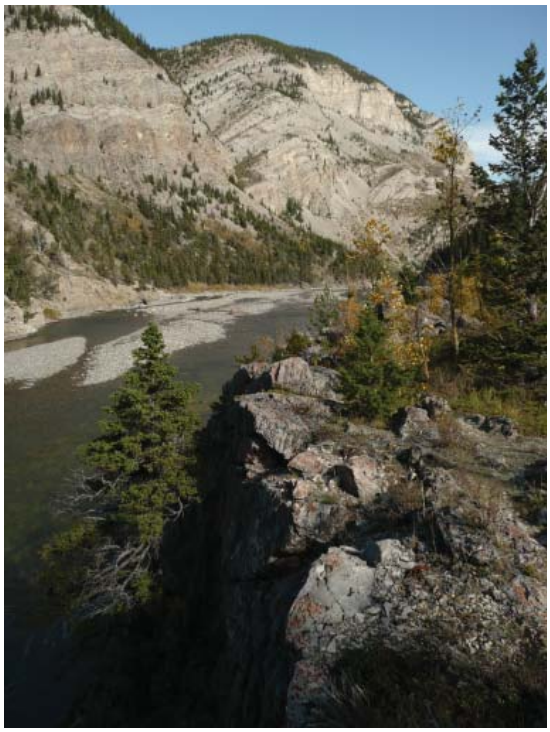

Figure 6.1: Bedrock outcrops at the west edge of the high terrace

The westernmost edge of the terrace (Figure 6.1) is dominated by large outcrops of

limestone bedrock which form steep cliffs overlooking the bend in the Oldman River at the south end of the Gap. Deep pools beneath these rocks make appealing habitat for bull trout (*Salvelinus confluentus*), cutthroat trout (*Oncorhynchus clarki lewisi*), and mountain whitefish (*Prosopium williamsoni*), all native to the Oldman River (Paul and Post 2001; Rodtka 2009), as well as rainbow trout (*Oncorhynchus mykiss)*, an introduced species which has hybridized with the native cutthroats (Mayhood 2000). Forbis (1966:2) speculated that prehistorically, fish may have been the most significant food resource to residents of the Gap.

The bedrock outcrops occur sporadically to a distance of about 20 m back of the terrace edge; beyond this, the terrace is generally level from west to east, with an increasing gradient as one proceeds southward. The only exception to this gradient is a shallow gully that cuts through the cleared area from south to north—possibly an ephemeral drainage. Bedrock is not evident in this area; the landform as a whole appears to be the eastern extent of an outwash terrace identified by Allee (1972) as occupying the south end of the Gap, and which formed in the early Wisconsin, the most recent glacial episode (Reeves and Dormaar 1972:328).

Because much of the high terrace immediately adjacent to the river features large bedrock protrusions and little evidence of soil development, when conducting subsurface testing, that area was avoided. Similarly, areas with pronounced slope, such as the southern part of the terrace, and surfaces that were visibly disturbed, such as the main clearing, vehicle trails, modern campsites, and treeless area adjacent to the road, were not tested.

Shovel testing, surface finds, and excavation block selection

Subsurface testing and excavation at DlPo-8 took place in two stages, from August 9-15 and from September 9-13, 2010. A total of 25 shovel tests were excavated in the forested

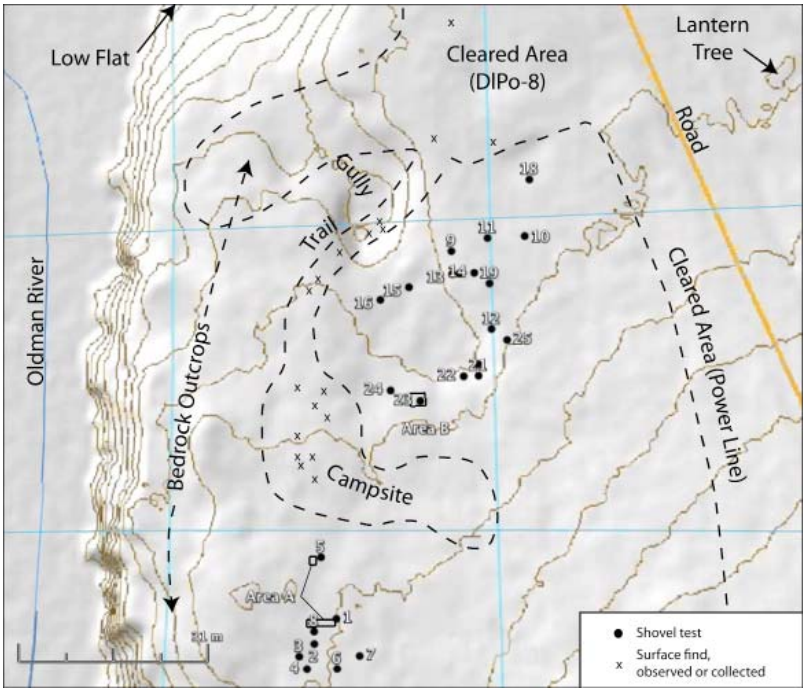

Figure 6.2: Location of shovel tests, surface finds, and excavation blocks in 2010 field work at DlPo-8

area south of the clearing examined in the 1960 study; all but two were positive for cultural material. Figure 6.2 shows the locations of these shovel tests in relation to the various topographic features just described; their contents, together with the depths at which sterile parent sediment were encountered are presented in Table 6.1.

Sediment deposition on this landform proved to be quite variable. Nearer the cleared area at the north end of the high terrace, shovel tests rarely encountered silty surface sediments in excess of 30 cm before roughly rounded limestone cobbles, probably proglacial deposits associated with formation of the outwash terrace, were encountered. In shovel test (ST) 9 through ST 25, artifacts were seldom found deeper than 15 cm b.s., in keeping with King's observation during testing of the cleared area itself that cultural materials were limited to the top few inches of sediment (King 1960, p. 17, GA M2105-4).

This pattern of shallow sediment deposition can be seen throughout the cleared area,

Table 6.1: Shovel test results, DlPo-8

ST #	Lithics	Faunal	FBR (count/weight)	Depth
1	49 flakes Biface fragment Edgeworn flake Bipolar core	23 bone fragments 17 tooth fragments (*Bison bison*)	8 pcs./1046.4 g	65 cm
2	33 flakes Edgeworn flake	-	6 pcs./143.0 g	60 cm
3	11 flakes 2 edgeworn flakes	4 bone fragments Rib (*Canis l. familiaris*)	11 pcs./483.5 g	60 cm
4	Net sinker	Tooth (*Canis l. familiaris*)	2 pcs./68.7 g	40 cm
5	Flake Biface fragment	-	2 pcs./17.3 g	40 cm
6	2 flakes	31 bone fragments	7 pcs./641.1 g	40 cm
7	4 flakes Bimarginal flake tool Core fragment	Bone fragment	2 pcs./54.7 g	60 cm
8	2 flakes	3 tooth fragments Scaphoid (*Ovis canadensis*)	4 pcs./57.4 g	50 cm
9	Flake	-	-	35 cm
10	-	-	6 pcs./225.5 g	30 cm
11	-	-	8 pcs./619.2 g	30 cm
12	Flake	-	2 pcs./88.9 g	20 cm
13	-	-	-	20 cm
14	8 flakes Edgeworn flake	3 bone fragments	3 pcs./292.6 g	40 cm
15	-	6 bone fragments Mandible (*Bison bison*)	3 pcs./83.0 g	40 cm
16	-	Bone fragment	1 pc./22.2 g	35 cm
17	Flake	-	-	20 cm
18	Flake	-	2 pcs./268.7 g	40 cm
19	-	-	-	25 cm
20	9 flakes	-	6 pcs./907.0 g	25 cm
21	2 flakes	-	3 pcs./570.9 g	30 cm
22	3 flakes	-	1 pc./18.9 g	25 cm
23	28 flakes 2 microblades 3 edgeworn flakes	-	-	30 cm
24	8 flakes	-	3 pcs./134.9 g	45 cm
25	2 flakes	-	3 pcs./382.4 g	25 cm

and also along the vehicle trail that runs through the trees south of the cleared area. For most of the trail's length, erosion of sediment from the ruts has exposed shallowly buried cobbles; surface finds, mostly flakes, but also a corner-notched projectile point (DlPo-8:2545; descriptions of this and all other tools are provided below), were found in this area. Where this trail opens out into a random campsite, shallowly buried cobbles are not evident, deposition of silty sand appears more extensive, and large amounts of prehistoric debitage are visible on the badly disturbed surface mixed with historic debris ranging from ceramic fragments and bottle glass to bullets, bottle caps, and beer pull tabs.

South of this campsite, STs 1, 2, 3, and 8 reached depths of 60 cm without encountering obvious glacial outwash gravels. Large numbers of artifacts were found interspersed throughout, consisting of debitage, lithic tools, fire-broken rock, and faunal remains including bison (*Bison bison*), bighorn sheep (*Ovis canadensis*), and canids—judging from comparative collections, probably domestic dog (*Canis lupus familiaris*). Deposits of this depth were evident only in a narrow area; as slope becomes more pronounced to the south, shallowly buried gravels were again encountered (STs 4, 6 and 7).

Deep sediments and high concentrations of cultural material observed through this subsurface testing program were used to place two blocks of excavation units. Area A (1 m x 5 m) was placed between ST 1 and ST 8. A number of cobbles that had the potential to represent a buried stone feature in ST 5 led to a single outlying 1-m-x-1-m unit being placed beside it. Findings from this unit are included in the discussion of Area A. Although sediment was less well developed to the north, a dense concentration of lithics was found in ST 23, and a second excavation block, Area B (2 m x 2 m), was centred on this test pit. Although not identified until subsequent lab analysis, debitage from this test pit included a fragment that refits to

form a complete microblade (DlPo-8:3058); another piece of the same material, a mottled tan and grey pebble chert, represents either a primary ridge flake or core tablet (DlPo-8:3062).

Site size

Originally identified through artifacts found in the cleared area at the north end of the terrace and alongside the road, Forbis (1966:25) anticipated that a significant portion of DlPo-8 remained undisturbed. However, no verification appears to have gone into Quapp's claim on the site form (ASA 2011) that the site covers the entire terrace, from the river's edge all the way to the feet of the Livingstone Range. The claim, however, does not appear to fall far from the mark. Shovel testing yielded positive results from undisturbed locations as much as 100 m south of the cleared area, with cultural material found continuously either in shovel tests or as surface finds in disturbed locations in all the area in between. Lateral subsurface transects were not attempted during this study, but the 25 shovel tests do demonstrate the presence of cultural material between the river and the road.

Treating the road as the eastern boundary of the area in which artifacts have been observed, the north and west ends of the cleared area as the northwest boundary, and the southernmost shovel tests 4 and 6 as a southwest boundary, DlPo-8 covers an area of at least 150 m from north to south and 100 m from east to west. It must be noted that this provisional delineation is not based on an observed absence of cultural material through negative shovel tests in any direction. Further verification of these site boundaries through a program of systematic subsurface testing is recommended.

What appears today as a continuous spread of cultural material on the high terrace at DlPo-8 should not be interpreted as the debris left by a single occupation at the site. Rather,

this material must be seen as a palimpsest of multiple occupations dispersed over an indeterminate period of time; given the broad amount of level space available on this landform, lateral spread of individual occupations and activity areas could overlap stratigraphically in unpredictable ways. The issue of interpreting cultural deposits at DlPo-8 is further clouded by the knowledge that multiple cultural groups from east and west of the Rockies frequented the Oldman Gap, at least in Protohistoric times, and this pattern of use could extend deep into prehistory (Yanicki 1999). With the expectation of differences in the material culture of plateau-adapted and plains-adapted peoples in terms of toolkit, lithic and faunal resource utilization, settlement strategies, and other archaeologically visible technological adaptations, even roughly contemporary occupations at the site could appear very different. For these reasons, though potentially very dissimilar in terms of artifactual content, the excavation areas discussed in this report are interpreted as portions of the same site.

Area A Overview

The first series of excavation units opened at DlPo-8 in August 2010 were placed south of the modern random campsite. An arbitrary baseline was placed on a north-south axis extending south from ST 5, and this northernmost point was arbitrarily designated 100N 100E. A single 1-m-x-1-m unit was opened at this location, and a second unit was opened seven meters south, at 93N 100E. Based on the results of these preliminary units, a 1-m-x-5-m trench was excavated east from 93N 100E, adding units 93N 101E, 93N 102E, 93N 103E, and 93N 104E. The combined 6 m^2 of excavations south of the random campsite are designated Area A.

A datum stake was placed adjacent to 93N 100E with a string and line level affixed 50

cm above the surface of that unit's southwest corner. Surface depths for the corners of each unit in Area A were recorded relative to this arbitrary datum; depths for individual artifacts were recorded relative to that unit's SW corner, with the exception of unit 93N 103E, in which this position was inconvenient owing to a decomposed tree fall covering most of the unit, and so measurements were taken from the significantly higher NW corner. References to depths below surface (b.s.) are therefore made relative to the corner measured from in that unit, while depths below datum (b.d.) reference the fixed datum point for the area.

Stratigraphy & radiocarbon dates

Basal sediment in Area A consists of medium brown silty clay interspersed with large, rounded, limestone cobbles and devoid of cultural material. This C horizon (Ch) parent sediment, first encountered between 40 and 50 cm b.s., likely represents a localized substratum of fluvially transported material deposited during the formation of the outwash terrace; elsewhere on the terrace, gravels and cobbles appear more prevalent in the substratum. Discontinuously draped over the C horizon substratum are thin patches of very fine-grained yellow loess, indicative of aeolian deposition in an immediately periglacial environment. B horizon sediments consist of a 10- to 25-cm-thick band of chocolatey brown sandy silt, probably aeolian in origin, and bearing cultural materials throughout. Cultural deposits continue through the Ah horizon, a 20- to 25-cm-thick layer of brown-black, organic rich silt, to within a few centimeters of the surface. Included in this upper layer is a thin leaf litter, fungus and humus (LFH) horizon at the surface, usually 1-2 cm thick, but up to 10 cm thick in units 93N 102E and 93N 103E, in which an overgrown tree fall overlaid the more mineral-rich Ah. Bottle glass fragments were found within the LFH, but no prehistoric material was observed in this upper-

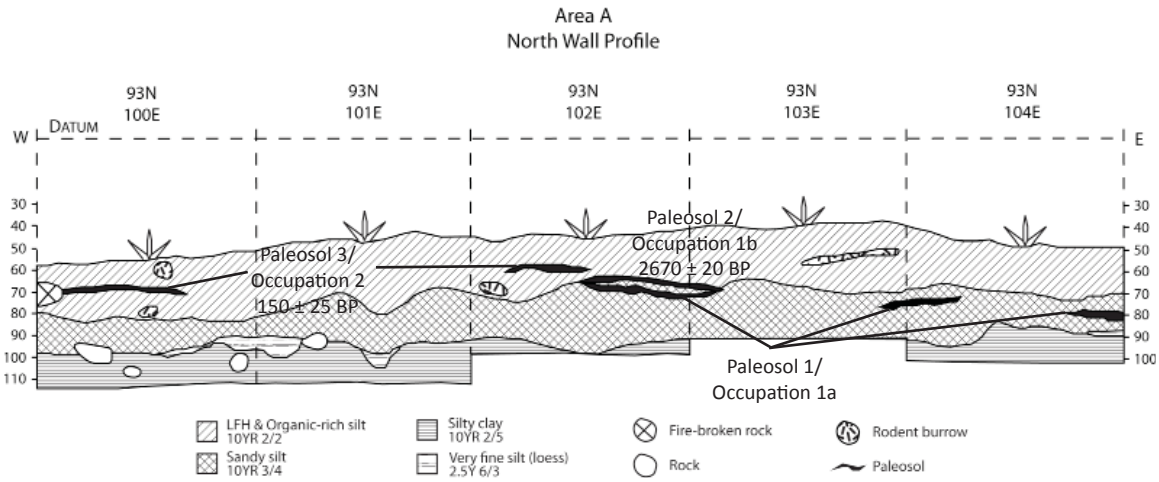

Figure 6.3: Natural and cultural stratigraphy, north wall, Area A main trench

most soil. Evidence for bioturbation exists in the Ah, B, and C horizons, consisting of rodent burrows and tree roots, while forest fires and tree throws have likely also been taphonomic factors; however, the transitions between each horizon remain generally distinct in the wall profile (Figure 6.3). Mazama ash, observed upstream at DlPo-20 (Reeves and Dormaar 1972), was not seen in the Area A excavations. The same pattern of deposition was observed in the outlying unit 100N 100E, except that the substratum was rockier than in the main trench.

Discontinuous paleosols were observed in several sections of the main trench's north wall profile. Within unit 93N 102E, these were stacked vertically, identifiable as three discrete phases of soil development. The lowest, Paleosol 1, occurs as three lenses of black sediment (10YR 2/2) between 22 and 30 cm b.s., situated completely within the B horizon. In unit 93N 104E, in which this paleosol is best defined, it is associated with a concentration of burnt bone fragments (72 pieces) and FBR (21 pieces), but only scant lithic debitage (eight flakes). This is also probably the lowest of the three paleosols visible in the 93N 102E wall profile, again entirely within the B horizon at a depth of 23 cm b.s.; a second paleosol, Paleosol 2, is situated at the transition between the Ah and B horizons only one centimeter above, at 22 cm b.s.

The difference between these two palesols may be significant. A large side-notched projectile point found in 93N 102E at a depth of 23 cm b.s. best matches descriptions of the Salmon River side-notched style, typical of the Maple Leaf complex (Peck 2011:151; see discussion of DlPo-8:2002 below). Bone collagen from a specimen found *in situ* only one centimeter away from this projectile point, but also one centimeter higher (22 cm b.s.), yielded an AMS ^{14}C date of 2670 ± 20 BP (UCIAMS 89683), or a calibrated date of 830 to 806 B.C. at the 1σ confidence interval (Bronk Ramsey 2009; Figure 6.4). This date is several milennia too young for Salmon River, ca. 6300-5200 BP (Peck 2011:151), but also centuries older than later side-notched styles such as Besant, ca. 2100-1500 BP (Peck 2011). The discrepancy in dates may be attributable to bioturbation, with either the bone or the projectile point being moved out of correct stratigraphic position. The discrepancy could also be the result of the projectile point's association with Paleosol 1 and the dated bone specimen with Paleosol 2. No other diagnostics or radiocarbon dates were recovered from these depths.

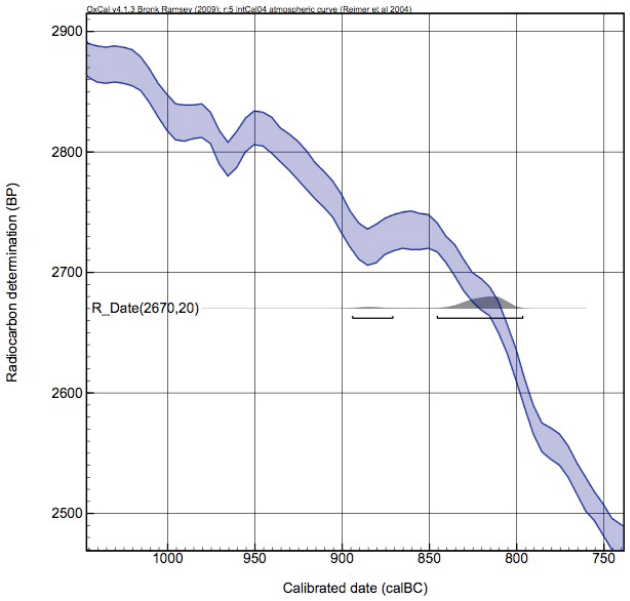

Figure 6.4: OxCal calibration of sample UCIAMS 89683 (Bronk Ramsey 2009; Reimer et al. 2004)

A final paleosol, Paleosol 3, is visible as a discontinuous black (10YR 2/2) band entirely within the Ah in units 93N 100E and 93N 102E, approximately 10-12 cm b.s. Associated with this in unit 93N 100E was a dark soil stain and concentration of bone fragments

(48 pieces), many of them burnt. Charcoal fragments from this soil stain yielded an AMS ^{14}C date of 150 ± 25 BP (UCIAMS 89771). While at a glance this date might seem to coincide with Peter Fidler's 1792 visit, calibration using OxCal shows that this is not likely to be the case: at the 1σ confidence interval, this sample has multiple intercepts with the IntCal04 atmospheric curve ranging from 1674-1694 AD (12.0%) and 1798-1812 AD (8.7%) to 1918-1942 AD (15.0%). The highest probability is in the range of 1728-1778 AD (32.5%) (Bronk Ramsey 2009; Reimer et al. 2004; Figure 6.5), within the Protohistoric period but decades before the documented first European contact with the Ktunaxa at this locale.

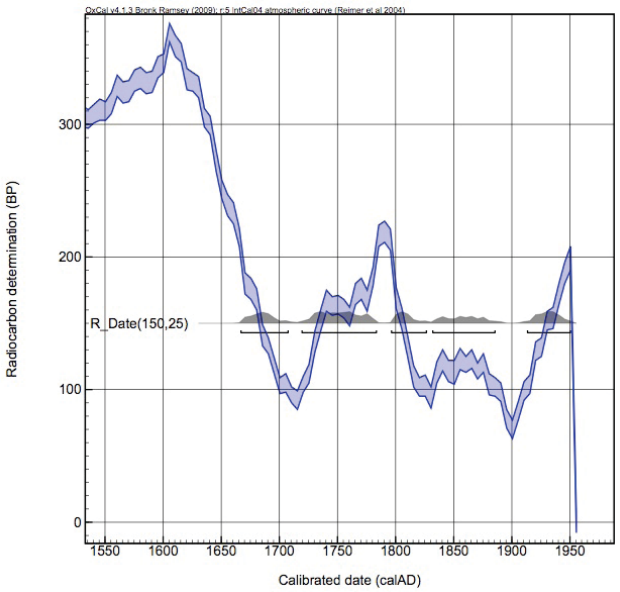

Figure 6.5: OxCal calibration of sample UCIAMS 89771 showing multiple intercepts with calibration curve (Bronk Ramsey 2009; Reimer et al. 2004)

A single diagnostic projectile point was recovered from these uppermost sediments in unit 93N 103E, 3 cm b.s. This is a square-stemmed point made from yellow Montana chert; entirely atypical of point variants of the Northern Plains, it corresponds quite closely with descriptions of the Wallula Rectangular Stemmed style (see discussion of DlPo-8:2000 below), common to various locales in the Interior Plateau between 2,000 and 150 BP (Copp 2008:254-255; Lohse 1995:10). A second potentially diagnostic artifact was found at a depth of 10 cm b.s. in unit 93N 102E. The square-stemmed base of a large bifacial tool, it is similar in size and

form to the bases of Cody complex artifacts such as Alberta and Scottsbluff points, ca. 9600-8600 BP (Peck 2011). Very badly out of its expected stratigraphic position if this were the case, it may be that this artifact instead represents a portion of a non-projectile hafted biface in the same style as the tiny Wallula Rectangular Stemmed point found at a comparable depth in the adjacent unit.

Based on the presence of three paleosols, coupled with diagnostic projectile points and radiometric dates, at least three prehistoric cultural occupations, as well as a Historic period occupation, occurred at Area A. The earliest, Occupation 1a, is associated with Paleosol 1, 23 cm b.s. and lower. Based on the presence of a Salmon River point, it is tentatively affiliated with the Maple Leaf complex, ca. 6,300-5,200 BP, and the early Middle Prehistoric period (Peck 2011:151). Paleosol 2, occuring at the transition between the Ah and B horizons around 20-22 b.s., has not been associated with any cultural diagnostics, but a radiocarbon date of 2670 ± 20 BP indicates later Middle Prehistoric occupation; this layer is tentatively identified as Occupation 1b. The uppermost prehistoric occupation, associated with Paleosol 3 and the top half of the Ah, 12 cm b.s. and higher, is designated Occupation 2. This occupation is Late Prehistoric in origin, featuring a Wallula Rectangular Stemmed point; given a date of 150 ± 25 BP, a Protohistoric designation may also be appropriate. The Historic period Occupation 3 is represented by materials found in the uppermost LFH; no dates or diagnostic materials were obtained for this portion of the assemblage.

The stratigraphic profile of this area is undoubtedly more complex than can be interpreted from the limited data available. Only 12 cm of vertical deposition separates Occupations 1b and 2, dated more that 2,500 radiocarbon years apart. Only one centimeter of

deposition separates Occupations 1a and 1b, also potentially thousands of years apart in age. Sediment deflation in the windy corridor of the Gap, for instance during periods of drought or after forest and grassfires, has likely been as much a factor as deposition in shaping the observed stratigraphy. Further investigation is required to better understand this particular issue. However, the dates and diagnostics do provide the desired bracketing ages for site occupation set out as a goal for this stage of research.

As excavation proceeded in 10 cm increments, analysis of screened material and floor plans is limited to these broad terms of observation. Material from Occupations 1a and 1b was collected together in the 20-30 cm b.s. excavation level. Similarly, material from Occupations 1b and 2 was collected together in the 10-20 cm b.s. excavation level. In analyzing screen finds from Area A, data are presented by level, and the likelihood of mixed results in the above levels is noted. For floor plans, excavation depths from 20-50 cm b.s. are grouped together and represent Occupations 1a and 1b. The 0-20 cm b.s. excavation levels are likewise grouped together and represent Occupations 2 and 3, again with the potential for some material from Occupation 1b to be present noted. No cultural material was recovered from the 50-60 cm b.s. excavation level, and so no floor plans for this depth are given.

Features

Five cultural features representing clusters of individual artifacts and/or pronounced soil discolourations were noted during excavation of Area A. Their distribution in relation to overall floor plans for the area are presented in Figures 6.6 and 6.7.

Feature 1

A dark soil stain (10YR 2/2) within the Ah horizon of unit 93N 100E containing

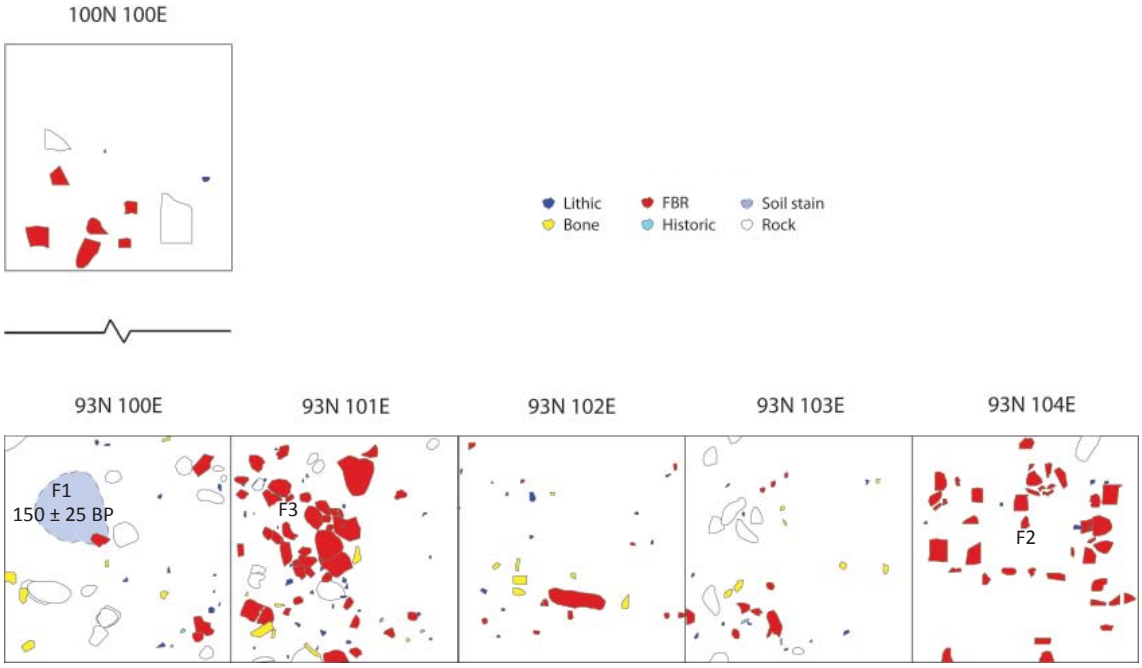

Figure 6.6: DlPo-8 Area A floor plan, 0-20 cm b.s. (Occupations 2 & 3); F# denotes feature discussed in text

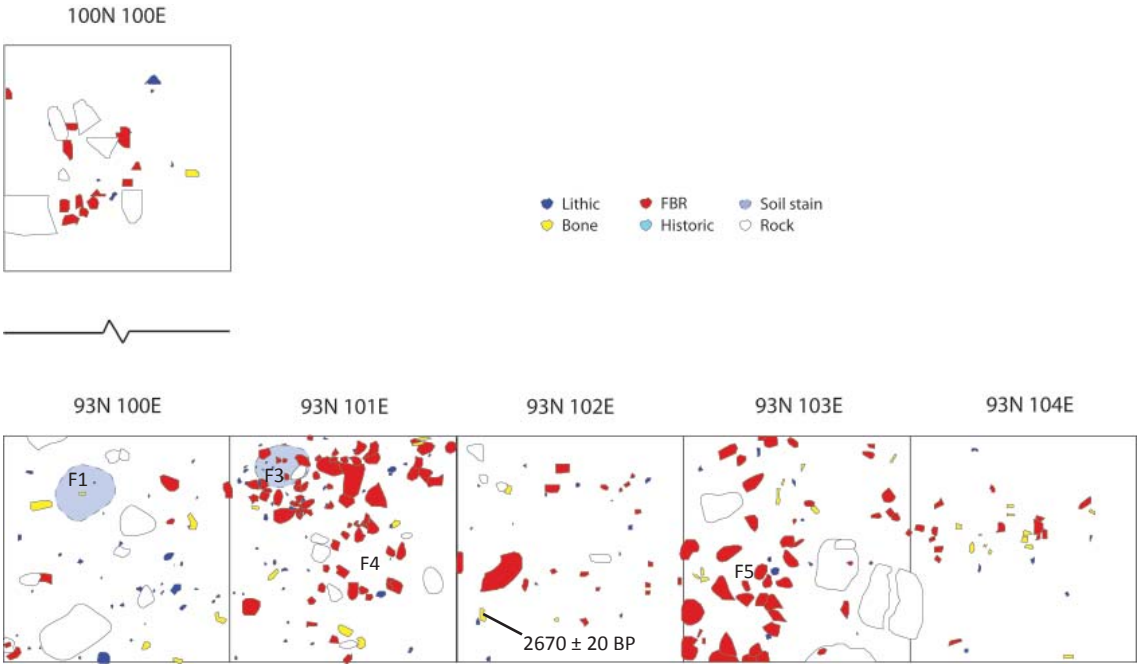

Figure 6.7: DlPo-8 Area A floor plan, 20-50 cm b.s. (Occupations 1a & 1b); F# denotes feature discussed in text

fragments of burnt bone and charcoal, possibly representing the remains of a hearth. The discolouration was first noted at a depth of 12 cm b.s. and continued to a depth of 22 cm. Charcoal fragments from the upper portion of the feature yielded an AMS ^{14}C date of 150 ± 25 BP (UCIAMS 89771), discussed above. The feature is assigned to Occupation 2.

Feature 2

This feature, a loose scatter of FBR within the Ah of unit 93N 104E, probably represents the discard heap of a boiling or roasting pit. In the case of a boiling pit, George Catlin described the process as follows:

> … when they kill meat, a hole is dug in the ground about the size of a common pit, and a piece of raw hide of the animal, as taken from the back, is put over the hole, and then pressed down with the hands close around the sides and filled with water. The meat to be boiled is then put in this hole or pot of water; and in a fire, which is built near by, several large stones are heated to a red heat, which are successively dipped and held in the water until the meat is boiled… [Catlin 1841:154].

Heated rocks exposed to the water would break in a characteristic crenellated pattern (McParland 1977:32), as noted for most of the stones in this feature. In addition to being used to cook meat, pounded fragments of bone were boiled in pits to render grease for pemmican (Dau 1988:9; Paget 1909:78).

Russell Brulotte also noted the probability of pits having been used locally to roast edible roots. Brulotte's pedestrian survey of the Gap area identified several spots at which such roots were abundant. Glacier lilies (*Erythronium grandiflorum*) grow along Vicary Creek to the southwest, and large fields of blue camas (*Camassia quamash*), perhaps the northernmost range of this plant, are found along Bob Creek, just east of the Gap (Brulotte 1983:48). Root roasting can produce considerable quantities of FBR which may be difficult to distinguish from

those produced by boiling (Peacock 2010).

FBR associated with Feature 2 was first observed at depths of 8 cm b.s. and continued to 15 cm b.s.; no pit or soil stains were observed. The feature is assigned to Occupation 2.

Feature 3

As a soil stain and dense cluster of FBR within the northwest quadrant of unit 93N 101E, the shape of the feature is consistent with a boiling or roasting pit (Figure 6.8). FBR associated with the feature was first encountered at a depth of 15 cm b.s. and continued to a depth of 30 cm b.s. At 20 cm b.s., a soil stain (10YR 2/2) containing a concentration of burnt bone was noted in the midst of the feature. Lithics, mostly black pebble chert, were scattered throughout. A soil sample from the soil stain failed to yield any charcoal fragments; the burnt bone was not submitted for AMS dating, although future analysis is recommended. The feature occured at the transition between the Ah and B horizons and is tentatively assigned to Occupation 1b.

Figure 6.8: Feature 3 in unit 93N 101E, 20 cm b.s. (left) and Features 3 and 4 in the same unit, 30 cm b.s. (right). The two do not appear contiguous; note the increasing compactness of Feature 3 at the lower depth, suggesting the FBR was deposited in a basin-shaped pit.

Feature 4

This feature is a sparse scatter of FBR mostly in the southeast quadrant of unit 93N 101E, arranged in a small ring. Though situated at the same depth as the bottom of Feature 3, the two did not appear contiguous (Figure 6.8). Stones associated with this lower scatter were observed between 28 and 31 cm b.s. No soil stains or bone fragments were observed; the feature is tentatively assigned to Occupation 1a.

Feature 5

This feature is a dense cluster of FBR in the southwest quadrant of unit 93N 103E, 25 cm b.s. A soil stain and concentration of bone fragments were observed immediately below the FBR; the feature may represent the remains of a hearth or boiling pit. Bone fragments have not been submitted for AMS dating, although this is recommended. Based on depth, the feature is tentatively assigned to Occupation 1a.

Area B Overview

The second block of excavation units at DlPo-8, excavated in September 2010, was placed in a treeless area adjacent to the random campsite, about 50 m northeast of Area A and 60 m south of the cleared area at the north end of the high terrace. A 2-m-x-2-m grid was set up over ST 23; the southwest unit was designated 200N 200E, with the other units being 200N 201E, 201N 200E, and 201N 201E. This 4 m^2 excavation block was designated Area B. As with Area A, an arbitrary datum was staked, and surface depths for the corners of each unit were recorded below datum. Within each unit, artifact depths were recorded below the surface of that unit's southwest corner.

Stratigraphy & radiocarbon dates

Two classes of basal C horizon sediment were observed in Area B. In unit 201N 201E, a thick layer of tan loess (2.5Y 5/4) extends from a depth of 25-30 cm b.s. to the bottom of excavations in this unit (40 cm b.s.); this sediment is culturally sterile. Draped over the loess is a sterile layer of rounded limestone gravels, interpreted as outwash sediments. These gravels, coupled with the loess, are indicative of deposition on the periphery of a glacial environment. B horizon sediment consists of sandy silt, probably aeolian in origin, and graded in colour from medium brown (10YR 4/3) at depths of about 30 cm b.s. to reddish brown (7.5YR 4/4) between 10 and 20 cm b.s. No sharp break in colour or texture was noted, and the reddish discolouration may be a result of chemical weathering of iron oxide in the soil. Cultural material is abundant in the B horizon, but largely confined to the 10-20 cm level. Many lithics from this depth, especially black pebble chert, exhibit patches of reddish iron oxide patination. Cultural material was found between 20 and 30 cm b.s. in the northwestern unit 201N 200E, but the reddish-stained band of the upper B horizon also extended to this depth in this direction, sug-

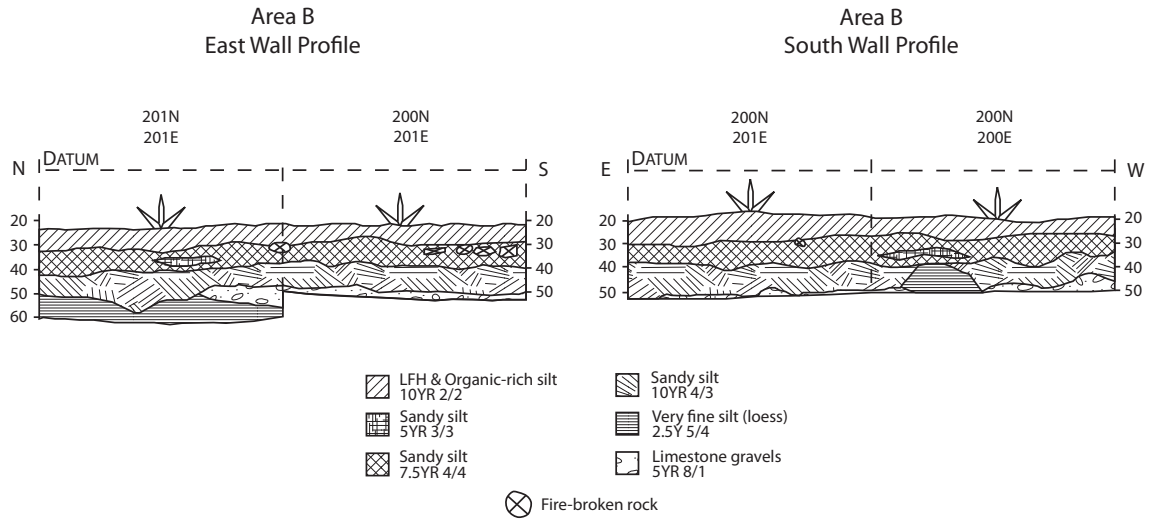

Figure 6.9: Natural and cultural stratigraphy, east and south walls, Area B

Figure 6.10: East wall, 201N 201E; note reddish staining of upper half of B horizon and dark lens of Paleosol 1 at 14-18 cm b.s.

gesting that the former ground surface was sloped. An 8- to 12-centimeter-thick Ah horizon of organic-rich brown-black silt (10YR 2/2) forms the uppermost sediment, with a thin (1-3 cm) LFH included in this at the very surface. Prehistoric cultural materials including lithics and FBR were found continuously from the uppermost mineral soil through the remainder of the Ah horizon. Historic period materials were confined to the LFH.

Two lenses of reddish-black silty sand (5R 3/3) within the upper B horizon, one visible in the east wall profile of 201N 201E (Figure 6.10) and the other in the other in the south wall profile of 200N 200E, both at about 14-18 cm b.s., probably represent the same ephemeral Paleosol 1. Small fragments of charcoal were found scattered throughout the 10-20 cm b.s. level in 201N 201E; these were not associated with any distinguishable soil discolouration or feature during excavation and were not collected. A cluster of burnt bone from the SE

quadrant of this unit at a depth of 14 cm b.s. may also be associated, and may provide a means of dating the paleosol; however, this has not yet been attempted. Significantly, a dense concentration of debitage containing evidence of microblade production (see discussion of Feature 8 below) occurred at a depth of 14-20 cm b.s. in unit 200N 201E, comparable in depth to both the paleosol and the burnt bone concentration. No dates for microblade sites in southern Alberta are yet known; obtaining dates from the limited sample of bone in Area B could provide much-needed insight into this very uncommon lithic technology.

Clusters of FBR are also evident in the wall profiles, particularly in the east wall of 200N 201E, at a depth of 10 cm b.s. and the Ah/B horizon transition. These correspond with relatively large quantities of FBR in this unit and 201N 201E in the 0-10 cm b.s. level, continuing into the 10-20 cm b.s. level in 200N 201E. In two cases, FBR in the latter unit was stratigraphically superimposed above the aforementioned lithic scatter and appears to have been deposited more recently. No soil discolourations were noted during excavation, but a bone concentration was found in unit 201N 201E at 10.5 cm b.s.; radiocarbon dates have not been obtained for this material, but they stand out as excellent candidates for further analysis. In addition, the tip of an Avonlea style projectile point was found at 10 cm b.s. in the same unit and is also probably associated.

Two prehistoric occupations are tentatively identified for the Area B assemblage. The earliest occupation, associated with Paleosol 1 and dense concentrations of lithic material between 14 cm and 20 cm b.s., is presently undated. However, microblades and microblade manufacturing debris may serve as a chronological marker (see discussion of microblades below); in Alberta, the High River Microblade Tradition is associated with Scottsbluff type

points and an approximate age of 9000 to 8000 BP (Wilson and Burns 1999; Wilson et al., in press). This estimate could be early; in the Interior Plateau, the Plateau Microblade Tradition is more commonly associated with the Middle Prehistoric (Pokotylo and Mitchell 1998:95). Unfortunately, assignation of these materials to a particular tradition is problematic without cores. Lack of dates and diagnostics mean it also cannot reliably be associated with either of the early occupations observed in Area A; until further information is available, it is provisionally designated as Occupation 1c.

Based on the presence of a diagnostic Avonlea projectile point, associated lithics and concentrations of FBR around 10 cm b.s. may date to between 1350 and 1100 BP (Peck 2011). Falling within the Late Prehistoric period, this material could overlap material from Area A such as the Wallula Square Stemmed point in age. Definite association is unconfirmed, and the late radiocarbon date from Paleosol 3 in Area A would suggest that the Area B material is older—no Avonlea points from ca. 150 B.P. are known. However, until further data is available, in particular better stratigraphic evidence for multiple Late Prehistoric occupations and radiocarbon dates, this material is assigned to Occupation 2.

Evidence of a third, Historic period occupation, is limited to the LFH. Again, no dates or diagnostics for this portion of the assemblage were collected. This material generally corresponds in age with Occupation 3 in Area A.

As with Area A, a significant timespan is represented by only limited vertical deposition, and the actual occupation history of the site was doubtless more complex than this rudimentary assessment would suggest. Excavation of Area B in 10 cm arbitrary levels also limits the interpretive resolution of floor plans and other data such as screened material. In this

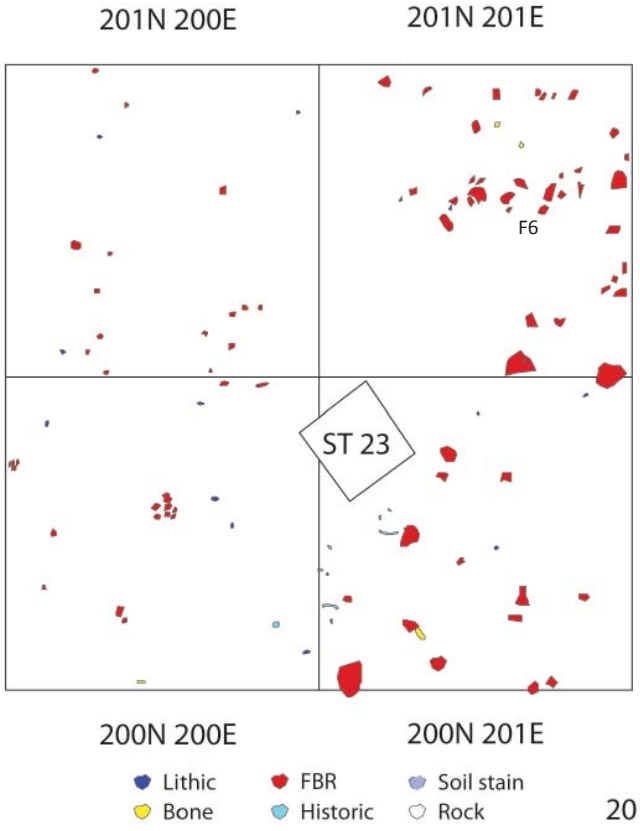

Figure 6.11: DlPo-8 Area B floor plan, 0-10 cm b.s. (Occupations 2 & 3); F# denotes feature discussed in text

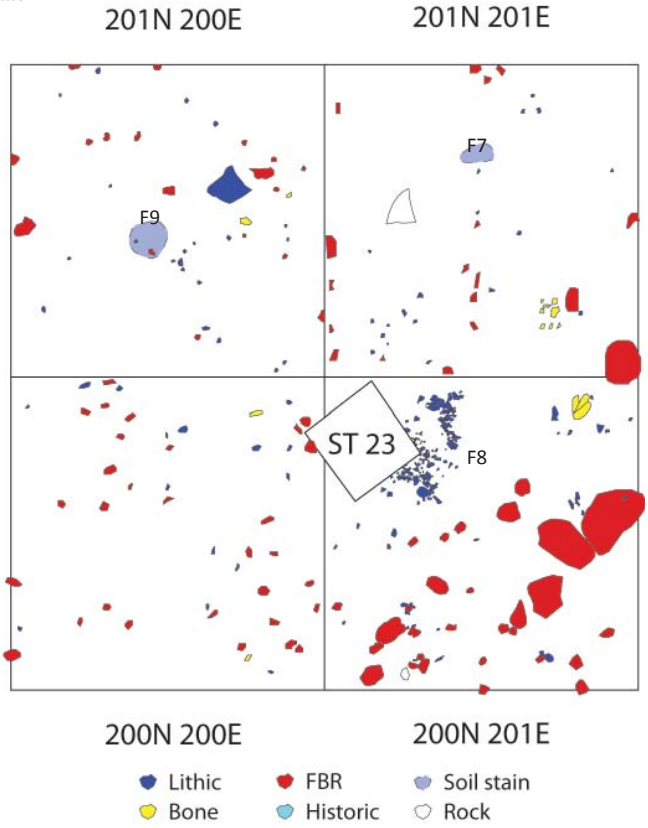

Figure 6.12: DlPo-8 Area B floor plan, 10-30 cm b.s. (Occupation 1c and 2); F# denotes feature discussed in text

analysis, data from the 0-10 cm b.s. excavation level broadly corresponds with Occupations 2 and 3, while in the 10-30 cm b.s. excavation levels, material from within and below Paleosol 1 at 14 cm b.s. is associated with Occupation 1c, and material above the paleosol with Occupation 2. Only scant numbers of artifacts were recovered from depths greater than 20 cm b.s.; these are attributed to Occupation 1c.

Features

Four features were observed during the excavation of Area B. Their locations are presented in the general floor plans for the area, Figures 6.11 and 6.12.

Feature 6

This is a loose scatter of FBR, probably the discard heap of a boiling or roasting pit. Principally located in unit 201N 201E at a depth of between 0 and 10 cm b.s., it extends into 200N 201E. Much of the FBR recovered from 10-20 cm b.s. in this latter unit is likely associated with this feature, as it overlies debitage from the lower Paleosol 1. The feature is attributed to Occupation 2.

Feature 7

This feature is a small bone concentration, 10 cm in diameter, at a depth of 10.5 cm b.s. in unit 201N 201E. Seven small, unidentifiable fragments, with a total weight of 7.0 g were recovered. The feature is attributed to Occupation 2.

Feature 8

A dense concentration of debitage consisting of 161 flakes and core fragments were found *in situ* from units 200N 201E and 201N 201E, and dozens more recovered in the screen

and in ST 23. The scatter consists of two types of pebble chert: a black variety frequently with iron oxide patination, and a distinctive mottled grey variety. The majority of the scatter consists of flakes produced through bifacial modification; no evidence of bipolar percussion was observed. In addition, material associated with microblade production including core tablets struck with burinated blows, a primary ridge flake, and pieces of microblades themselves were found in the mottled grey material; two microblade fragments were also found in the oxidized black material. Though numerous core fragments were present, these were exclusively of the oxidized black material. No fragments of the core from which the mottled grey flakes were struck was found, and those black chert core fragments that were present could not be refit with the microblade fragments of that material. Descriptions are provided in the discussion of tools below. The scatter occurred at depths of 14-20 cm b.s. and is the primary means used to identify Occupation 1c.

Feature 9

This is a small reddened soil stain in unit 201N 200E, 10 cm in diameter, between 15 and 20 cm b.s. No charcoal or bone was recovered from this feature; it may represent the traces of a hearth, an intact patch of Paleosol 1, or a concentration of iron oxide in the soil.

Slope correction

The graded surfaces of each area present a special challenge for spatial analysis of cultural materials at DlPo-8, and merit further discussion. Wall profiles for Areas A (Figure 6.3) and B (Figure 6.9) provide some detail of this problematic sloping microtopography: In Area A, the surface slopes upward some 18 cm from the west wall of 93N 100E, cresting in

units 93N 103E and 93N 104E before descending 7 cm to the east wall of the trench in 93N 104E. In Area B, while the surface of the south wall is nearly level, downward slope is evident in the east wall profile from the southeast corner of 200N 201E to the northeast corner of 201N 201E. Surface depth measurements for each unit show that slope in each unit was not unidirectional: in addition to sloping from east to west, units also sloped from north to south. In both areas, interrupted sections of buried paleosols conform with the surface slope trends while remaining at fairly constant depths below surface.

The problem with spatially interpreting collections on sloped depositional surfaces arises from three-point provenience data inherently assuming a level gradient. Within an individual unit, depth measurements reference a single fixed point, either a datum or unit corner; an artifact found at 10 cm b.s. on one side of the unit is treated as being at the same depth as an artifact found at 10 cm b.s. on the opposite side of the unit. However, if the depositional surface is sloped, for instance with one side of the unit being 5 cm higher than the other, then following natural surface contours, the two artifacts found at 10 cm b.s. could be separated by as much as 5 cm of vertical deposition, and could have originated in very different cultural occupations.

One way of dealing with this problem of stratigraphic association on sloped surfaces is to excavate following natural surface contours, and to analyze materials by excavation level. With this approach, any resolution beyond the arbitrary depth of the excavated level, be it 5 cm or 10 cm, is lost; this procedure is inadequate for sites which possess compressed stratigraphy, in which individual occupations can be separated by only centimeters of vertical deposition. Another approach is to excavate following cultural levels, exposing paleosols as

floors and recording all artifacts associated with them; this approach is not practical in many settings, in which taphonomic processes render paleosols invisible to the excavator except as ephemeral traces visible in wall profiles.

Rawluk, Reilly, Stewart, and Yanicki (2011) have devised a method to correct for slope using three-point provenience data, expressing an artifact's depth relative to the former surface as a fraction of rise over run ($\Delta y/\Delta x$), or mathematical slope. Working with an assemblage in which slope was evident only from west to east, the formula $D - (\Delta y \times [E \div \Delta x])$ was applied, explained as follows:

> 1. Determine the total rise and run.
> 2. Determine the individual artifact's easting (E) as a fraction of the total run (Δx).
> 3. Multiply the artifact's fraction of total run, determined in step 2, by the total rise (Δy).
> 4. Subtract the results from step 3 from the depth (D) of the artifact. The depth is now equivalent to being on a slope of 0 cm rise [Rawluk et al. 2011:6].

By calculating an adjusted depth for each artifact that compensates for slope, associative trends in the depositional record can more easily be assessed. Throughout the following analysis of excavated materials from DlPo-8, adjusted depth below surface (adj. b.s.) is indicated when used.

To determine adjusted artifact depths in units where slope is bidirectional, modification to the formula used by Rawluk et al. (2011) is required: rise and run by both easting and northing must be corrected for, with the adjusted depth of an artifact being an average of the two. The formula is a bugbear: $(D - [\Delta y_1 \times \{E \div \Delta x_1\}]) + (D - [\Delta y_2 \times \{N \div \Delta x_2\}])/2$, where D is the artifact's recorded depth, E is its easting, N is its northing, Δy_1 is the rise from west to

east, Δx_1 is run from west to east, Δy_1 is rise from south to north, and Δx_2 is run from south to north.

Table 6.2 lists the surface depths below datum of each unit corner, together with values for Δy_1 and Δy_2. Rise by easting, Δy_1 is calculated as an average of NE corner surface depth subtracted from NW corner surface depth and SE corner surface depth subtracted from SW corner surface depth. Rise by northing, Δy_2, is calculated as an average of NW corner surface depth subtracted from SW corner surface depth and NE corner surface depth subtracted from SE corner surface depth. These values reflect that three-point provenience measurements were taken from units' southwest corners, and measurements of individual artifacts were by easting and northing. In unit 93N 103E, where artifact depths (*D*) were relative to the unit's northwest corner, southings of individual artifacts were substituted for northings, and Δy_2 was calculated as average slope from north to south. Because slope varied considerably

Table 6.2: Surface depths and average rise E-W (Δy_1) and N-S (Δy_2)

Unit	Corner Depth (cm b.d.)				Avg. Δy_1	Avg. Δy_2
	NW	NE	SW	SE		
Area A						
93N 100E	58	51	53.5	49	+5.75 cm	-3.25 cm
93N 101E	51	45	49	48	+3.50 cm	+0.50 cm
93N 102E	45	41	48	41	+5.50 cm	+1.50 cm
93N 103E	41	40	41	48	-3.00 cm	-4.00 cm*
93N 104E	40	47	48	43.5	-1.25 cm	+2.25 cm
100N 100E	-**					
Area B						
200N 200E	46	43	40	40	+1.50 cm	-4.50 cm
200N 201E	43	41	40	41	+0.50 cm	-1.50 cm
201N 200E	50	46	46	43	+3.50 cm	-3.50 cm
201N 201E	46	43	43	41	+2.50 cm	-2.50 cm

**Because measurements in 93N 103E were from the NW corner, Δy_2 was calculated as an average slope from north to south rather than south to north*

*** Surface depths referenced to a fixed datum were not recorded for 100N 100E*

within each 1-m-x-1-m excavation unit, these values have been calculated individually rather than as an average for each area. In each unit, total run by both easting (Δx_1) and northing (Δx_2) is 100 cm (= 1 m). Despite the possibility of some surface undulation within individual units, as the highest level of resolution available, gradient is treated as constant over these 1 m intervals.

Historic material analysis

A total of 40 pieces of material dating to the Historic period were found during excavation of Areas A and B. While these materials, consisting of broken bottle glass, pieces of metal wire, and a fragmented rubber seal, are not a principal research focus of this study, their presence is noted as an indicator of disturbance and the stratigraphic integrity of buried subsurface deposits.

Table 6.3 provides a breakdown of these materials by unit and area. In the main trench of Area A, only pieces of clear glass were found, probably fragments of the same bottle. *In situ* pieces were found at depths of between 5.5 and 5.6 cm adj. b.s. in unit 93N 100E, 3.5 and 4.2 cm adj. b.s. in 93N 101E, and between 8.0 and 9.0 cm adj. b.s. in unit 93N 103E. In Area B, *in situ* historic materials were found at depths of between 0.1 and 0.8 cm adj. b.s. in unit 200N 200E; a bottle cap was found at a depth of 3.2 cm adj. b.s. in 200N 200E.

When compared with *in situ* lithic materials to assess stratigraphic integrity, these results suggest very limited intermixing of materials from historic and prehistoric components in Area A, and none in Area B. In unit 93N 100E, the shallowest *in situ* lithic was found at 10.2 cm adj. b.s., well below historic debris. Likewise in 93N 101E, lithics beginning at 5.6 and 5.7 cm adj. b.s. occurred below historic material. However, in 93N 103E, lithics at 2.0, 6.0 and 6.2

Table 6.3: Historic material, DlPo-8 Areas A and B

Unit	Material Type (count/weight)	Depth Range (adj. b.s.)
Area A		
93N 100E	Glass fragment, clear (2 pcs./6.5 g) " " (1 pc./2.8 g)	5.5-5.6 cm screen, 0-10 cm
93N 101E	Glass fragment, clear (2 pcs./3.5 g) " " (3 pcs./4.9 g) " " (1 pc./0.6 g)	3.5-4.2 cm screen, 0-10 cm screen, 10-20 cm
93N 103E	Glass fragment, clear (4 pcs./2.6 g) " " (1 pc./0.3 g)	8.0-9.0 cm screen, 0-10 cm
93N 104E	Glass fragment, clear (1 pc./0.5 g)	screen, 0-10 cm
100N 100E	Glass fragment, brown (1 pc./1.2 g)	screen, 10-20 cm
Area B		
200N 200E	Beer bottle cap (1 pc./2.5 g) " (3 pcs./7.9 g) Metal wire (1 pc./10.1 g) Rubber seal fragment (3 pcs./1.5 g) " (2 pcs./0.5 g)	3.2 cm screen, 0-10 cm screen, 0-10 cm screen, 0-10 cm screen, 0-20 cm
200N 201E	Metal wire (1 pc./1.6 g) Rubber seal fragment (12 pcs./6.1 g) " (4 pcs./1.4 g)	screen, 0-10 cm 0.1-0.8 cm screen, 0-10 cm
201N 201E	Glass fragment, melted (1 pc./2.6 g)	screen, 0-10 cm

cm adj. b.s., including the Wallula Rectangular Stemmed point, were found at shallower depths than pieces of glass in the same unit. Surface microtopography in this unit was complex, including pronounced slope and a very thick LFH layer, owing to a rotting log covering much of the unit; the effects of recent bioturbation appear most pronounced in, and localized to, this unit. Overall, the quantities of historic materials found at unusual depths, including in the screen from the 10-20 cm b.s. excavation level, do not indicate that surface disturbance or bioturbation in the more recent cultural deposits is a major concern.

In Area B, where historic material was recovered up to a maximum depth of 3.2 cm adj. b.s., the uppermost *in situ* lithic found was at 3.3 cm b.s.; the next deepest lithic was at 6.0 cm b.s. With the possible exception of two rubber seal fragments found in the screen from the

10-20 cm excavation level (attributable to falling in from the walls, as several such fragments were found in the loose topsoil at the unit margins), there is no evidence of intermixing of historic and prehistoric materials in this area.

Lithic analysis

A total of 1,183 lithic artifacts including tools, cores, and debitage were collected during the 2010 fieldwork at DlPo-8, weighing a total of 4,272.05 g. Of these, 525 lithic artifacts were recovered in Area A excavations and 468 were from Area B. A further 190 specimens were recovered in shovel tests or from the surface; limited provenience data (depths were estimated) and soil profiles render these materials difficult to compare with other excavation areas (a notable exception being ST 23, which was in the midst of Area B). With the exception of tool descriptions, these artifacts are not discussed further in this section.

In area A, 187 lithics were recovered *in situ* (35.6%); the remainder were collected in the screen. Recovery rates in Area B were somewhat higher, with 264 artifacts (56.4%) recorded *in situ*. Time constraints and the attendant decision to excavate by shovel-shaving limited the ability of excavators to identify artifacts *in situ*. Trowel excavation would have yielded higher numbers of artifacts for which three-point provenience data would be avaialable, an important consideration when excavating sites with compressed stratigraphy (Rawluk et al. 2011). Although not optimal, these results are sufficient to allow some in-depth analysis.

A primary goal of this portion of the study was to assess changes to use of the site over time; lithics provide a key source of information in this regard. The sourcing of lithic raw materials can indicate the direction raw materials travelled from, and by extension the geographic areas to which visitors to the site had direct access (via quarrying) or indirect ac-

cess (via down-the-line trade). Changes in tool technology, especially projectile point styles, are widely used to determine changes in cultural occupation. Lithic manufacturing techniques, as demonstrated by debitage morphology including flake type, amount of cortex, and number of dorsal scars, can provide a further avenue of insight into changing resource utilization strategies.

An emphasis in the analysis of raw materials, tool types, and debitage morphology presented in this section is on spatial analysis. Where possible, three-point provenience data of individual artifacts, corrected for slope, is correlated with the cultural stratigraphy of each area to assign artifact clusters to individual occupations. For material collected by screening, unit and arbitrary 10 cm level are the highest resolution of provenience data available; these results are also presented, but given the observed compression of multiple occupations within individual levels, the questionable accuracy of results sorted by this latter method is acknowledged.

Raw materials

Identification of lithic raw materials in this study was done by macroscopic analysis, supplemented by use of a stereoscopic microscope for ambiguous specimens, and with comparison to known lithic types. Macroscopic methods alone are generally acceptable, as at least on the Northern Plains, most lithic materials are visually distinguishable from one another (Kooyman 2000); chemical analysis of many materials, such as chert, can be inconclusive, as trace element signatures between different-sourced materials often possess considerable overlap (Roll et al. 2005). A noteworthy exception is obsidian, which from one specimen to another may not be visually distinct, but which can be chemically traced to individual volcanic sources

through nondestructive means using energy dispersive x-ray fluorescence (EDXRF) (Hughes 1998, 2010). Given the availability of this technique, obsidian specimens recovered during the 2010 fieldwork at DlPo-8 were sent to Dr. Richard Hughes at the Geochemical Research Laboratory for further analysis.

In reviewing all archaeological sites within a 30 km^2 area centred on DlPo-8, Yanicki (1999:75-81) provided a detailed description of the most common lithic materials found in the Gap area. These materials are summarized here; total frequencies and weights collected during the 2010 excavations are presented in Table 6.4. Where available, known sources of materials are indicated.

One of the most frequent materials found in the Gap area as a whole is black pebble chert, an exceptionally fine-grained, opaque silicified siltstone. Contrary to what the name implies, pebble cherts are frequently brown or grey in colour; the name derives from the smoothed and polished black cortex observed on many pieces (Loveseth et al. 1979:88-89). Pebble cherts often exhibit a vermiculated appearance, attributed by Shepherd (1972) to chemical weathering in acidic soils; such weathering was observed on many pieces collected during the 2010 fieldwork. The material probably has numerous sources: Gryba (1983) reported occurrences of black pebble cherts eroding from Cretaceous deposits at Sibbald Creek, in the Foothills of southern Alberta. In eastern Alberta, these same deposits are referred to as the Bearspaw formation; Steuber (2008) has conducted an extensive study of a pebble chert quarry from this formation near Consort. This is the "black slate" material at DlPo-8 remarked upon by Forbis (GA M2105-4), and is the most abundant material in previous collections from the site (Yanicki 1999:77). It was also the most abundant material collected in 2010 fieldwork, by count

Table 6.4: Total weights and counts of lithic raw material from 2010 fieldwork at DlPo-8

Material	Count	Weight (g)	% Total Count	% Total Weight
Black pebble chert	529	597.15	44.8%	32.4%
Mottled pebble chert	158	184.30	13.4%	10.0%
Banff chert	126	415.35	10.7%	22.5%
Siltstone	91	216.70	7.7%	11.8%
Top of the World chert	50	23.15	4.2%	1.3%
Etherington chert	44	48.80	3.7%	2.6%
Brown chalcedony	36	19.00	3.0%	1.0%
Mudstone	35	16.15	3.0%	0.9%
Quartzite	22	45.55	1.9%	2.5%
Misc. chert	20	18.60	1.7%	1.0%
Misc. chalcedony	16	15.15	1.4%	0.8%
Ochre/pigment	16	106.20	1.4%	5.8%
Avon/Bowman chert	8	44.50	0.7%	2.4%
Obsidian	8	4.45	0.7%	0.2%
Andesite	7	9.50	0.6%	0.5%
Swan River chert	6	4.80	0.5%	0.3%
Kootenay argillite	2	0.70	0.2%	0.0%
Montana chert	2	1.50	0.2%	0.1%
Sandstone	2	1.60	0.2%	0.1%
Scoria	2	66.30	0.2%	3.6%
Limestone*	1	2,430.00	-	-
Porcellanite	1	2.40	0.1%	1.3%
Silicified peat	1	0.20	0.1%	0.0%

** A single limestone chopper was recovered in Area B. Given the massive disparity in its weight compared to the rest of the assemblage (more than all other tools, cores, and debitage combined), it has been excluded from calculation of proportional weights and counts.*

making up 58.2% of the lithic assemblage. It must be noted that these are not all pebble cherts, *sensu stricto*. While several examples of bipolarly reduced pebble-sized cores were recovered during the 2010 excavations, many other cores and core fragments were from cobble-sized pieces of material and exhibited multidirectional, bifacial reduction. In terms of raw material, the debitage from either reduction technique was indistinguishable; the conventional term

"pebble chert" has been applied to both.

Two distinct varieties of pebble chert were noted during analysis of the 2010 excavatied materials: a very dark grey-black material frequently contained iron oxide staining, and a mottled green-grey variant with fine black whorls. A reinspection of the DlPo-8 collections at the Department of Archaeology, University of Calgary, in September 2011 found no specimens of the mottled variant; this material was recovered exclusively from Feature 8, Area B. As will be discussed later in this section, several pieces of the mottled material demonstrate that it was used in microblade production. It was noted during cataloguing that with handling, the green-grey material has a tendency to turn black and resemble other pebble cherts in the assemblage; its original colour and patterning can be restored through soaking in acetone. Numerous pieces of the mottled material appeared to have undergone post-depositional chemical weathering, having a black, vermiculated appearance; refits of broken flakes sometimes look like they are from two different cores. Soaking in acetone had no effect on the chemically weathered specimens; it is probable that there is some overlap in this analysis between chemically weathered pieces of the mottled material and ordinary black pebble chert.

Banff chert is a banded grey-black or blue-black material that exhibits a range in quality: lustre can be vitreous or dull, while opaque and slightly translucent variants are known. Quarries have been identified in Banff National Park near Vermilion Lakes (Fedje and White 1988; Gorham 1993), while local quarrying is also suspected in the Kananaskis basin (Gryba 1983:46; Reeves and Choquette 1977:12). Though Banff chert outcrops occur in the High Rock Range in the vicinity of the Crowsnest Pass, no evidence of quarrying has been observed (Loveseth et al. 1979:88); relative to the Gap, this material has been presumed to origi-

nate from sources to the north (Yanicki 1999:77). The low count to weight ratio of this material, indicating collected specimens were generally quite large, suggests this assumption of non-local origin to be incorrect. Seven cores and numerous large primary reduction flakes of Banff chert recovered during the 2010 excavations exhibited rounded, weathered, lustreless cortex indicative of fluvial transport—these confirm that cobbles were selected from streambed materials rather than quarried directly from exposed outcrops.

A number of other siltstones were collected in the 2010 excavations, ranging in colour from a buff tan to grey, brown, and black. Many exhibited multiple colours, and banding was evident on some. These were often difficult to distinguish macroscopically from the pebble cherts and Banff chert; during the course of this analysis, the distinction was made based on grain size—coarser-grained material, in which individual grains were visible without microscopic assistance, were classified as generic siltstone. These are probably local in origin, being present in both the Livingstone Range and the Main Range to the west (Yanicki 1999:80). Cobbles of these materials can readily be collected from the streambed of the Oldman (Brulotte 1983:35-36).

Top of the World chert is a distinctive material that ranges in colour from grey-blue through blue-black (Loveseth et al. 1979:89), with whites and "rarely, a slight pinkish cast" (Choquette 1981:27) also known. A "waxy" lustre and black fossilized sponge spicule inclusions (Kooyman 2002) also help distinguish the material from other cherts. Quarried from a number of sources in the Van Nostrand Range in southeastern British Columbia, Choquette (1981:27) describes it as "the most vitreous of the indigenous cherts" of the Kootenay region; black variants can easily be mistaken for obsidian (Loveseth et al. 1979:89; Yanicki 1999:97-

98). Top of the World chert has been linked by some authors to the ancestral Ktunaxa: Loveseth (1985:11) identified it as the dominant material of the Late Prehistoric, immediately pre-contact Tobacco Plains phase of southeast British Columbia and the Crowsnest Pass area. It is probably the traditionally used, high-quality stone tool material from a source near Fernie noted by Turney High (1941:87) in his Ktunaxa ethnography. Top-of-the-World chert is the second most abundant material in existing collections from DlPo-8 (Yanicki 1999:78). While this observation was not replicated in the 2010 excavations, Top of the World chert remained the most abundant of the non-local materials present at the site.

Within the Gap area, Etherington chert is by far the most abundant material (Yanicki 1999:76-77). It can be difficult to identify by colour, having a range that covers the spectrum from whites and pinks through browns, greens, greys, and even blacks; its most readily identifiable characteristics are a rough, "sugary" texture and a tendency to fracture in blocky, brecciated segments. Etherington chert was quarried from outcrops in the Livingstone Range near Bellevue in the Crowsnest Pass, south of the Gap (Loveseth 1976:4, Loveseth et al. 1979:90). Though the source is nearby, it was not a dominant material in previous collections from DlPo-8 (Yanicki 1999:77); this trend was echoed in the 2010 excavations, where the material made up only 3.7% of the assemblage by count.

Brown chalcedony was moderately abundant, with 36 pieces found. Whitish patina and fossiliferous inclusions in most pieces may suggest that this is Knife River flint, sourced from a number of quarries principally in Dunn and Mercer counties, North Dakota (Clayton et al. 1970; Kooyman 2000). However, the existence of "look-alikes", including Hand Hills chert and Sand Hills chert, has long been known (Crawford 1936; Kirchmeir 2011:5), and

macroscopically distinguishing them is not always possible (Taylor 1969:32). Pending further analysis, for instance following the combination of macroscopic, microscopic, and UV irradiation suggested by Kirchmeir (2011), a more cautious identification as brown chalcedony is here applied. Both Knife River flint and its look-alikes, however, originate from quarries to the east.

A number of Montana cherts have been reported in the study area; this term is something of a catch-all, frequently used to refer to flecked golden, orange, and red dendritic cherts that appear in southern British Columbia and Alberta (Choquette 1981:27; Loveseth et al. 1979:90). However, the very broad range of high-quality cherts originating from multiple sources in Montana can also include white, pink, brown, blue, grey, and black hues, and can possess a "bewildering array of attributes... [including] petrified wood or other plant matter, gastropods, oolites, vugs, brecciated material, extensively zoned or mottled material, veins or welds, opaque clouds, dendrites, cortex, and poorly silicified material" (Roll et al. 2005:67). While the more brightly coloured specimens are easily classed under this moniker, many pieces classified as miscellaneous chert in this study could also originate in one of the hundreds of known Montana chert quarries (Roll et al. 2005).

Distinctive among the Montana cherts are Avon chert and Bowman chert, creamy white porcellanous cherts with brown chalcedony inclusions. Avon chert is sourced from quarries southwest of Helena, Montana (Reeves 1972); this material is macroscopically indistinguishable from material originating from the lesser-known Bowman chert quarries in Glacier National Park (Reeves 1995, 2003:xiii; Reeves and Shortt 1997:16-30). While the routes by which these materials were transported to the Gap are open to speculation, both originate

from sources to the south.

Several samples of material classified as ochre or pigment have also been collected in the Gap area, including surface and excavated collections by the Glenbow Foundation at DlPo-8 (Yanicki 1999) and at DlPo-4 (Brulotte 1983:42). These are generally red to orange-red pellets of soft, iron oxide-rich material, foreign to the local soil matrix and presumably transported in. Handling of ochre specimens can often leave traces of pigment on the skin; during the 2010 excavations at DlPo-8, this soft, pigment-like quality was noted for specimens not only in the orange-red colour range, but yellow, grey-black, and white. These were also collected and catalogued as possible ochre/pigments specimens. Sourcing information for ochre is not easy to find in the literature, but its availability may have been widespread; in a recent interview, Martin Magne has noted significant ochre deposits at the Paint Pots in Kootenay National Park, and also iron nodules in sandstones of the Paskapoo Formation in the Alberta foothills (Croucher 2010). Northern Piikáni informant Jack Crow spoke about a paint source on the upper Castle River that formerly was part of the Peigan Reserve:

> Yes, I used to go with the old people to get this paint. When they arrived at the site, they would make camp, gather berries, sing, pray and use rattles. They prayed so this paint would be found easily. If noise were made they claimed, the paint would disappear. Some would break and scrape rocks but would never find any. It was then that they would express that the paint had crawled into the rocks and disappeared. Some were lucky and paint would come out to them. Buffalo rocks [*iniskim*] were painted by medicine men with this paint and animal fat [Yellowhorn 1973:3].

The strong ceremonial significance of ochre to the Piikani is indicated by Crow's testimony of its use.

Several macroscopically distinct types of obsidian were noted at sites in the Gap area

by Yanicki (1999:79), ranging from smoky grey to black with varying degrees of banding and transparency. Eight obsidian flakes were found during the 2010 excavations, seven of them from a single cluster between 20-30 cm b.s. in unit 93N 101E. Five specimens were sent to Geochemical Research Laboratory for nondestructive EDXRF analysis. Quantitative composition estimates from the larger three pieces, and integrated net intensity data for the smaller two, showed Fe/Mn vs. Zr/Nb quantities within the parameters typical of obsidian from Obsidian Cliff, Wyoming (Richard Hughes, personal communication, Geochemical Research Laboratory Letter Report 2011-43).

Swan River chert is a white to grey, and sometimes pink, yellow, or orange chert that includes translucent chalcedony sections and larger quartz growths within porous vugs (Ahler 1977:139; Campling 1980:295; Leonoff 1970:12); when subjected to heat-treatment, it turns red (Crabtree and Butler 1964:2; Low 1996:165). It is found in concentrated frequencies in south-central Manitoba, and in intermittent quantities through southern Saskatchewan and southeast Alberta, its distribution affected by the movement of the Laurentide ice mass (Low 1996:166-168).

Kootenay argillite, obtained at quarries on the west side of Kootenay Lake in the southeast B.C. interior (Choquette 1981; Loveseth et al. 1989:90-91; Reeves 1972), is "a milky to dark grey-green siliceous rock with plate or scale-like fracturing characteristics" (Yanicki 1999:79). It occurs in low numbers throughout the Gap area; five nearly identical projectile point blanks made from Kootenay argillite were found at DlPo-9. Two argillite flakes were recovered during the 2010 excavations.

Seven pieces of igneous material which under magnification were found to contain

crystalline inclusions of pyrite, garnet, and quartz were recovered during excavations at DlPo-8. Similar flakes were recovered at DlPo-4, the Daisy Creek site, and were identified as andesite, with sources in the Crowsnest Volcanics (Brulotte 1983:36).

Two pieces of scoria were also recovered during excavation at DlPo-8. Scoria is a highly vesicular igneous rock differentiated from pumice in that it does not float (Gore 2008).It may be possible that this material also originates in the volcanic Crowsnest formation, "a series of tuffs, agglomerates, breccias, and flows" (Glaister 1957:590); this formation is exposed at numerous localities south and west of the Gap (Bowerman et al. 2006:1622; Chao et al. 1996). However, scoria has not previously been reported from archaeological sites in the immediate vicinity as a raw material type. Its sourcing must be treated at present as unknown.

Other materials seen in low numbers at DlPo-8, including quartzite, sandstone, and limestone, are local in origin, occuring at numerous locations in the Front Range of the Rocky Mountains to the west, and can be found as streambed cobbles (Yanicki 1999:80; Brulotte 1983:35-36). Other materials, like mudstone, chalcedony, porcellanite, and silicified peat, are not reliably sourced or traceable to individual quarries, but can be found at numerous locations elsewhere in Alberta (Bob Dawe, personal communication, 2010; Rawluk et al. 2011).

Lithic spatial distribution

When sorted by level, a breakdown of lithic materials suggests some general temporal trends. Results for Area A and Area B are given in Tables 6.5 and 6.6, respectively.

In Area A, the greatest concentrations of lithics are seen in the 10-20, 20-30, and 30-40 cm b.s. excavation levels; of the materials that occurred in highest frequency at the latter depth, Banff chert, black pebble chert, and siltstone, considerable numbers also occur

Table 6.5: Lithic material counts by level, Area A

Level (cm b.s.)	Andesite	Avon/Bowman chert	Banff chert	Black pebble chert	Brown chalcedony	Etherington chert	Kootenay argillite	Misc. chert	Misc. chalcedony	Obsidian	Ochre/pigment	Porcellanite	Quartzite	Sandstone	Scoria	Siltstone	Swan River chert	Top of the World chert
0-10			7	19				1	1		3					3		1
10-20		2	13	87	1	4	1	2	2	1	8	1			1	3		6
20-30		1	14	117		6		2	2	7	3		1			6	1	1
30-40	2		41	74				3	2		1			1	1	10	2	4
40-50			11	23		1										7		1
50-60			2	3														1

at greater depths, up to 60 cm b.s., together with trace amounts of Top of the World chert and Etherington chert. No evidence of cultural features or paleosols were observed at these depths; the deepest artifact occurences are likely attributable to post-depositional bioturbation factors such as root and rodent disturbance. A similar degree of disturbance must be assumed for the upper deposited materials.

Nevertheless, there exists a discernible degree of variation between upper and lower deposits. Some materials simply do not occur at deeper depths; those which appear associated primarily with later site occupation, based on recovery primarily in the 0-10 and 10-20 cm excavation levels, include Avon/Bowman chert, brown chalcedony, Kootenay argillite, and porcellanite. Ochre and Top of the World chert also reach their highest frequencies in the uppermost levels. These materials include many of the most recognizable exotic materials found at DlPo-8—that is, materials which originate from distant known sources. The gradually increasing occurence of ochre in higher levels, with its attendant implications of ceremonial use, is of particular interest here. Those materials which have their highest frequencies in the

Table 6.6: Lithic material counts by level, Area B

Level (cm b.s.)	Andesite	Avon/Bowman chert	Banff chert	Black pebble chert	Brown chalcedony	Limestone	Misc. chert	Misc. chalcedony	Montana chert	Mottled pebble chert	Ochre	Quartzite	Sandstone	Silicified peat	Siltstone	Swan River chert	Top of the World chert
0-10		1	1	8	8		2	3	1			3			5		4
10-20	1	3	11	89	24	1	4	4		157	1	14	1	1	32	3	9
20-30			8	8			1	1	1	1					14		8

20-30 and 30-40 cm excavations levels—andesite, Banff chert, black pebble chert, Ethering-ton chert, quartzite, sandstone, and siltstone—are primarily local, with known sources only as distant as the Crowsnest Pass. Notable exceptions in these lower depths include obsidian, sourced from Obsidian Cliffs, Wyoming, and Swan River chert.

In Area B, where deposition was not as well developed, changing patterns of use are not as clearly suggested by the data from arbitrary 10 cm excavation levels. As in Area A, Avon/Bowman chert and brown chalcedony trend upward, together with quartzite, while Banff chert, pebble chert, siltstone, and Top of the World chert occur principally in the intermediate and lower levels. Most materials, however, are concentrated in the 10-20 cm excavation level, which, as has already been discussed, contains both of the prehistoric occupations evident in this area, Occupations 1c and 2.

Greater resolution is provided by the three-point provenience data for each area. 3D scatterplots of material found *in situ*, generated using Apple Grapher 1.1 (Figures 6.13 and 6.14), not only show the association of individual artifacts in Areas A and B to surface slope trends, but graphically demonstrate gaps in artifact deposition that are attributable to separate

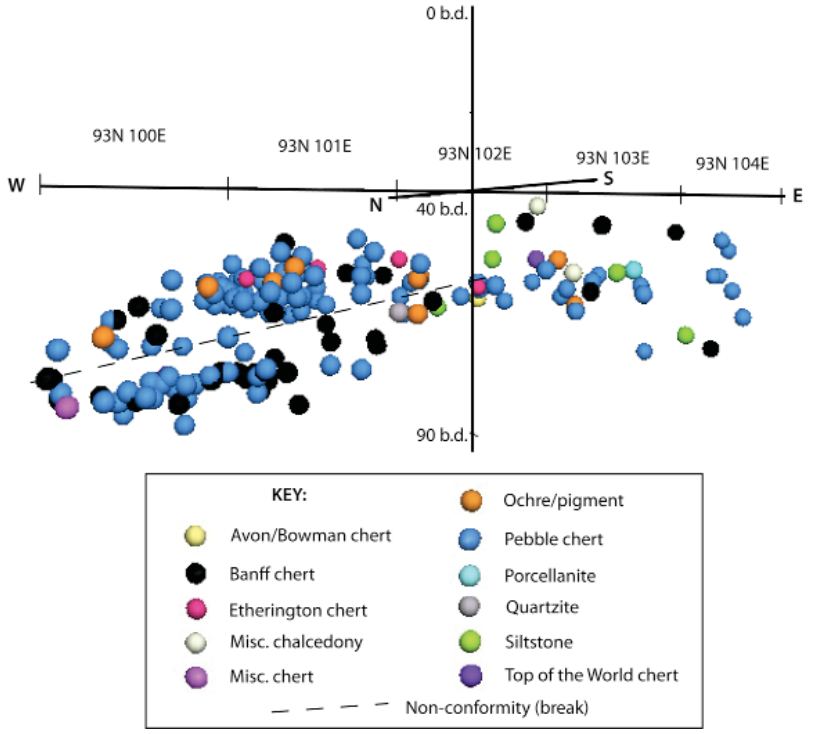

Figure 6.13: 3D scatterplot of *in situ* lithics, Area A. Depths are exaggerated by a factor of 2.5X to highlight possible breaks in occupation.

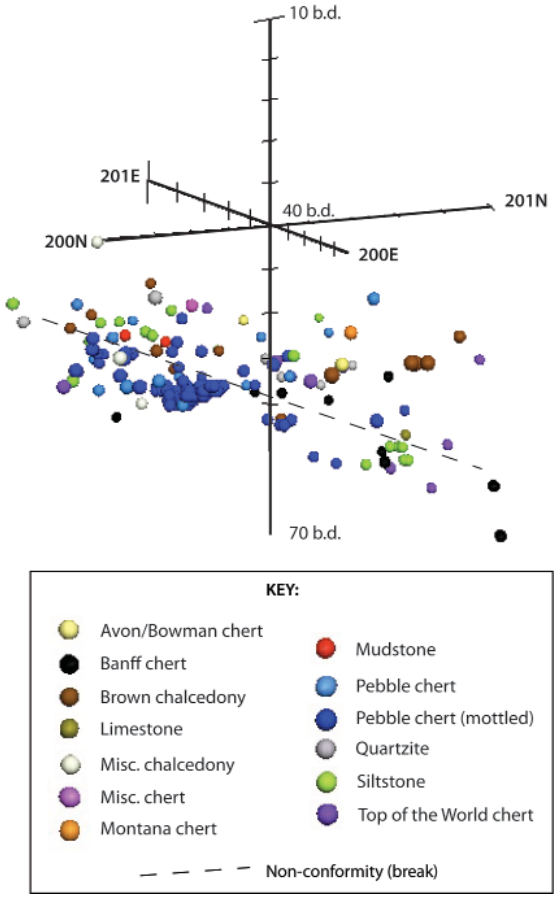

Figure 6.14: 3D scatterplot of *in situ* lithics, Area B. Depths are exaggerated by a factor of 2.5X to highlight possible breaks in occupation.

cultural occupations. In Area A, such a break occurs through units 93N 100E, 93N 101E, and 93N 102 E at a gradient mirroring the surface slope. The quartzite Salmon River projectile point found at 23 cm b.s. in 93N 102E appears to be positioned below this break in occupation; materials below this break appear to be associated with Occupation 1a, as identified through stratigraphic profiles. Unfortunately, the paucity of *in situ* materials in the easternmost units of Area A makes any depositional trends in those units unclear. Similarly, no clear break in occupation occurs between Occupation 1b and 2, at least in the 3D model.

In Area B, the deposition of artifacts on a slope mirroring the surface trend from southeast to northwest is again demonstrated. Also evident is the concentration of pebble chert and mottled pebble chert; a thin break in deposition occurs just above this concentration, following the slope trend. Below the break, pebble cherts and Banff chert dominate, and are markedly less abundant above. Materials including brown chalcedony, mudstone, Avon/Bowman chert, and quartzite almost exclusively appear above the break. And yet other materials, including siltstone, chalcedony, and Top of the World chert, are common both above and below. The overall binary nature of this deposition reflects the pattern anticipated by assessment of the exposed stratigraphy: the lower materials are associated with Occupation 1c, while the upper materials are associated with Occupation 2.

The qualitative assessment of provenienced artifacts enabled by the 3D models is of some interpretive power, reinforcing trends identified through examination of the full assemblage depth-sorted by level. However, characterization of the suggested cultural occupations remains vague. Quantitative comparison of material associated with individual occupations is made possible through use of depth-adjusted three-point provenience data. Tables 6.7 and 6.8

Table 6.7: Lithic material frequencies by adjusted depth, Area A; grey shaded cells are assigned to Occupation 1a, white to Occupation 1b, and purple to Occupation 2

Depth (adj. b.s.)	Artifact frequency (count)					
	93N 100E	93N 101E	93N 102E	93N 103E	93N 104E	100N 100E
0.0-2.0 cm	-	-	-	1	1	-
2.1-4.0 cm	-	-	1	-	1	-
4.1-6.0 cm	-	2	-	2	-	-
6.1-8.0 cm	-	3	-	-	1	1
8.1-10.0 cm	1	1	1	-	-	-
10.1-12.0 cm	3	7	2	-	-	-
12.1-14.0 cm	1	7	1	-	-	-
14.1-16.0 cm	3	6	4	1	2	-
16.1-18.0 cm	1	10	2	5	1	1
18.1-20.0 cm	2	8	3	-	1	-
20.1-22.0 cm	2	7	3	2	-	-
22.1-24.0 cm	2	3	5	4	-	1
24.1-26.0 cm	2	2	2	-	-	-
26.1-28.0 cm	1	1	-	1	1	1
28.1-30.0 cm	1	-	-	3	-	-
30.1-32.0 cm	2	1	1	-	1	-
32.1-34.0 cm	8	2	1	-	-	1
34.1-36.0 cm	8	7	-	-	1	-
36.1-38.0 cm	5	5	-	-	1	-
38.1-40.0 cm	2	1	-	-	-	1
40.1-42.0 cm	-	1	-	-	-	-
42.1-44.0 cm	1	1	-	-	-	-
44.1-46.0 cm	1	1	-	-	-	-
46.1-48.0 cm	-	-	-	-	-	1
48.1-50.0 cm	-	-	-	-	-	2

show lithic material counts by unit, sorted by adjusted depth.

Assigning material from this data set to individual occupations is a somewhat subjective process. With slope corrected for, gaps in occupation are evident as troughs in which little or no cultural material was found. Peaks in artifact frequency are meanwhile interpreted to represent material deposited during cultural occupations of the site. It should not be assumed

that peaks and troughs will occur at constant depths across each excavation area; some variation by unit in the depths at which they occur is expected, as depth of deposition was not constant. When assigning clusters of material to individual occupations, each unit is therefore assessed separately. Where a break in occupation is predicted but is not evident as a gap in the data, frequencies of individual material types are examined, and the material from a given depth range is assigned to an occupation based on whether it appears more consistent with the material above or below.

In Area A, two principal breaks can be seen. The first occurs at a depth of between 20.1 and 28.1 cm adj. b.s.; this break corresponds with the observed trend in 3D plotted data (Figure 6.13) and the separation between Occupations 1a and 1b, as seen in the stratigraphic profile (Figure 6.3). A second break occurs between 12.1 and 16.0 cm adj. b.s.. This is most pronounced in units 93N 103E and 93N 104E; in 93N 101E and 93N 102 E, in which a decrease in material frequency is less pronounced, the presence of ochre and Etherington chert at 12.1-14.0 cm b.s., less frequent with greater depth, signifies the occupational transition. Material from below the first break is assigned to the earlier Middle Prehistoric Occupation 1a; that from between the two is assigned to the later Middle Prehistoric Occupation 1b, and material from above the second break is assigned to the Late Prehistoric Occupation 2.

Figure 6.15 presents a comparison of the *in situ* material types for each of these occupations. Overall trends include a heavy reliance on local materials, including pebble chert and fluvially-transported Banff chert cobbles, through all three occupations. Sustained use of ochre, increasing in overall proportion of the lithic assemblage in the latest occupation, is also suggested. Caution must be excercised, though, in interpreting the raw material usage patterns

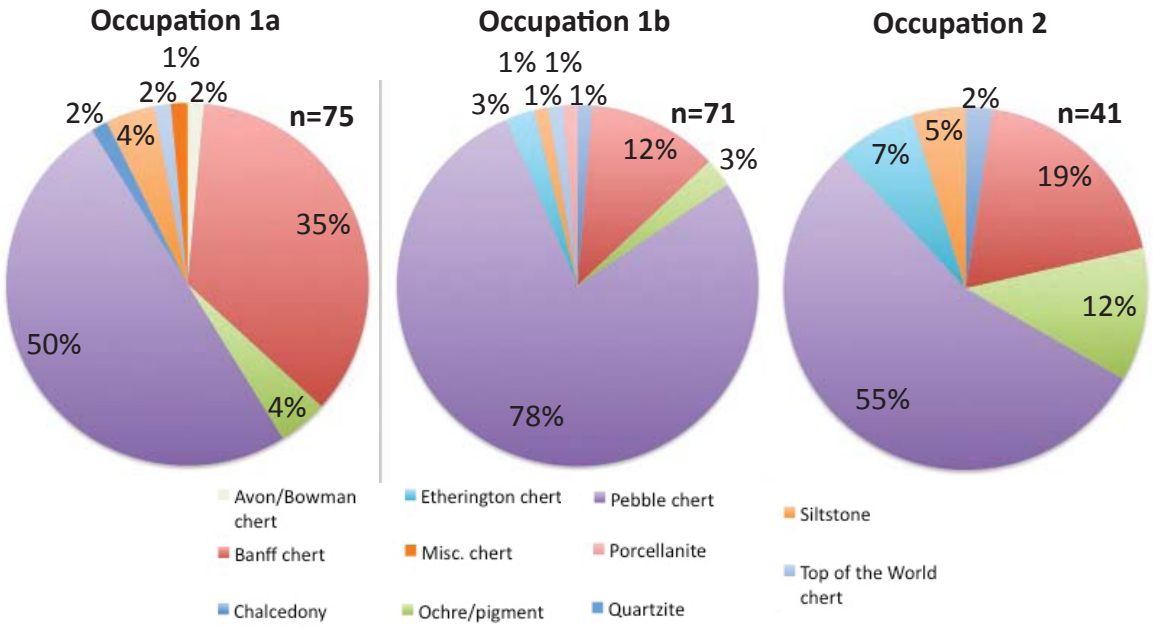

Figure 6.15: Raw material use by occupation, Area A; percentages are calculated from depth-adjusted *in situ* lithics, presented in Table 6.8

suggested by these results, particularly of the lower-frequency exotic materials. Several key materials found in relatively high numbers in Area A, such as siltstone and Top of the World chert, are underrepresented in the provenienced material, being found mostly in the screen. Others, such as obsidian, Swan River chert, and brown chalcedony, were not found *in situ* at all.

While the depth-adjusted three-point provenience data can be quite effectively used to identify breaks in occupation in this area, the results are unfortunately of limited utility, given the poor recovery rates for *in situ* material as a representative sample of the assemblage as a whole. The availability of data depth-sorted by arbitrary level only partially offsets this failing. The potential exists for material to be attributed to individiual cultural components at this site, allowing robust characterization of changes to lithic raw material utilization over time; future researchers are strongly advised to employ more rigorous field methodology.

In Area B, recovery rates of *in situ* lithic material were much higher, and as a result,

Table 6.8: Lithic material frequencies by adjusted depth, Area B; white cells are assigned to Occupation 1c, purple to Occupation 2

Depth (adj. b.s.)	Artifact frequency (count)			
	200N 200E	200N 201E	201N 200E	201N 201E
0.0-2.0 cm	-	1	-	-
2.1-4.0 cm	-	-	-	-
4.1-6.0 cm	-	1	-	1
6.1-8.0 cm	3	1	2	-
8.1-10.0 cm	3	8	1	1
10.1-12.0 cm	1	8	3	8
12.1-14.0 cm	2	12	1	4
14.1-16.0 cm	7	7	-	-
16.1-18.0 cm	4	125	2	4
18.1-20.0 cm	-	27	16	2
20.1-22.0 cm	1	-	6	-
22.1-24.0 cm	-	-	1	-
24.1-26.0 cm	-	-	1	-
26.1-28.0 cm	-	-	-	-

a much clearer picture of changing lithic utilization patterns emerges. Table 6.8 presents frequencies of raw material, with depth adjusted to correct for slope, in each of the four units in this area. At 14.0 cm adj. b.s., the upper surface of the paleosol observed in wall profiles from this area (Figures 6.9 and 6.10), a distinct break is evident; no lithics were recovered in units 201N 200E and 201N 201E between 14.1 cm and 16.0 cm. Mottled pebble chert, meanwhile, abruptly disappears above this depth range in unit 200N 200E, accompanied by a sharp drop in overall lithic frequency. In 200N 201E, mottled pebble chert persists to an uppermost threshold of 12.1 cm. Material below this threshold is assigned to the undated Occupation 1c; material above is assigned to the Late Prehistoric Occupation 2.

A number of lithic raw material utilization trends are evident in the depth-adjusted data (Figure 6.16). The mottled pebble chert associated with Feature 8 dominates Occupation

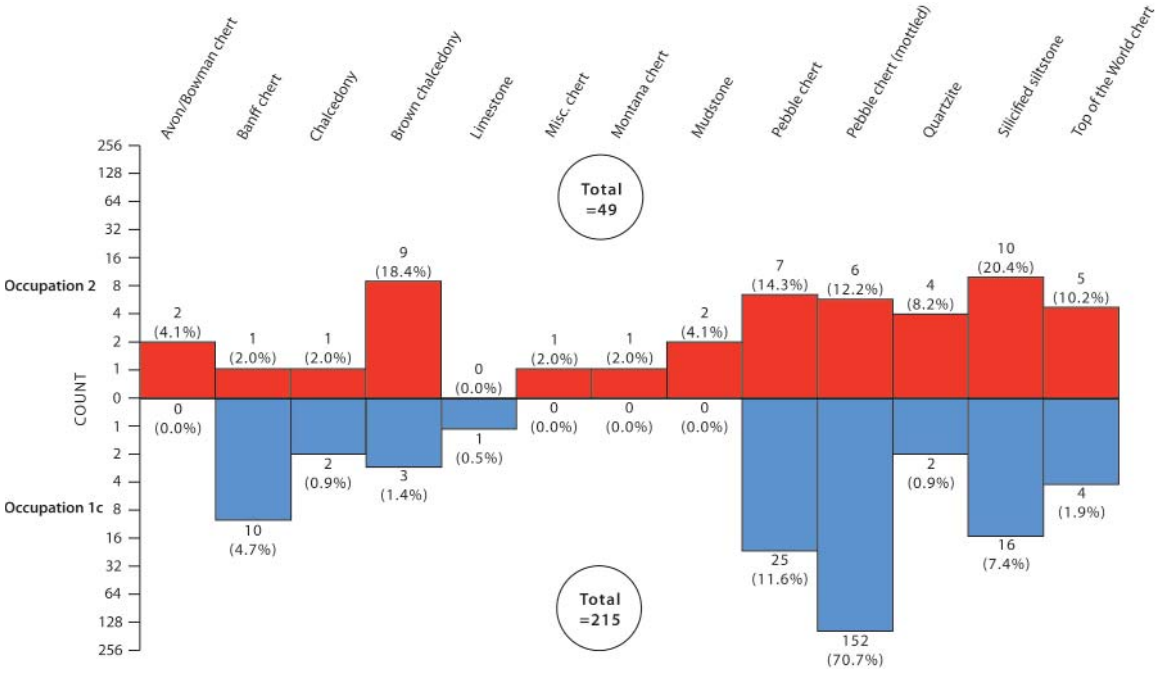

Figure 6.16: Raw material use by occupation, Area B; percentages are calculated from depth-adjusted *in situ* lithics, presented in Table 6.9

1c, making up 70.7% of all *in situ* materials; only six pieces, attributable to bioturbation, appear in Occupation 2. Other local materials, including siltstone, Banff chert, and other pebble chert, also decline in frequency over time. However, given the low numbers of material recovered above 14 cm adj. b.s., pebble chert and siltstone remain proportionally quite significant in the later occupation. Top of the World chert and brown chalcedony are the only exotics from known sources associated with the earlier occupation; both are more frequent with time, brown chalcedony dramatically so, making up 18.4% of *in situ* materials from the later occupation. Exotics that appear exclusively in Occupation 2 include Avon/Bowman chert, Montana chert, and mudstone.

Debitage

Nine classes of debitage type were recognized during analysis of the lithic assemblage from the 2010 excavations. Core reduction flakes and bipolar flakes are considered here rep-

resentative of the primary stages of stone tool manufacture, including cobble testing, decortication, and initial shaping. Reduction flakes, thinning flakes, and core rejuvenation flakes are classed here as representative of the secondary stages of stone tool manufacture, including blank production, preform thinning, and biface shaping. The final, tertiary stages of stone tool reduction, including edge sharpening and retouch, are represented by pressure flakes and bifacial reduction flakes. Broken flakes with no platform and angular shatter are treated as unclassifiable.

Using this classificatory scheme and the divisions of cultural occupations by adjusted depth discussed in the previous section (Tables 6.7 and 6.8), a cursory review of debitage characteristics for each area is presented in Tables 6.9 and 6.10. In Area A, proportions of primary, secondary, and tertiary reduction stages remain fairly constant across all three cultural occupations. Exceptions are a decrease, by proportion, in secondary flake production and an increase in tertiary flake production in Occupation 2; however, the small sample size (n=32) limits the interpretability of these results. Relatively low numbers of primary flakes found in the screen,

Table 6.9: Debitage reduction stages, Area A

Occupation	Flake class (count/% total)			
	Primary	Secondary	Tertiary	Unclassified
Occupation 1a	6 (11.1%)	21 (38.9%)	9 (16.7%)	18 (33.3%)
Occupation 1b	8 (13.1%)	22 (36.1%)	12 (19.7%)	19 (31.1%)
Occupation 2	4 (12.5%)	8 (25.0%)	8 (25.0%)	12 (37.5%)
Screen	22 (7.2%)	86 (28.3%)	62 (20.4%)	134 (44.1%)

Table 6.10: Debitage reduction stages, Area B

Occupation	Flake class (count/% total)			
	Primary	Secondary	Tertiary	Unclassified
Occupation 1c	6 (3.0%)	52 (26.1%)	50 (25.1%)	91 (45.2%)
Occupation 2	2 (5.1%)	15 (38.5%)	7 (17.9%)	15 (38.5%)
Screen	5 (2.5%)	40 (19.7%)	68 (33.5%)	90 (44.3%)

meanwhile, reflect the larger size of this type of debitage, and its greater likelihood of being found *in situ*. Overall, a tendency for about 50% of the debitage to come from the secondary and tertiary stages of tool production across all three occupations in consistent with the area's sustained use as a camping and general activity area.

A sharper distinction can be drawn between occupations in Area B. The later Occupation 2 appears comparable to Occupations 1a and 1b in the Area A data set, with an emphasis on secondary stages of tool production. *In situ* material from the earlier Occupation 1c exhibits high numbers of both secondary and tertiary flakes. With no evidence of bipolar percussion in this portion of the assemblage, this debitage is the byproduct of the intermediate and later stages of biface preparation.

Peculiar to this cluster are seven core rejuvenation flakes from Feature 8 in unit 200N 201E, all made of mottled pebble chert. Only 10 other such flakes were found in Areas A and B combined; the manufacturing technique associated with what was probably a single mottled pebble chert core was unusual for the site as a whole. Two of the core rejuvenation flakes refit to form a primary ridge flake, indicative of microblade production (Sanger 1968b; Odell 2003:96); three refit to form a pair of overlapping core rejuvenation tablets removed with sequential burin-driven blows, also distinctive of microblade manufacture (Sanger 1968b; Wilson et al. 2011). Four flake fragments from this cluster refit to form two complete microblades. Three of the fragments exhibit edgewear or retouch and can also be classed as tools; they are included in the following discussion of individual specimens related to microblade manufacture at DlPo-8, and the context of microblade sites in southern Alberta and the Interior Plateau. In addition, a number of black pebble chert flakes from this cluster are blade-like in

appearance; no ridge flakes or core rejuvenation tablets were found in this material, and those pieces that show evidence of wear are discussed in the section on edgeworn flakes below.

Microblades and ridge flakes

Microblades are a type of blade classified as being more than twice as long as they are wide and less than 5 cm in length. They are generally parallel-sided, thin, and feature one or more linear crests, or arrises, running down their length (Crabtree 1976:76; Kooyman 2000:12, 75). Speculative uses include hafting as engravers, cutting, scraping, and slotting as barbs in the sides of composite projectiles (Fladmark 1986; Greaves 1991; Pokotylo 1978; Pokotylo and Mitchell 1998:97-98; Sanger 1968*a*, 1968*b*).

The presence of microblades in the Interior Plateau has long been recognized, with occurrences more common in British Columbia than on the Columbia Plateau. Materials used in microblade manufacture in this area generally reflect local availability, but otherwise show remarkable uniformity in size and shape throughout their geographic and temporal ranges (Borden 1956, 1960, 1961, 1962; Browman and Munsell 1969; Campbell 1985:300-304; Munsell 1968; Pokotylo and Mitchell 1998:74-75; Sanger 1967, 1968a, 1970).

Despite the possibility of influence from the subarctic Denali complex[1], David Sanger (1968a:113-114) saw the association of microblades in otherwise typically local assemblages in the B.C. interior as representative of a distinct Plateau Microblade tradition. In addition to core rotation, microblades being removed from only one end of the core, and cores forming

[1] Sanger used the term "Northwest Microblade tradition", after MacNeish (1959) and Irving (1962). "Denali complex" is the term used in current scholarship (Clark and Gotthardt 1999; Younie et al. 2010:73), following Hadleigh-West (1967).

a wedge-shaped keel, also distinctive of this tradition is the absence of core rejuvenation tablets or ridge flakes. Although Sanger's (1967, 1968a) original assessment of materials from the Lochnore-Nesikep locality in southwest British Columbia also identified striking platforms on weathered rather than fresh surfaces, this attribute was not recognized in subsequent reanalysis of the materials (Ludowicz 1983; Pokotylo and Mitchell 1998:97). That said, given the attested absence of core rejuvenation tablets and ridge flakes, there may be few other recognizable products of the technology other than cores and the microblades (Campbell 1985:302).

Sanger (1967:189-190) saw microblades in the Interior Plateau as reaching peak intensity between 5,000 and 1,500 B.C., becoming absent by A.D. 1. This assessment has since been somewhat revised; early occurences of microblades in the Plateau, though rare, have been recognized as contemporary with Early Prehistoric assemblages in the far north (Chatters and Pokotylo 1998:74; Rousseau 1993), including at Kettle Falls on the middle Columbia River ca. 7,600-6,800 B.C. (Pokotylo and Mitchell 1998:95). Pokotylo and Mitchell (1998:95) note somewhat equivocal evidence for microblades in the British Columbia Plateau persisting over the past two millennia, although dating problems are acknowledged. This evidence includes assemblages in the Highland Valley (Arcas Associates 1986), Anahim Lake area (Wilmeth 1978), and Williams Lake area (Whitlam 1976). Although microblades in the Interior Plateau are most common in the Middle Prehistoric, given their broad distribution, their occurrence cannot be viewed as a reliable temporal diagnostic.

The presence of microblades east of the Rocky Mountains has also long been attested, but only rarely in excavated contexts. In southern Alberta, analyses of the Russell Johnston collection from the Little Gem area and other sites near Cereal noted the presence of mi-

croblades in surface blowouts, some of which were found in association with Cody complex materials (Wormington 1957:217-218; Wormington and Forbis 1965:60, 83). In the late 1950s, Don King of the Glenbow Foundation collected 62 microblades and fragments, as well as seven ridge flakes, all struck from obsidian and chalcedony cores, from another localized blow-out near High River (Sanger 1968*b*:195; Wilson et al. 2011; Wormington and Forbis 1965:128). The Fullerton site near Wetaskiwin (Frazer Taylor, pers. comm. cited in Sanger 1968*b*:201) yielded a number of prismatic obsidian microblades from a poorly stratified dune site, and the assemblage was interpreted as "pre-Oxbow". Most prevalent is evidence from Alberta's north, where the Bezya site (LeBlanc and Ives 1986), the Fort Vermillion area (Pyszczyk 1991), the Little Pond site (Younie et al. 2010), and other sites in the Oilsands region (Wickham 2009) have yielded microblades and/or wedge-shaped cores. Through analysis of the reduction sequence of the Little Pond and Bezya materials, Younie and colleagues (2010:89) noted several features that are typical of the Denali complex, including the presence of platform tablets and the removal of ridge flakes, coupled with the bifacial or unifacial preparation of wedge-shaped cores. The assemblage therefore is estimated to date between 13,500 and 3,000 BP (Clark 2001:73; Holmes 2001:162; Younie et al. 2010:73).

Most proximate to the finds in the Oldman Gap are the High River microblades. Sanger (1968b:205) noted several differences between the microblades of this assemblage and those of the Plateau Microblade tradition; such attributes of the High River microblades include the frequent occurrence of multiple strikes to the platforms, the presence of ridge flakes created through transverse flaking, and a high number of pieces that are non-triangular in transverse cross section. Echoing the sentiments of Sanger (1968b:206), several authors

have suggested that the High River assemblage could be an anomalous southern expression of the Denali complex (LeBlanc and Ives 1986; Magne and Fedje 2007).

However, since 1981, a number of microblade cores have been found in the High River area; these have been described in an article currently in press by Michael Wilson, John Visser, and Martin Magne (Wilson et al. 2011). Their examination of the cores confirmed that many of Sanger's (1968b) predictions of what they would look like were essentially correct. In addition to the differences from the Plateau Microblade tradition, the High River microblade cores differ from the Denali complex microblade cores in that they exhibit no taper, or wedge shape, from striking platform to keel. Instead, cores were "square or rectangular tablets at the preform manufacturing stage" (Wilson et al. 2011:11). Representing "a unique microblade technology," the High River microblade tradition is "typified by the use of ridge flakes to initiate blade detachment and by platform preparation by means of burin-like blows against a transversely flaked, rising platform ridge" (Wilson et al. 2011:11).

Kooyman (2000:12) cautions that while blades and microblades are made from distinctive cores, elongate, or lamellar, flakes can be produced fortuitously through other means. Bipolar percussion is one example—several such fortuitously produced microblade flakes have been recovered in southwestern Alberta, but are not representative of a microblade production-oriented technology (Sanger 1968*b*:202). Telling the difference can be a sticky problem. In general, the presence of cores showing a pattern of microblade removal is seen as the most reliable indicator of a microblade industry (Browman and Munsell 1972; Campbell 1985:301; Sanger 1968*a*:95, 1970:106). Unfortunately, no microblade cores were recovered in the 2010 excavations at DlPo-8, nor were any recovered in previous work at the site.

A similar scenario was encountered by Sanger in his analysis of the High River microblades (Sanger 1968*b*). In the absence of distinctive microblade cores, Sanger attempted to characterize the High River microblade industry, and predict the shape of the cores, based on an assessment of the microblades' qualtitative and quantitative attributes. This analysis was accomplished in large part through comparison with microblade assemblages that he had previously worked with from the Plateau Microblade Tradition (Sanger 1968*a*, 1968*b*, 1970).

Subsequent experimental attempts to duplicate archaeologically observed cores and microblades of the Interior Plateau, where microblade sites are relatively common, have shown that byproducts of the process are indistinguishable from those made during biface

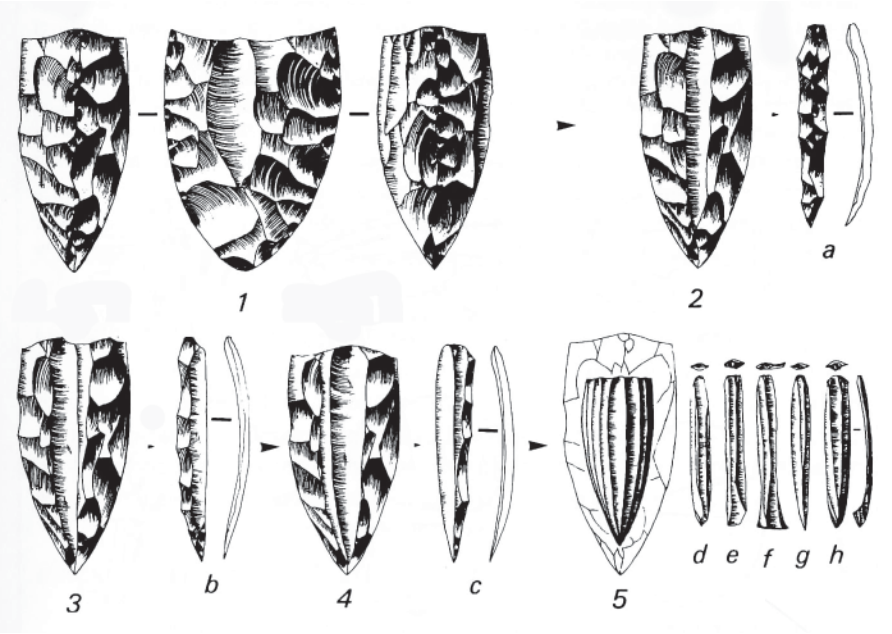

Figure 6.17: Schematic of microblade technique from a wedge-shaped, bifacially prepared core. 1) A dominant striking platform is established through core tablet removal (tablet not shown); 2) a primary ridge flake, or *lame à crête*, is made by removing a lateral ridge; 3-4) secondary ridge flakes, or initial microblades, are removed, showing evidence of core preparation on part of their dorsal faces; 5) microblades removed later in the sequence show only parallel arrises on their dorsal faces, while the core is reduced in size through repeated striking platform rejuvenation (Odell 2003: Fig. 4.5, adapted from Tixier 1984: Fig. 5).

manufacture (Kelly 1982; Campbell 1985:303). However, Interior Plateau microblade collections lack several attributes distinctive to the High River microblade assemblage, notably core rejuvenation tablets and well-defined ridge flakes (Sanger 1968*b*:194). While requiring a prepared biface as a starting point, neither core rejuvenation tablets nor ridge flakes are typical of biface manufacture. These elements, together with the microblades themselves, are particular to the microblade manufacturing process; following Sanger (1968*b*) and Odell (2003:96), they are indicative of the presence of microblade technology, and should be noted when present in an assemblage.

Individual specimens at DlPo-8 recovered during the 2010 excavations that have properties distinctly related to microblade manufacturing are described as follow:

DlPo-8:2619 and 2843. *Unit 200N 200E, 38.0 cm N, 76.0 cm E, 17.0 cm b.s.; unit 200N 201E, 83.5 cm N, 41.5 cm E, 18.5 cm b.s.; Occupation 1c.* These two fragments refit to form a complete elongate, parallel-sided core rejuvenation flake of mottled grey-green pebble chert. The distal end flares outward in a squared overshot termination. The left margin is straight, while the right margin is incurvate. Neither margin is retouched. The proximal end is a wide, irregularly shaped striking platform; it does not exhibit crushing, battering, or grinding. The flake is sickle-shaped in longitudinal profile and has a pronounced triangular transverse cross section.

Two linear arrises at the proximal end converge to form a single pronounced ridge running longitudinally down the length of the flake. The area in which the two arrises converge refits with another elongated ridge flake (see DlPo-8:3058, below), on which the single main ridge is contiguous, and which represents an earlier

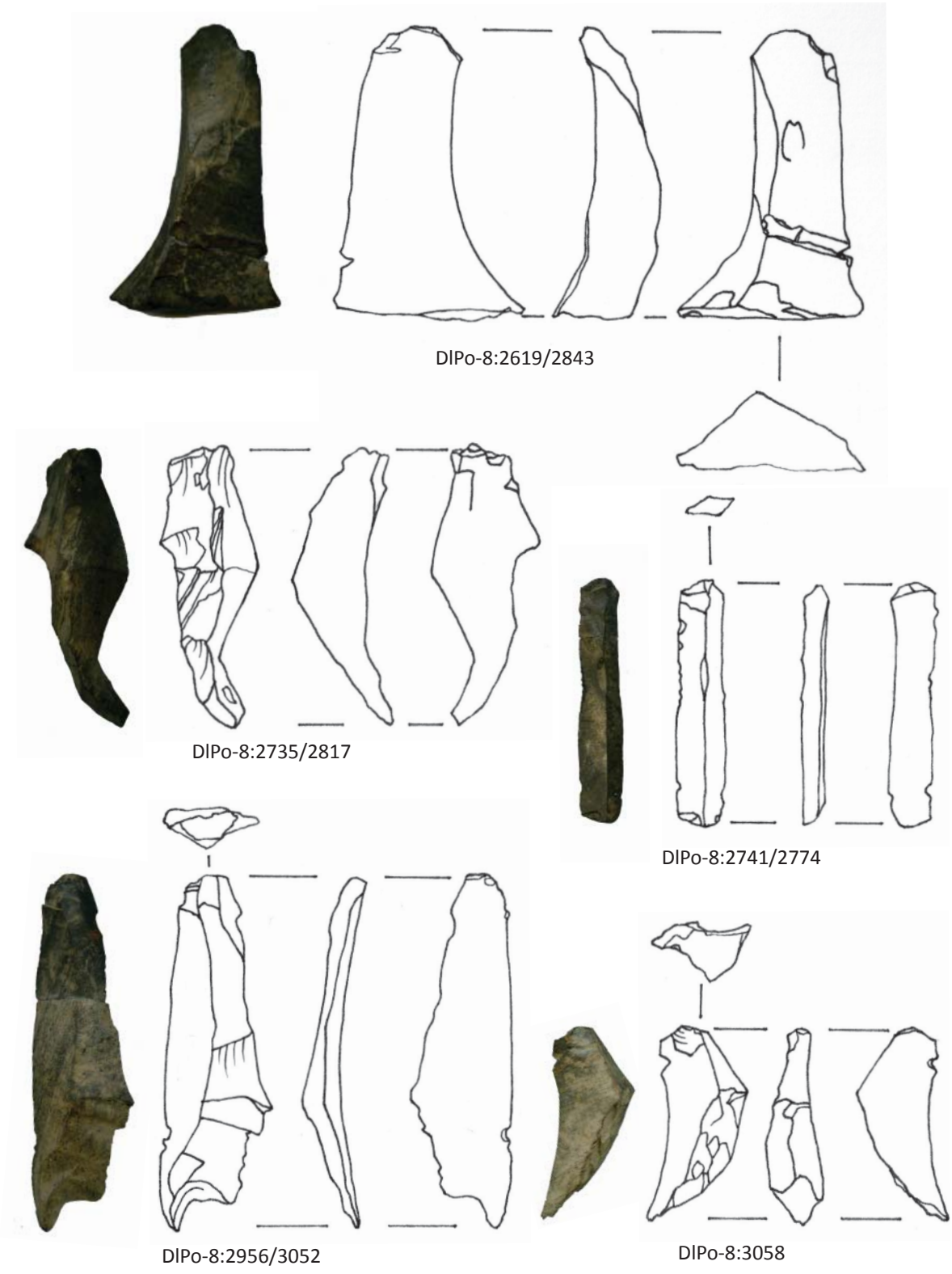

Figure 6.18: Microblades and associated debitage, Feature 8, Area B (actual size)

removal along the same plane in the reduction sequence. Numerous transverse oriented striking platforms occur along this ridge, showing that the rejuvenation flake was struck from a mostly unifacially prepared core: five platform scars are directed towards the left side of the flake, while only one platform scar, located towards the distal end of the flake, is oriented to the right.

The striking platform of this flake is overlapped by DlPo-8:3058; the striking platforms of the overlapping pieces, when refit, are offset by 9 mm, and are oriented in the same direction. This overlap is characteristic of the process of "platform rejuvenation... accomplished by detachment of new burin-like spalls along the platform ridge" (Wilson et al. 2011:5). Two such cores with overlapping burin scars on the platform have been documented (Wilson et al. 2011:11). These would each have formed part of the dominant striking platform from which microblades would have been removed.

The absence of platform preparation is consistent with Sanger's prediction that High River microblade cores would lack platform faceting and grinding (Sanger 1968b; Wilson et al. 2011:11). Further, while most High River microblade cores are bifacial, one features "mostly unifacial shaping" (Wilson et al. 2011:5); the pattern of mostly unifacial negative platforms along the arris of this specimen falls within the range of known High River microblade cores.

DlPo-8:2735 and 2817. *Unit 200N 201E, 58.0 cm N, 83.0 cm E, 16.5 cm b.s.; unit 200N 201E, 62.0 cm N, 78.0 cm E, 14.5 cm b.s.; Occupation 1c.* These two pieces refit to form an elongated, complete, slightly sinuous core rejuvenation flake of mottled grey-

green pebble chert identical to DlPo-8:2619 and 2843. A high crest runs longitudinally down the center of the flake, along which seven striking platforms are visible, from which transversely oriented flake removals originated. Overall shaping is again primarily unifacial: six platform scars are on the left side of the dorsal face, while only one is on the right. Several other flake scars, particularly on the distal right side of the dorsal face, do not correlate with visible striking platform scars.

The distal end is pointed; the left margin is sinuous, while the right margin is broadly excurvate, leading the distal tip to skew leftward. The proximal end is wide and squared, and exhibits extensive crushing and battering on the dorsal face. The flake curves downward and is sickle-shaped in longitudinal profile, with a steeply triangular transverse cross section. The platform is angled 79.5° in relation to the dorsal surface of the flake, falling within the 73-88° range for High River microblades; the average within that assemblage was 79° (Sanger 1968*b*:194-196).

The overall form of a central ridge from which transverse flakes have been removed bidirectionally conforms with definitions of a primary ridge flake (Sanger 1968*b*:197) or *lame à crête* (Bordes 1967:44; Odell 2003:95; Figure 6.17, *a*). It does not refit with the single secondary ridge flake in the assemblage, however. It is possible that the core was rotated and primary ridge flakes were removed from multiple faces.

DlPo-8:2741 and 2774. *Unit 200N 201E, 80.5 cm N, 31.0 cm E, 18.5 cm b.s.; unit 200N 201E, 76.0 cm N, 36.0 cm E, 11.0 cm b.s.; Occupation 1c.* These two fragments refit to form a complete small, thin, rectangular and parallel-sided linear flake made

of mottled grey-green pebble chert. Dimensions of 39.2 mm length and 7.3 mm width suit classification of this artifact as a microblade (Crabtree 1976:76; Kooyman 2000:12). It is flat in longitudinal profile, and has a triangular transverse cross section. The distal end terminates with a squared hinge fracture, with one chip on the dorsal right side. Left and right margins are straight, and a single linear arris runs longitudinally down the middle of the flake. A row of 15 edgewear or retouch facets is present along the dorsal right margin.

The striking platform is present at the squared, faceted proximal end. Several chips on the dorsal face of this end show the crushing and battering associated with reduction of the overhang at the edge of the core that results from previous microblade removal (Bordes 1947, 1967; Sanger 1968b:195-196; Semenov 1964:46). While this crushing and battering was not observed on any of the High River microblade cores, "this type of preparation may have taken place just prior to microblade removal" (Wilson et al. 2011:11). The platform is at a pronouncedly acute angle (58°) in relation to the main axis of the flake. While outside the range observed by Sanger (1968b), the angle of striking platform to fluted surface on one High River microblade core was about 55°, with a range of variation of 5-10° (Wilson et al. 2011:11).

DlPo-8:2956 and 3062. *Unit 201N 201E, 20.0 cm N, 25.0 cm E, 12.0 cm b.s.; ST 23, 15-30 b.s.; Occupation 1c.* These two fragments refit to form a complete, elongate flake of mottled grey-green pebble chert 57.7 mm long and 16.9 mm wide. A high central arris that runs longitudinally down the center of the flake. To the right of this

arris is a single longitudinally oriented flake scar, while left of this ridge is a series of transverse flaking scars. This pattern matches what has been described alternately as a secondary ridge flake (Sanger 1968b:197) or initial blade (Odell 2003:95; Tixier 1984:95), in which the first microblades struck from a prepared core will exhibit transverse scars from earlier bifacial core preparation on one side of their dorsal faces together with a longitudinally oriented scar from a previously removed ridge flake on the side opposite (see Figure 6.17, *b* and *c*).

The distal end of the flake is a pointed feathered termination. The right margin is straight, while the left margin is more irregularly shaped, following the contours of five transverse flakes. One of these flakes was struck from the same prepared platform as the blade itself, reminiscent of the oblique "shaping spalls" or "corner platform flakes" observed on some of the High River cores (Wilson et al. 2011:11) and described by West (1967:369). The proximal end is squared, crushed, and battered, with an acute facetted platform angled 71.5° in relation to the body of the flake. The piece is sickle-shaped in longitudinal profile, and has a triangular transverse cross section.

Retouch is present on both pieces that form this refit. However, the wear that exists on the left margin of the proximal section, DlPo-8:3062, does not appear along the contiguous margin of the distal section, DlPo-8:2956; the wear occurred on them as separate pieces. The wear pattern on the proximal section consists of 11 tiny facets on the distal left margin. On the distal section, edgewear is localized around the end and right side of the pointed tip, consisting of 10 small facets.

DlPo-8:3058. *ST 23, 15-30 cm b.s.; Occupation 1c.* An elongate core rejuvenation flake of mottled pebble chert. The flake is crescent-shaped, with the distal end tapering to a pointed tip. The left margin is excurvate, the right incurvate; neither features marginal retouch. The proximal end is a squared striking platform; no crushing or battering is evident on the dorsal face of the platform, while the wide, flat facet is angled slightly acutely (85.5°). The flake is sickle-shaped in longitudinal profile and highly triangular in transverse cross section.

This piece refits with DlPo-8:2619/2843 (described above) and overlies the platform of that refit piece. A high, longitudinally oriented arris is contiguous between the two, and as with the previously described piece, multiple transversely-oriented striking platforms are present on this crest. The three platform scars on the arris are directed to the left side of the flake. As with the refit, this specimen appears to be a core rejuvenation tablet struck in a sequence of burin-like blows from the striking platform of a microblade core.

In summary, the microblades, ridge flakes, core rejuvenation tablets, and associated core fragments and debitage at DlPo-8 come from a single, distinctive mottled pebble chert core. The observed tendency of the grey-green mottled chert to weather chemically through post-depositional processes makes it difficult to determine whether mottled black specimens in the same artifact cluster, Feature 8 in Area B, are from the same core. True microblades were observed only from the mottled variant, although blade-like pieces were noted in the black material. While classified as "pebble chert" in this analysis, this is somewhat of a misnomer: cores were cobble-sized, and were knapped with a multidirectional reduction strategy rather than the

bipolar percussion technique used on pebble-sized pieces, and no bipolar flakes were identified in this portion of the assemblage. Bifacial reduction flakes are present in the scatter from Feature 8, but ridge flakes and core rejuvenation tablets show primarily unifacial reduction. These pieces were found in a tightly grouped cluster of lithic debitage that appears related to a single manufacturing event.

The core rejuvenation tablets of the mottled material show the striking platform of the core to have been made through a sequential series of burin-like blows, and both primary and secondary ridge flakes were removed to create a fluted face from which microblades could be removed. Microblades consist of specimens with single central arrises. The proximal dorsal faces of microblades were subjected to battering and crushing to remove projecting overhangs from previous microblade removal, but platforms themselves underwent no appreciable preparation. Microblades were struck from fluted faces that were sometimes highly acutely angled to the striking platform, with platform angles ranging from 58-79°. Edgewear is present on the lateral margins of both complete microblades, and on the distal margin of one.

While these materials fit within the range described for the nearby High River microblade tradition, many uncertainties remain. For instance, while core rejuvenation tablets and ridge flakes are atypical of Plateau Microblade tradition sites, they are noted for both Denali complex (Younie et al. 2010:89) and High River microblade tradition sites (Sanger 1968*b*; Wilson et al. 2011). A number of methods of platform rejuvenation are noted for Denali complex microblade cores, including "burin-like flake detachment" (Younie 2008:185). Further investigation is required to compare Denali complex materials to the sequentially struck core rejuvenation tablets using burin-like blows reported for some High River microblade cores

(Wilson et al. 2011), a rejuvenation technique which appears to have been practiced at DlPo-8.

The few complete specimens also make it difficult to gauge whether the microblades at DlPo-8 were struck from tabular cores. The parallel sides of one of the DlPo-8 microblades correspond with Sanger's (1968*b*:196) prediction that these would be struck from tabular cores. However, one microblade and the primary ridge flake are pointed at the distal end, a feature which Sanger felt was more indicative of microblade cores with wedge-shaped keels. The distinction may be irrelevant—tabular microblade cores are uncommon, but not unheard of, at Denali complex sites, particularly later Denali sites such as Pointed Mountain, ca. 4000-2200 BP (MacNeish 1954; Millar 1981; Younie 2008:23). While these fit within the range offered by Sanger (1968*b*) and Wilson et al. (2011) for High River microblades, the small sample available at DlPo-8 unfortunately does little to reinforce the claim that this represents a unique tradition (Wilson et al. 2011).

Tools and cores

In addition to the microblades described above, 20 formed tools, 65 expedient tools, and 11 cores or core fragments were recovered during the 2010 work at DlPo-8. Table 6.11 provides a brief summary, sorted by area. Formed tools, discussed first, conform to generally recognized shapes and styles, and have undergone sufficient thinning and retouch to render invisible most properties of the original flake, such as platform and cortex. Formed tools include projectile points, scrapers, bifaces, unifaces, and wedges, or *pièces esquillées*.. Groundstone, which while not retouched, has undergone extensive modification from its original form, and is included in this category.

Expedient tools are pieces which have undergone some modification, usually pat-

Table 6.11: Tool and core counts, DlPo-8 Areas A and B, surface, and shovel tests

Artifact Type	Area A	Area B*	Surface & Shovel Tests*
Formed Tools			
Projectile Point			
Avonlea	-	1	-
Bracken	-	-	1
Salmon River	1	-	-
Wallula Square Stemmed	1	-	-
Indeterminate	1	1	1
Biface	4	-	2
Groundstone	1	-	-
Scraper	1	3	-
Uniface	-	1	-
Wedge	1	1	-
Expedient Tools			
Chopper	-	1	-
Edgeworn flake	16	7	5
Flake tool, bimarginal	1	1	2
Flake tool, composite	1	1	-
Flake tool, unimarginal	7	6	1
Microblade**	-	4	-
Net sinker	-	-	1
Ochre	15	1	-
Cores			
Bipolar core	3	2	1
Core fragment	-	5	-

** Results from ST 23 are included in count totals for Area B.*
*** Three microblade fragments exhibit retouch or wear; these are discussed in the previous section.*

terned retouch or edgewear, but for which most properties of the original flake or cobble are still visible. Included in this class are net sinkers and choppers, cobble tools which have undergone only slight marginal reduction. Also included are unimarginal flake tools (those with one worked edge), bimarginal flake tools (those with two worked edges), and composite flake tools (those with multiple worked edges), which exhibit what under macroscopic analysis appears to be deliberate, patterned retouch, but no substantial effort at reshaping. Edgeworn

flakes exhibit patterns of wear along one or more edges that often require microscopic assistance to view clearly. Chipping of this size is unlikely to have been produced through deliberate retouch, and may be attributable to usewear. In other cases, the observed edgewear may simply be the result of taphonomic processes; an effort to distinguish between different wear patterns has not been attempted in this analysis. Finally, ochre is included in this category; it is difficult to judge to what extent, if any, individual pieces have been modified.

Two classes of core were identified during the analysis of the DlPo-8 assemblage. Multidirectional cores exhibit platform scars showing flake removals oriented from a number of different angles. Bipolar cores are typically small, pebble-sized objects that show evidence of force having been applied from two opposing ends simultaneously. This process was typically accomplished by holding the core against a large stone as an anvil, and then impacting the exposed upper margin with a hammerstone, causing the pebble to split (Andrefsky 2005:28; Goodyear 1993; Steuber 2008). Core fragments are also briefly described.

In the Protohistoric period, the Oldman Gap straddled the ethnographically attested frontier between the Piikani, inhabitants of the Northwest Plains, and the Ktunaxa, some of whom included both the Northwest Plains and the Interior Plateau in their seasonal round (Coues 1897; Grinnell 1892; Kidd 1986:8; Thompson 1916:238, 345-347; Turney-High 1941:23; Wissler 1910; Yanicki 1999:42). It is far from certain to what extent the geopolitical situation of the Protohistoric period extends into prehistory, but this uncertainty gives good reason to consider the literature of both the Northwest Plains and Interior Plateau in assessing such aspects of the assemblage as tool style. Certainly it would be unreasonable to assume that

because DlPo-8 is situated within the boundaries of the modern political entity of Alberta, it is a Northwest Plains site.

Consideration of the archaeological records of both sides of the Rocky Mountains is especially important for projectile points, where styles at different time periods are often quite different (cf. Carson and Magne 2008; Peck 2011). However, this exercise can also be a valuable excercise in assessing other materials, as can be seen in the previous discussion of microblades, and other objects like groundstone vessels and net sinkers that are largely anomalous to sites purely on the Alberta side of the continental divide. In the following tool descriptions, reference to both Interior Plateau and Northwest Plains assemblages is frequently made. Such comparison can in some cases lead to stylistic assessments that are equivocal, which is to be expected: residents of a frontier area, particularly if it were an open rather than closed boundary (Green and Perlman 1985) would potentially exhibit a blend of culture traits of both sides.

Projectile points

DlPo-8:2000. *Unit 93 N 103 E, 66.0 cm N, 24.0 cm E, 3.0 cm b.s.; Occupation 2.* This is a small, square-stemmed projectile point made of a dendritic yellow chalcedony containing large vugs. The artifact is complete except for the right shoulder, which has broken off with a linear snap fracture. The blade is triangular in shape, with an acutely pointed and very sharp tip and a

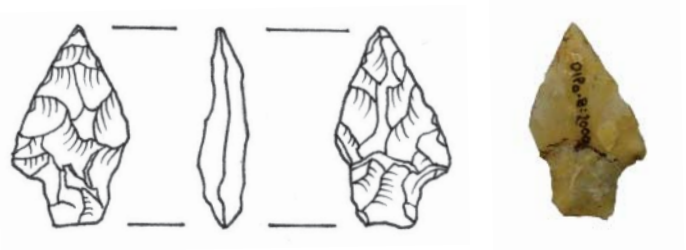

Figure 6.19: Wallula Rectangular Stemmed point (DlPo-8:2000, actual size)

slight rightward skew. Blade edges are straight; the one intact shoulder is angular and slightly obtuse. Corner-notching has produced a straight-sided stem that expands slightly towards the shoulders. Basal margins are angular and squared, while the base is straight except for a small spur that projects from the left basal corner. Longitudinal and transverse profiles are biconvex.

Small stemmed points are rare in Alberta and the Northwest Plains, to the point of being unheard of. One possible exception is labeled as a Head-Smashed-In Corner-Notched arrowhead (Mirau et al. 1999:34). This style, not widely recognized in the literature, is described as having triangular blades and broad notches, with a base narrower than the width of the blade; a photographed example, possibly from Head-Smashed-In, appears similar in style to DlPo-8:2000, but does not appear to be typical of the variant as described.

More widely reported in the literature are arrow-sized stemmed points from west of the continental divide, in the Interior Plateau. Here, a number of small, broadly corner-notched and stemmed points are known; those with triangular blades, square shoulders, straight square stems, and a convex to straight basal margin are considered distinctive, and have been defined as Wallula Rectangular Stemmed (Shiner 1961; Lohse 1985:351, 1995:10; Lohse and Schou 2008:200). Their distribution is greatest in the Southern Columbia Plateau, occurring as far upstream on the Columbia as Kettle Falls (Lohse 1985, 1995, 2008); the variant has also been widely reported in the Okanagan-Similkameen area, intermediate between the Columbia and Fraser Plateaus (Copp 2008). Their temporal distribution has been assigned to a range between 2,000 and 150 BP (Copp 2008:254-255; Lohse 1995:10).

DlPo-8:2001. *Unit 93N 102E, 80.0 cm N, 15.0 cm E, 15.0 cm b.s., Occupation 2.* This

is the blade of a small projectile point of glossy black Banff chert. The tip is pointed and the edges are excurvate, giving the blade a symmetrical, ovate shape. A hinge fracture occurred above the shoulders, and no part of the shoulders, notches, or base are visible on this fragment. The point is quite thin and biconvex in both transverse and longitudinal profiles. It is also quite regularly flaked, with retouch flakes from both the left and right margins converging on an arris that runs longitudinally down the center of the blade. Style cannot reliably be determined based on the portion present.

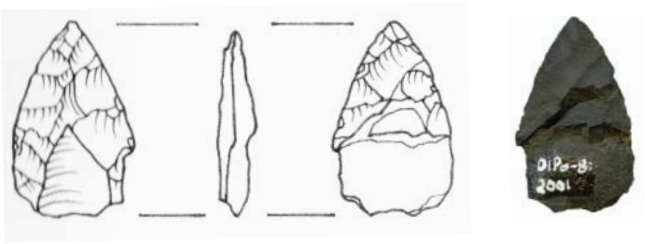

Figure 6.20: Unidentified projectile point fragment (DlPo-8:2001, actual size)

DlPo-8:2002. *Unit 93N 102E, 17.0 cm N, 7.0 cm E, 23.0 cm b.s.; Occupation 1a.* A complete, large side-notched projectile point of pinkish-red quartzite. The tip is slightly blunted, while the blade is triangular with a slight leftward skew. Blade edges are straight except for a small chip on the distal right margin. Shoulders are rounded and obtusely angled. The notches are shallow, rounded, and very wide, occurring

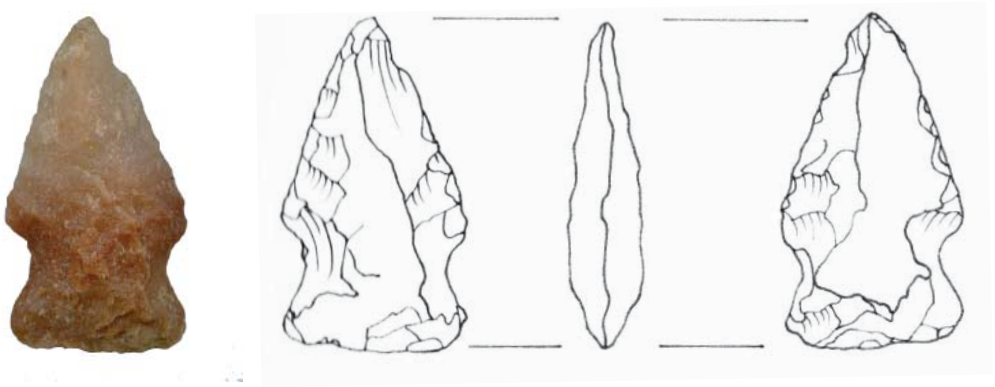

Figure 6.21: Salmon River point (DlPo-8:2002, actual size)

low on the lateral margins. Left and right basal margins are rounded, and the base is straight. Both the base and the basal margins are ground, and basal thinning flakes have been struck from both the dorsal and ventral faces.

Large side-notched projectile points are generally attributed to the Early Middle Prehistoric period; a number of terms have been used to describe point styles from this time period on either side of the continental divide, including Bitterroot, Blackwater, Gowen, Hawken, Mount Albion, Mummy Cave, Northern, Pahaska and Salmon River (Frison 1983:9-10; Peck 2011:133-142; Reeves 1969:30-31; Roll and Hackenberger 1998:126; Swanson et al. 1964; Walker 1992). Noting that the term Bitterroot could misleadingly imply a link to the ancestral Shoshoni, Reeves (1969) opted for the term "Mummy Cave complex" to classify these materials. Dyck (1983:92) and Vickers (1986:59) cautioned that a large amount of variability may be subsumed within such a broad classification, and that Mummy Cave should instead be considered a series. Subsequent statistical study (Walker 1992:132-142) and reanalysis of sites with Early Middle Prehistoric assemblages (Peck 2011:120-179) have provided greater clarity in the variability within this series.

A large, triangular-bladed and asymmetrical point such as DlPo-8:2002 with wide, shallow side notches low on the lateral margins and a straight basal margin best corresponds with the Gowen side-notched style, as defined by Walker (1992:44, 72). Peck proposes a tentative Gowen phase, noting however that "Gowen side-notched points appear to be rare in Alberta, if they exist at all" (Peck 2011:168). The two sites in which they have been recognized in stratigraphic contexts in Alberta, the Snyder Farm locality (DjPm-36) and the Spring Kill site (EgPs-51), are both proximate to the Front Range of the Rocky Mountains, and divorced geo-

graphically from sites in central Saskatchewan where they are otherwise known (Kasstan 2004; Schroedl and Walker 1978; Walker 1992; Zurburg 1991).

Walker (1992:133) cautioned that Gowen side-notched points may be equivocal to the Salmon River side-notched style (Swanson and Sneed 1966). Noting that the point style was originally described by Swanson and Sneed (1966) as straight-based and shallowly side-notched, with notches sometimes close enough to the basal margin to appear corner removed, Peck (2011:152) felt that these points are morphologically dissimilar from the more fish-tailed forms that appear in Alberta. However, shallowly side-notched, straight-based points not dissimilar from Swanson and Sneed's (1966) definition of Salmon River side-notched or Walker's (1992) definition of Gowen side-notched are shown among more fish-tailed projectile points from the Maple Leaf complex (Peck 2011:144, Plate 12 j, m, n, and p). As the proposed date range for Gowen, ca. 5900-5200 B.P. (Peck 2011:168), fits entirely within that proposed for the Maple Leaf complex, ca. 6300-5200 B.P. (Peck 2011:151), the distinction may be academic. The shallowly side-notched variant is present on both sides of the continental divide, occurring perhaps earlier on the Interior Plateau as far west as Idaho, ca. 6200 B.P. (Swanson 1972:110), than at sites on the Eastern Slopes or in Saskatchewan. Without corroborating evidence from other points in this style range or radiocarbon dates for the occupation from which the point was recovered, a designation as Salmon River style, with Maple Leaf complex affiliation, seems most appropriate for this geographic locale.

DlPo-8:2003. *Surface, north end of parking area, 4.5 m from terrace edge.* This is a projectile point fragment made of black chert. The artifact shows an irregular flaking pattern over both the dorsal and ventral surfaces, and is lenticular in cross-section. The

artifact was found on the surface in the area that is now used as a parking lot, and a number of chips and irregular fractures may be attributable to it being crushed in this setting. The absence of a dull grey patina on some fracture planes indicates what are probably more recent breaks.

Figure 6.22: Unidentified projectile point fragment (DlPo-8:2003, actual size)

Given the amount of breakage, the style of the piece cannot be determined. The left shoulder and left basal margin appear to be intact, while parts of the left blade, the right shoulder, and the right basal margin have been removed through recent fractures, and a break at the tip is indicated by a pair of older, patinated fractures.

DlPo-8:2545. *Surface, on trail between south end of parking area and random campsite.* This is a nearly complete, triangular-bladed, corner notched projectile point of pinkish-white variegated Montana chert. The tip is rounded, with a snap fracture at the very end indicating only a small portion of the artifact is missing. The tip does not bear any evidence of resharpening. Both the left and right blade margins are straight, creating a triangular-shaped blade. The left shoulder is broken, but the position of the fracture plane indicates that there would have been a pronounced tang. The right shoulder is only very slightly barbed; both shoulders are acutely angled. Left and right notches are

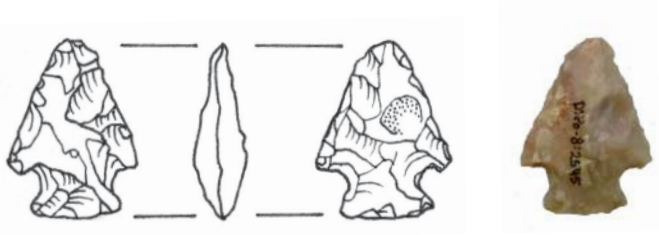

Figure 6.23: Bracken point (DlPo-8:2545, actual size)

rounded, and both sides are corner-notched, with the shoulders being wider than the base. Both basal lateral corners are also acutely angled, while the basal margin is slightly convex. The point is biconvex in both transverse and lateral profiles. There is a round potlid scar on the ventral blade face, indicating heat exposure either post-manufacture or post-depositionally. The artifact was found on the surface of the rutted vehicle path running south from the cleared part of the terrace to the random campsite in the treed area.

From a Northern Plains perspective, the corner notches and barbed shoulders are typical of classic Pelican Lake points (Brumley and Dau 1988:33; Dyck 1983:105; Kehoe 1974:109-111; Peck 2011:224-225). Convex-based variants of the Pelican Lake point style are common in southwestern Alberta, as well as northern and central Montana, and are frequently made of Avon chert, porcellanite, or, as likely with this specimen, Madison Formation chert (Brumley and Dau 1988:34; Peck 2011:225). The point is small (2.3 cm from base to tip; cf. DlPo-8:2538, a probable Avonlea point, the blade alone of which is 2.2 cm in length), in line with observations of the frequent occurrence of small Pelican Lake points, probably used as arrow tips (Brumley and Dau 1988:33; Dyck 1983:107; Peck 2011:225).

In the Eastern Plateau, a range of corner-notched projectile points mark the termination of the Middle Prehistoric period and appear to be approximately contemporary with Pelican Lake (Foor 1981:182; Roll and Hackenberger 1998:128). As on the Northern Plains, small variants are recognized that are interpreted as arrow points (Fredlund 1979; Roll and Hackenberger 1998:128). Their tendency to co-occur with side-notched variants in the Eastern Plateau has prompted Roll and Hackenberger (1998:128) to assert that "without corroborating

evidence, corner-notched projectile points, particularly singly or in small numbers, probably provide a poor basis for assigning chronology or cultural affiliation." There is no such lack of clarity on the Northern Plains; Peck (2011:235) notes, "A review of Pelican Lake sites in Alberta illustrates an overwhelming trend toward barbed, narrow-necked points dating between 3,600 and 2,800 BP."

Figure 6.24: Avonlea point fragment (DlPo-8:2538, actual size)

DlPo-8:2538. *Unit 201 N 201 E, 54.0 cm N, 42.0 cm E, 10.0 cm b.s.; Occupation 2.* The ovate, elongate blade of a small, narrow, thin projectile point, made out of a variegated tan chert, probably from the Madison Formation or other Montana source area. The very tip is broken off with a hinge fracture, while the blade edges are excurvate. A transverse fracture plane runs across the neck, just below the shoulders, which are squared. Notch depth and orientation cannot be determined. A large chip at the proximal end of the left blade edge is probably incidental breakage. Overall flaking is quite regular, and the point exhibits fine symmetry. The point is biconvex in both transverse and longitudinal profiles.

Despite the absence of a base, the very narrow neck width, coupled with the thinness and fine workmanship of DlPo-8:2538, are typical of Avonlea style projectile points (Kehoe 1966; Kehoe and McCorquodale 1961; Peck 2011:336; Reeves 1983:161-162; Wettlaufer and Mayer-Oakes 1960:37-41). The point style, considered a diagnostic marker of the Avonlea phase, is common throughout the Northwest Plains, including Alberta and Saskatchewan

(Meyer et al. 1988; Peck 2011:335-336; Peck and Hudecek-Cuffe 2003; Smith and Walker 1988; Reeves 1983; Vickers 1986), but less frequently to the east in Manitoba and the Dakotas (Hannus and Nowak 1988; Joyes 1988) and south into Montana (Brumley and Dau 1988:41; Fraley 1988). The point style is also abundantly represented on the western side of the continental divide, with greatest concentrations occurring along the Kootenay River in southeast British Columbia and northern Idaho, and also throughout northwestern Montana (Roll 1988; Roll and Hackenberger 1998:132).

The Avonlea phase is generally regarded as the first in both the Northwest Plains and Interior Plateau to have made exclusive use of bow and arrow technology (Peck 2011:336; Roll and Hackenberger 1998:132; Vickers 1994:14). Although the phase may have appeared as early as 1,550 BP, Peck's (2011:346-347, 355-366) review of dates for Avonlea sites in Alberta puts the likeliest initial occurrence at about 1,350 BP, with a rapid termination around 1,100 BP. In the eastern two-thirds of the Eastern Plateau, Avonlea specimens occur sometime after 1,450 BP, persisting until sometime after 950 BP (Roll 1988; Roll and Hackenberger 1998:132).

Figure 6.25: Unidentified projectile point fragment (DlPo-8:2543, actual size)

DlPo-8:2543. *Unit 200N 200E, 7.0 cm N, 84.0 cm E, 22.0 cm b.s.; Occupation 1c.* A triangular, bifacially worked tool fragment of black pebble chert; one pointed corner is represented, probably the tip of a projectile point. Parts of both blade edges are present; the left margin is thin and regularly retouched, while the right margin is thicker as a result of several hinge fractures. The proximal end of the fragment is an angled snap fracture that would

have traversed the width of the blade. If symmetry to the two margins is assumed, the blade would have been quite broad. Style cannot be determined from the portion present.

Bifaces

DlPo-8:2010. *Unit 93N 102E, 30.0 cm N, 11.0 cm E, 10.0 cm b.s.; Occupation 2.* This is the square-stemmed base of a large bifacial tool made of purple and white Etherington Chert. A jagged transverse fracture forms the tool's distal margin; shoulders

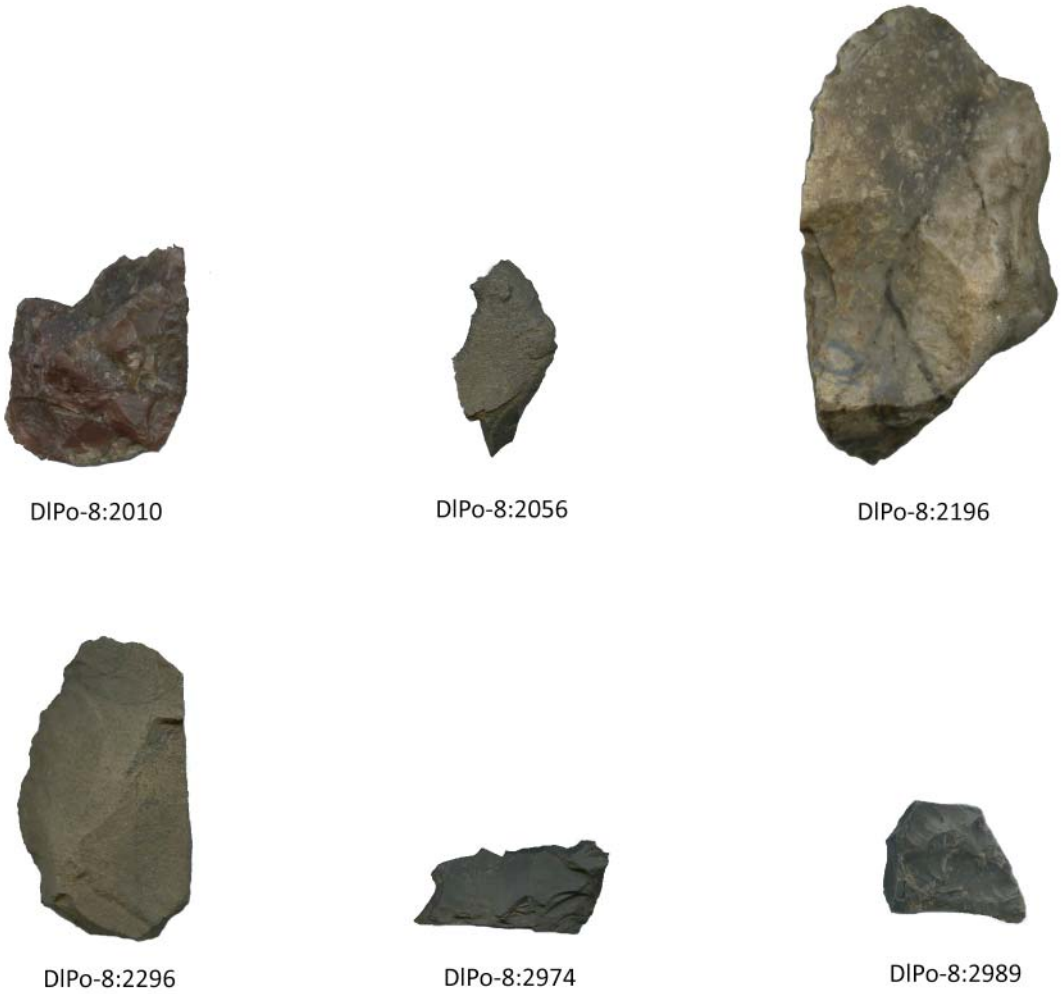

Figure 6.26: Bifaces, DlPo-8

and blade are not present. The lateral margins are straight and parallel up to the distal fracture point and exhibit fine bifacial retouch. The proximal left and right corners are rounded, and the basal margin is slightly convex, with a rightward skew; both proximal margins and basal margin also show fine bifacial retouch. Parts of the left and right margins are rounded and polished, possibly from grinding.

Square stems are uncommon as hafting elements in any era on the Northwest Plains. Large square-stemmed projectile points are known, but these occur temporally quite early. On the Northwest Plains, this includes Alberta phase, ca. 9,600-9,000 B.P. (Peck 2011:67), and Scottsbluff-Eden phase materials, ca. 9,000-8,600 B.P. (Frison et al. 1996:15; Peck 2011:78). In the Interior Plateau, large square-stemmed projectile points with slight grinding of the basal lateral margins are termed Windust style (Ames 2000a, 2000b; Copp 2008:255; Rice 1972). These points have been variably dated between ca. 11,000 and 7,000 B.P. (Ames et al. 1981; Davis and Sisson 1998; Green et al. 1998; Lohse 1985, 1995:6; Rice 1965, 1972; Sappington 1994). Some authors have more recently suggested dates of between 13,000 and 9,000 B.P. (Copp 2008:253; Lohse and Schou 2008:199).

Identification of this object as a projectile point base is problematic, given the absence of a blade; meanwhile, the early dates suggested for large square stemmed points are highly problematic, given the artifact's depth of only 10 cm b.s. One possibility is that the artifact was part of a hafted biface that mimicked the form of the other square stemmed artifact found at DlPo-8, the tiny Wallula Rectangular Stemmed point (DlPo-8:2000). The object is tentatively classed here as a biface fragment, pending further investigation.

DlPo-8:2056. *ST 1, 0-18 cm b.s.* A hinge-fractured triangular edge fragment of a black

pebble chert biface. No striking platform is visible on the fragment; it is possible that it snapped off during heavy use. About half the dorsal surface is covered by unmodified cortex. Opposite the linear hinge fracture, about half of the intact dorsal margin shows regular retouch creating a steeply carinated working edge. This margin is crushed and battered, consistent with use as a scraper or wedge. On the ventral face, three broad shaping scars are visible running perpendicular to the direction of the flakes on the dorsal side. Usewear is not readily visible on this side.

DlPo-8:2196. *Unit 93N 102E, 80.0 cm N, 84.0 cm E, 22.0 cm b.s.; Occupation 1b.* A very simple biface constructed from a large core reduction flake and made of a brown-grey chert with coarse crystalline vugs. Overall shape is ovate and bipointed; the tool is thicker in cross-section towards the left margin. Except where marginal retouch is present, the entire dorsal surface consists of unmodified cobble cortex. The thick, perpendicular striking platform is still present on the tool's left margin; very little modification has altered this side of the tool other than one or two broad shaping flakes on the ventral face, and two small retouch flakes at both the pointed distal and proximal ends. The right margin is more extensively modified, but again with only two broad shaping flakes struck from the ventral face. Finer marginal retouch extends along the full length of the excurvate right margin, mostly on the ventral side, where 18 facets can be counted. On the dorsal side, retouch consists of six smaller facets along the right edge's medial portion.

DlPo-8:2296. *Unit 100N 100E, 40.0 cm N, 89.0 cm E, 8.0 cm b.s.; Occupation 2.* A fragment of a pointed ovate biface made of dark grey banded Banff chert. The proxi-

mal and left margins are linear fracture planes, while the fully intact right margin and portion of the left margin that is present are both excurvate. Retouch is largely confined to the margins, with four flake facets on the dorsal left margin and eight facets on the ventral right margin. However, at least one broad shaping flake is present on the dorsal face, extending from the right margin, and four more can be seen on the ventral face, extending from the same margin and creating a sinuous edge appearance.

DlPo-8:2974. *Unit 93N 104E, 80.0 cm N, 85.0 cm E, 17.0 cm b.s.; Occupation 1b.* An edge fragment of a black pebble chert biface; there are six large retouch facets on the dorsal face and two on the ventral. Extensive crushing and chipping of the dorsal margin, coupled with the absence of a striking platform and an incurvate ventral surface, suggest that the flake was created as a snap fracture during use, possibly as a scraper or wedge, rather than through deliberate bifacial reduction or core rejuvenation.

DlPo-8:2989. *ST 5, 0-20 cm b.s.* A Top of the World chert biface edge fragment. The dorsal and ventral surfaces feature broad shaping flake scars over their entire surface. Three margins are linear fracture planes created when the artifact shattered; one margin features a sinuous, bifacially retouched edge. Six facets are present on the dorsal side of this margin and eight on the ventral. While the fragment is roughly diamond-shaped, overall shape of the original artifact cannot be determined. However, it is quite universally thin and biconvex in cross-section; coupled with the thorough shaping flake scars on both surfaces and regular marginal retouch, it was

likely part of a large projectile point or other finely retouched biface.

Groundstone

DlPo-8:2364. *Unit 93 N 101E, Level 2, screen; Occupation 1b(?).* A small, rectangular fragment of grey scoria . Both the dorsal and ventral surfaces are flat and ground so that the vacuoles are smoothed away and flat. Three margins of the fragment are irregular fracture planes; the fourth, while not showing signs of grinding, does have a spur projecting upwards, so that the fragment has the appearance of being the base of a flat-bottomed vessel and part of the wall.

Figure 6.27: Ground scoria fragment (DlPo-8:2364, actual size)

One other scoria fragment, DlPo-8:3434, was recovered during this excavation from Unit 93N 103E, Level 4. This fragment appears to be a large, conchoidally fractured reduction flake, with a narrow platform end and bulb of percussion on the ventral face and a wider distal margin, as well as two flake scars on the dorsal face. About 30% of the dorsal face is covered by cortex, which while rounded and relatively smooth, does not have the same gritty, polished appearance of those flattened portions of fragment DlPo-8:2364 that may be the result of grinding. Though the groundstone piece was found in the screen during excavation of the 10-20 cm excavation level, within which materials from Occupations 1b and 2 were found, the scoria flake at a lower depth suggests that it should be assigned to the earlier Occupation 1b.

It should also be noted that, while not common locally, groundstone artifacts made of scoria are known in western North America, some incidentally from the literature on the

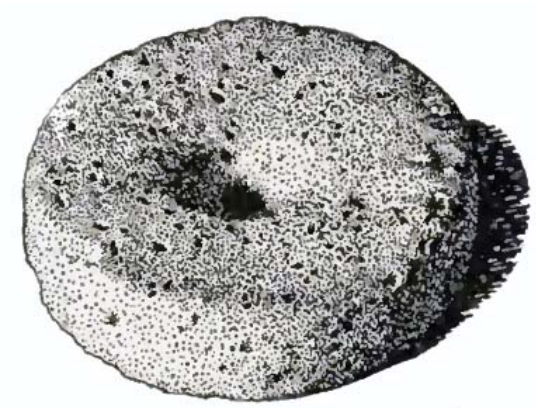

Figure 6.28: Kwakwaka'wakw perforated lava disc collected by C.F. Newcombe in 1901; cat. no. 39707, Free Museum of Science and Art, University of Pennsylvania (from Culin 1907, fig. 685)

hoop and pole game. Perforated "lava disks", possibly scoria (Figure 6.28), were collected by ethnologists from among the Nuxalk (Culin 1907:490) and the Kwakwaka'wakw (Boas and Hunt 1902:295; Culin 1907:521), among the latter of whom they were known to have been shot at with bows and arrows in a game. Vesicular basalt, pumice, and presumably scoria, which is medial between the two, were commonly used to make tools such as abraders and mortars on the Lower Columbia (Wolf 1994:20) and elsewhere on the Northwest Coast (Stewart 1975).

Scrapers

DlPo-8:2194. U*nit 100N 100E, Level 3, screen; Occupation 1b(?).* A tiny triangular thumbnail scraper of yellow-white chalcedony; total length is only 13.6 mm, and width is only 11.7 mm. All three margins are slightly convex. The steeply carinated distal margin is narrower than either the left or right margins; the apex of this distal retouch forms the thickest part of the artifact. Six broad retouch flakes are present on the distal margin, overlain by smaller chipped and crushed facets from use. This pattern of usewear extends around the distal left and right margins, which are otherwise unmodified. The proximal end, where the left and right margins converge, features the bulb and lipped facet, showing that the tool was made from a biface reduction flake. No evidence of attempts to reduce this platform are visible.

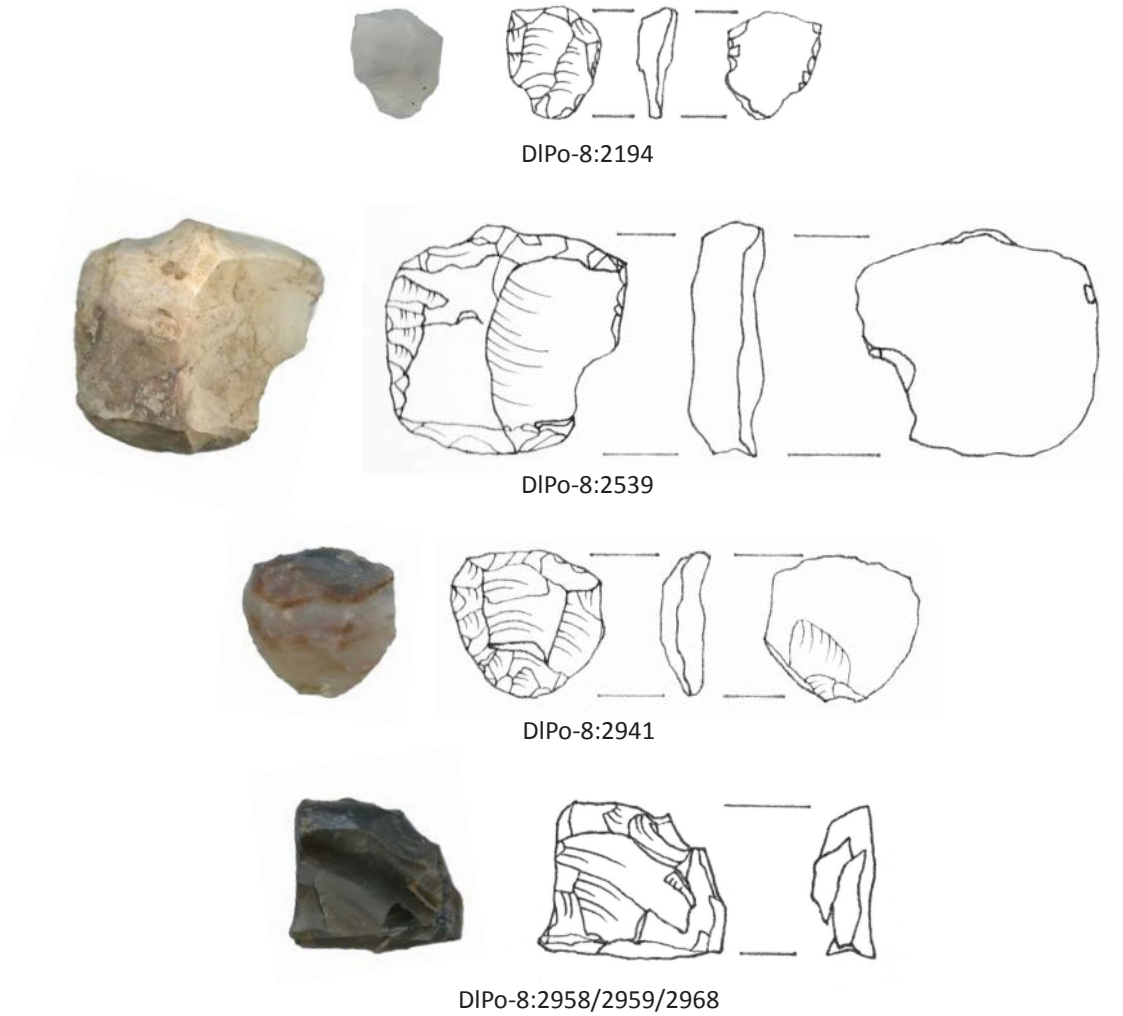

Figure 6.29: Scrapers, DlPo-8 (actual size)

DlPo-8:2539. *Unit 200N 200E, 67.0 cm N, 62.0 cm E, 10.0 cm b.s.; Occupation 2.* A large rectangular scraper of cream and pink Avon or Bowman chert. A high arris runs longitudinally down the center of the artifact, creating pointed spurs in the middles of both the distal and proximal margins, while a squared spur extends from the distal right margin. The distal margin is the widest part of the tool, and features a very steeply angled working edge (80°) shaped with 12 broad retouch flakes. Evidence of use in the form of crushing and chipping is extensive, particularly at the distal right corner and around the projecting central spur. The left margin is straight and

more acutely angled (55°), but is also extensively retouched (9 facets) and shows considerable edgewear. A slight lip on the ventral face at the proximal margin suggests that the striking platform was at this end and was subsequently reduced. The full width of the proximal margin is retouched (9 facets) and heavily edgeworn, particularly around the projecting central spur. The right margin is very acutely angled (15-30°), and is retouched only along the straight-edged distal spur (5 facets). Some edgewear is visibile along the incurved proximal right margin.

DlPo-8:2541. *Unit 200N 201E, 46.0 cm N, 56.5 cm E, 3.0 cm b.s.; Occupation 2*. A triangular thumbnail scraper of red and pinkish-grey chalcedony. All three margins are slightly convex. The distal margin is the widest of the three, with eight broad facets forming a steeply carinated edge. The left margin is also extensively retouched, with 12 facets forming a carinated edge. The point at which the two retouched edges converge at the distal left corner is the thickest part of the artifact. Both these margins feature extensive crushing and chipping from use over the retouched facets. The proximal right margin features the bulb and lipped facet of the biface reduction flake from which this tool was made; no attempt has been made to reduce this platform. The right margin, meanwhile, is acutely angled and unmodified, except for one possible retouch flake.

DlPo-8:2957, 2958 and 2968. *Unit 201N 201E, 85.0 cm N, 63.0 cm E, 13.0 cm b.s.; unit 201N 201E, 85.0 cm N, 68.0 cm E, 13.0 cm b.s.; unit 201N 201E, 90.0 cm N, 66.0 cm E, 13.0 cm b.s.; Occupation 2*. These three fragments of brown chalcedony, probably Knife River Flint, refit to form part of a shattered triangular scraper. The worked

distal margin is the longest of the three on the artifact and is broadly excurvate. A series of at least five broad retouch flakes gives this margin the snub-nosed appearance characteristic of a scraper; these broader facets are overlain with finer edge-wear. The other two margins are unmodified linear fracture planes. In cross section, the artifact is plano-convex, with a very flat ventral face and a pronounced, rounded crest on the dorsal face running parallel to the distal margin.

The split between fragments 2957 and 2958 is medial to the dorsal and ventral faces, with potlid-type depressions present between the two flakes, as well as on the dorsal surface of 2968. These potlid scars may indicate that the artifact broke through heating or post-depositional weathering. All three fragments were found within five centimeters of each other, but other refits to complete the piece have not been identified.

Unifaces

DlPo-8:2544. *Unit 200N 201E, 21.5 cm N, 71.5 cm E, 11.5 cm b.s.; Occupation 2*. A large, flat discoidal uniface made of tan-coloured quartzite. The tool is made from a core reduction flake, with most of the dorsal surface being rounded cobble cortex. No trace of the platform is present; the tool's left margin is an unmodified, linear fracture plane. Little attempt at shaping has been made, except for one broad flake struck from the ventral face's proximal right margin. The full length of the tool's rounded, excurvate distal, right

Figure 6.30: Uniface (DlPo-8:2544)

and proximal margins features fine marginal retouch, however. Seventeen facets are present on the ventral side of the distal and left margins; the proximal margin, meanwhile, features four retouch flakes on the distal face. The tool is plano-convex in cross section, with the marginal retouch creating an acutely angled edge likely used for cutting rather than scraping.

Wedges

DlPo-8:2263. *Unit 93N 102E, 74.0 cm N, 33.0 cm E, 17.0 cm b.s.; Occupation 1b.* A complete wedge made of a black chert biface reduction flake; the piece is roughly ovate in shape, and a lipped striking platform is present at one narrow end. The margin opposite this striking platform is a feathered flake termination. The longer margins of the flake show extensive crushing, battering, and bipolar flake removal – in some cases, ripple marks emanate from opposite ends of the same flake scar. One of these wide margins, interpreted as the proximal end of the tool, is extensively crushed and battered, and the margin appears flat. On the opposite, distal margin, the platforms appear regularly spaced, and a keeled edge has been retained. This edge, however, is snapped and dulled in places. Being made from a flake and showing possible edgewear, the piece is classified here as a wedge-like tool rather than a bipolar core.

Figure 6.31: Wedges, DlPo-8

DlPo-8:3013. *Unit 201N 200E, Level 3, screen; Occupation 1c.* A small diamond-shaped

flake fragment of black Top of the World chert. The two distal margins, which taper to feathered terminations, meet at a rounded point and exhibit bifacial chipping and crushing. Four facets have been removed from the dorsal face and five from the ventral of the distal left margin, and four from the ventral face of the distal right margin. The apex of the more beveled proximal left and right margins is also crushed, and the full length of the proximal right margin is chipped and crushed. Use as a wedge is inferred, with battering of the proximal apex and right margin and some rotation of the tool as it was used, resulting in wear to the distal left and right margins.

Choppers

DlPo-8:2660. *Unit 201N 200E, 40.0 cm N, 30.0 cm E, 18.0 cm b.s.; Occupation 1c.* A large chopper made from a trapezoidal limestone cobble with one wide and one narrow end. The narrow end has been bifacially retouched, with five dorsal and two ventral flake removals, creating a sinuous edge that shows some chipping and battering.

Edgeworn flakes

DlPo-8:2009. *Surface, random campsite south of main cleared area.* An elongated flake fragment of brown chalcedony, probably Knife River Flint, representing the medial portion of a broken flake. The long margins meet at one end in a pointed tip; the tip and one margin show extensive bifacial wear (six dorsal, seven ventral facets). This wear pattern may be indicative of the object's use as a perforator or graver.

DlPo-8:2117. *Unit 93N 101E, 80 cm N, 13 cm E, 21 cm b.s.; Occupation 1b.* The medial

Figure 6.32: Chopper (DlPo-8:2660)

Figure 6.33: Edgeworn flakes, DlPo-8

Figure 6.33: Edgeworn flakes, DlPo-8 (cont'd.)

portion of a blade-like black pebble chert flake; both the proximal and distal ends terminate in hinge fractures, while a high central arris runs the length of the flake parallel to the longitudinal margins. The hinge fracture at the distal end is overlaid with a series of 24 tiny facets, probably the result of use. This wear pattern extends around the left and right distal margins, which as a result are rounded.

DlPo-8:2131. *Unit 93N 101E, 87 cm N, 5.5 cm E, 20.5 cm b.s.; Occupation 1b.* The terminal end of a rectangular flake of black pebble chert. Three facets form a small

notch on the distal margin; six facets along either side of this notch are visible under low magnification.

DlPo-8:2189. *Unit 100N 100E, Level 3, 35 cm N, 47 cm E, 28 cm b.s.; Occupation 1b.* A triangular reduction flake of yellow-grey Etherington chert. The right side of the feathered distal margin exhibits edgewear consisting of a series of about 15 tiny facets.

DlPo-8:2215. *Unit 93N 101E, 32 cm N, 36 cm E, 7 cm b.s.; Occupation 2.* An irregularly-shaped flake fragment of black pebble chert. The longest linear edge bears extensive edgewear; at least 17 facets are visible under low magnification.

DlPo-8:2239. *Unit 93N 102E, Level 2, screen.* Sickle-shaped bipolar flake fragment of black pebble chert; one battered platform and pronounced bulb of percussion are present. The excurvate distal margin exhibits edgewear consisting of 12 small facets.

DlPo-8:2254. *Unit 93N 102E, Level 2, screen.* A rectangular flake fragment of white, pink and brown Avon or Bowman chert. The distal margin is pointed; edgewear is present along the ventral side of the point (three facets) and along the dorsal left distal margin (six facets). Wear to the tip may indicate use as a graver.

DlPo-8:2321. *Unit 93N 100E, Level 3, screen.* Long, triangular black pebble chert reduction flake; edgewear is present along the full length of the right margin, consisting of 22 tiny facets.

DlPo-8:2408. *Unit 93N 100E, 7 cm N, 70 cm E, 15 cm b.s.; Occupation 1b.* A teardrop-

shaped core rejuvenation flake of black pebble chert; the right and distal margins exhibit the terminations of six narrow, parallel flake scars. Following the removal of those flakes, the orientation of the core was changed to remove this flake, resulting in a series of five pronounced spurs where the arrises between those scars project. Edgewear is evident on one of these spurs, the second from the left along the flake's distal margin, which is crushed, chipped, and rounded.

DlPo-8:2415. *Unit 93N 100E, 31 cm N, 93 cm E, 10 cm b.s.; Occupation 2.* Distal flake fragment, triangular in shape with sharply pointed tip. Edgewear in the form of six small facets runs the length of the left margin towards the tip. The fragment is quite small (11.9 mm in length), and may represent the tip of a larger retouched flake tool.

DlPo-8:2475. *Unit 93N 100E, 24.0 cm N, 48.0 cm E, 34.0 cm b.s.; Occupation 1a.* A blade-like biface reduction flake of dark grey pebble chert. Edgewear is present on the straight distal margin, consisting of eight facets visible under low magnification. Three facets are also present on the ventral face of the distal left corner; use as a graver is inferred from this pattern of edgewear on the sharp corner.

DlPo-8:2499. *ST 3, 15-40 cm b.s.* A blade-like black pebble chert reduction flake. Edgewear is present on the narrow distal margin; a total of 17 facets, visible under low magnification, are present, wrapping around the rounded distal left and right corners.

DlPo-8:2507. *ST 3, 40-60 cm b.s.* A small, triangular flake fragment of dark grey pebble chert. The full length of the right margin exhibits edgewear consisting of 12 facets

visible under low magnification.

DlPo-8:2534. *Unit 93N 103E, 86 cm N, 7 cm E, 30 cm b.s.; Occupation 1a.* A triangular biface reduction flake of grey-brown pebble chert. The artifact has the proportions of a small thumbnail scraper with a high central arris, but the edges are acutely angled. Edgewear is present along the full length of the distal margin (13 facets) and around the rounded distal left margin (five facets).

DlPo-8:2668. *Unit 200N 201E, Level 1, Screen.* An elongate, parallel-sided, blade-like flake fragment of black pebble chert; the striking platform is absent. A single linear arris runs longitudinally down the center of the flake. The distal end is a pointed feather termination; slight edgewear is present on the distal left margin, consisting of 11 facets visible under low magnification. The right and left margins are slightly excurvate and unmodified. The proximal end is an irregular snap fracture. The piece is flat in longitudinal profile, and slightly triangular in transverse cross section.

DlPo-8:2792. *Unit 200N 201E, 81 cm N, 40.5 cm E, 19 cm b.s.; Occupation 1c.* A short, wide reduction flake of dark grey pebble chert. The long, steeply angled distal margin has slight edgewear; 11 facets are visible under low magnification, running most of the length of the margin.

DlPo-8:2803. *Unit 200N 201E, 71.0 cm N, 34.0 cm E, 19.0 cm b.s.; Occupation 1c.* A blade-like fragment of black pebble chert with iron oxide patination. The piece reprsents the medial portion of a narrow, parallel-sided flake. A single straight arris runs longitudinally down the center of the flake. The distal margin is squared and edgeworn, with 11 facets visible under low magnification. Left and right margins are slightly

incurvate and unmodified. The proximal end is a straight snap fracture. It is flat in longitudinal profile, and triangular in transverse cross section. Length of 17.0 mm and width of 8.2 mm qualify the flake for classification as a microblade; the complete flake would have been even longer. However, the piece refits within the fluted scar on the dorsal face of an unmodified flake fragment, DlPo-8:2662, which does not possess definitive microblade-like characteristics (Figure 6.34). While quite possible that these are microblades, there is no corrolary evidence that the black pebble chert in Area A was used to manufacture microblades (i.e., ridge flakes or core rejuvenation tablets), and so it cannot be stated with certainty that these fragments are not a fortuitous result of an alternate manufacturing technique.

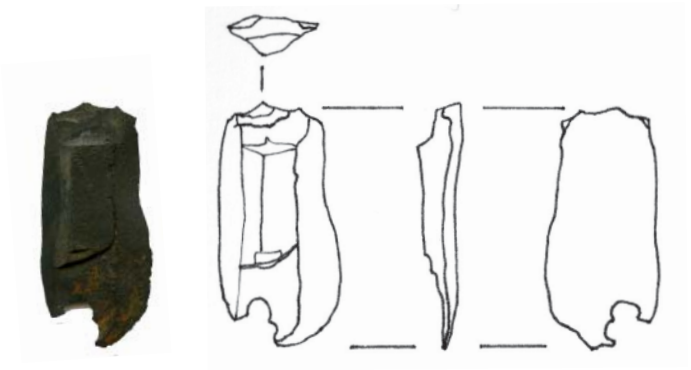

Figure 6.34: Blade-like edgeworn flake fragment (DlPo-8:2803) set within a flute-shaped scar on another blade-like flake fragment (DlPo-8:2622)

DlPo-8:2920. *Unit 200N 201E, Level 2, screen*. The proximal end of a brown chalcedony pressure flake, possibly Knife River Flint. The full length of the right margin is edgeworn, consisting of eight facets. The last facet is interrupted by a fracture plane, indicating that the flake may have broken during use.

DlPo-8:2972. *Unit 93N 102E, 53.0 cm N, 87.0 cm E, 1 cm b.s.; Occupation 2*. An overshot reduction flake of dark grey pebble chert; the distal margin is squared, with edge-

wear present on the left distal corner. The edgewear consists of three facets from the left margin and two facets from the distal margin, creating a sharp spur. The wear may be the result of using this sharp corner as a graver.

DlPo-8:2979. *Unit 93N 104E, Level 2, screen*. A small ovoid reduction flake of black pebble chert; four small flake scars are present on the distal left margin, possibly edgewear from use.

DlPo-8:3025. *Unit 201N 200E, Level 3, screen*. A small triangular black pebble chert biface reduction flake. Traces of edgewear (nine facets) are visible under low magnification along the right portion of the steeply carinated distal margin, perhaps indicative of use as a scraper.

DlPo-8:3032. *Unit 201N 200E, 48.5 cm N, 17.5 cm E, 24.5 cm b.s.; Occupation 1c*. A tiny rectangular fragment of Top of the World chert with linear fracture planes on three sides. The one intact margin bears traces of edgewear consisting of four tiny facets. The artifact may be a fragment of a larger tool that broke during use.

DlPo-8:3052. *ST 14, 0-40 cm b.s.* The proximal end of a broken biface reduction flake of black pebble chert. Very light edgewear (10 small facets) is evident on the distal left margin.

DlPo-8:3076. *ST 23, 15-30 cm b.s.; Occupation 1c*. Distal end of a blade-like pebble chert flake with two arrises running parallel to longitudinal margins. Edgewear is visible under low magnification on the left margin (five facets) and distal right margin (five facets).

DlPo-8:3082. *ST 23, 10-15 cm b.s.; Occupation 1c.* Proximal end of a blade-like pebble chert reduction flake with a high central arris, similar in form to several other flakes from concentration in Unit 200N 201E and ST 23. A wear pattern on the left margin is evident under low magnification, consisting of 11 small facets.

DlPo-8:3104. *Unit 93N 104E, Level 4, screen; Occupation 1a.* A thin, trapezoidal flake fragment of highly lustrous pinkish-white Swan River chert. Three margins are irregular fracture planes, but one margin is thin, feathered and very sharp. Bifacial wear is visible on this margin under low magnification, with nine facets on the dorsal surface and four facets on the ventral.

DlPo-8:3107. *Unit 93N 104E, Level 4, screen; Occupation 1a.* A flaring, triangular reduction flake of black pebble chert; the straight left, right and distal margins are unmodified, but edgewear is present on the distal left and right corners. The obtusely-angled left distal corner is chipped and rounded, with three larger facets representing possible retouch, overlain by a series of smaller facets comprising possible edgewear. The acutely-angled right distal corner is also rounded, with a series of seven tiny facets visible under low magnification.

DlPo-8:3117. *Unit 93N 102E, 48 cm N, 72 cm E, 18 cm b.s.; Occupation 1b.* A bipolar flake fragment of a yellow-brown Montana chert. Its proximal end is battered; the right margin is rounded, chipped, and polished. Twelve facets are visible on the dorsal face of this margin under low magnification.

DlPo-8:3156. *Unit 93N 102E, wall.* A trapezoidal flake fragment of black pebble chert. Three margins are linear fracture planes; at the distal intersection of the left and

right margins is a single vertical flake scar, overlain with three facets of micro-chipped edgewear. The artifact was exposed while preparing the wall of the unit for drawing soil profiles.

DlPo-8:3160. *Unit 93N 101E, wall.* A long, roughly elliptical reduction flake of red-grey Etherington chert. Light edgewear is visible under low magnification, with 12 facets along the dorsal left and 12 facets on the ventral right margins. The artifact was exposed while preparing the wall of the unit for soil profiles.

DlPo-8:3169. *ST 2, 45-60 cm b.s.* A small, sickle-shaped core reduction flake of black and buff-coloured pebble chert. Under low magnification, edgewear is visible in the form of nine small facets on the distal margin, 19 facets on the incurvate right margin, and three facets on the pointed distal right corner.

Flake tools, bimarginal

DlPo-8:2479. *ST 1, 50-60 cm b.s.* A rectangular biface reduction flake of dark grey Banff chert; the proximal and distal ends are excurvate, the left margin is straight, and the right margin is slightly incurvate. The full lengths of both the left and right margins are retouched. On the left margin, this retouch consists of 20 tiny, regularly spaced facets; on the right, a row of 11 small and three larger facets is present. Both may represent a combination of deliberate retouch and edgewear.

DlPo-8:2516. *ST 7, 30-45 cm b.s.* A small triangular reduction flake of pale green-grey Kootenay argillite. All three margins are straight, while the distal left and right corners are broken, creating a five-sided appearance to the flake. Retouch on the

distal margin consists of seven regularly spaced facets, while the right margin is also modified, with eight facets possibly representing both retouch and edgewear.

Figure 6.35: Bimarginal flake tools, DlPo-8

DlPo-8:2775. *Unit 200N 201E, 21.0 cm N, 25.5 cm E, 10.0 cm b.s.; Occupation 2.* A triangular flake fragment of brown chalcedony, possibly Knife River Flint. The wide proximal margin is a linear fracture plane, while both the left and right margins are retouched, but with the retouch appearing on opposite faces – retouch on the left (10 facets) being on the dorsal face, and retouch on the right (16 facets) on the ventral face. On both margins, the pattern of tiny facets is likely a combination of deliberate retouch and edgewear. The two retouched margins converge to a pointed distal tip, which is broken. The opposing retouched margins and evidently worn tip suggest the tool was used with a rotating motion as a perforator.

DlPo-8:3424. *Unit 93N 101E, Level 3, screen.* A large core reduction flake of grey Banff chert, rhomboid in shape with a high central arris, flaked so that the pattern of banding within the material runs parallel to the longitudinal margins. All four edges are straight; eight retouch flake scars are present on the narrow distal margin, and

four facets are visible on the longer right margin. This retouch is most pronounced at the acutely angled distal right margin, where the broad retouch facets are overlain with smaller facets from edgewear. The distal margin is somewhat snub-nosed, with about a 45° angle, and use as an endscraper is inferred.

Flake tools, composite

DlPo-8:2644. *Unit 200N 200E, 72.0 cm N, 52.0 cm E, 12.0 cm b.s.; Occupation 2.* A small, rectangular fragment of black pebble chert; the dorsal face consists mostly of shiny black cortex. The right, distal, and left margins are modified, while the proximal margin consists of an irregular hinge fracture. Retouch to the straight right margin consists of unifacial retouch on the dorsal side; seven small facets are present. Retouch on the narrow distal margin is bifacial, with four facets removed from both the dorsal and ventral sides. Modification to the left margin consists of a row of nine tiny facets on the dorsal side, possibly edgewear. This margin is only partially intact, as the proximal left corner is broken.

Figure 6.36: Composite flake tool (DlPo-8:2644)

Flake tools, unimarginal

DlPo-8:2140. *Unit 93N 102E, Level 3, screen.* A bipolar flake fragment of black pebble chert, roughly trapezoidal in shape with a battered proximal end and pronounced bulb of percussion terminating in a hinge fracture. The dorsal surface is mostly unmodified cortex; eight facets are present on the proximal right margin on the

Figure 6.37: Unimarginal flake tools, DlPo-8

ventral side; these appear to be the result of a combination of deliberate retouch and incidental usewear.

DlPo-8:2255. *Unit 93N 102E, Level 2, screen.* A rectangular reduction flake of purple and white Etherington chert; a linear arris runs parallel to the left and distal margins, giving those edges a steeply angled appearance. The flake is extremely curved in longitudinal cross-section, with the hooked distal end characteristic of an overshot flake. The distal margin features the terminations of five flake scars. Two small retouch facets are present on this very linear margin, as well as a pattern of finer edgewear at the right distal corner. Given the steep angle of the distal margin and indications of retouch and use, the artifact may have been used as a scraper.

DlPo-8:2295. *Unit 93N 100E, 33 cm N, 77 cm E, 38 cm b.s.; Occupation 1a.* A large Banff chert reduction flake, rectangular in shape with a high central arris, flaked so that the pattern of banding within the material runs parallel to the longitudinal margins. The acutely angled left margin exhibits retouch along nearly its full length; this retouch consists of nine larger facets overlain with a finer pattern of edgewear visible under low magnification.

DlPo-8:2421. *Unit 93N 100E, Level 4, screen; Occupation 1a.* A biface reduction flake of black Banff chert, broadly ovate in shape; retouch consisting of five facets is present on the excurvate left margin. The distal portion of the left margin terminates in a linear fracture plane interrupting the row of retouch flakes; it is possible the artifact broke during shaping or use.

DlPo-8:2459. *Unit 93N 100E, 46.0 cm N, 72.5 cm E, 34 cm b.s.; Occupation 1a.* A large,

discoidal core reduction flake of dark grey pebble chert; the left margin is steeply angled, straight and unmodified, but the right and distal ends taper to thin, feathered margins. The broadly excurvate right margin features five retouch flakes creating two distinct, broad notches, which are in turn overlain with a finer pattern of microchipping, probably incidental edgewear from use.

DlPo-8:2540. *Unit 200N 201E, 13.5 cm N, 69.5 cm E, 9.5 cm b.s.; Occupation 2.* A trapezoidal flake fragment of grey-brown siltstone. Nine retouch flakes run along the flake's widest margin, with many smaller chips of edgewear overlying this retouch. The retouched edge is somewhat steeply angled (45°), and the tool may have been used as a scraper.

DlPo-8:2542. *Unit 200N 200E, 82 cm N, 49 cm E, 17 cm b.s.; Occupation 1c.* A blade-like flake fragment of grey-brown quartzite, parallel-sided and slightly sickle-shaped in longitudinal cross-section, with a high central arris running down the length of the artifact. The platform is missing, with a hinge-fracture at the proximal end and a transverse snap-fracture at the distal end. The left margin is retouched with three broad facets, and extensive edgewear is visible under low magnification.

DlPo-8:2983. *Unit 200 N 200 E, Level 3, screen; Occupation 1c.* The hinge-fractured distal end of a pebble chert core reduction flake; roughly rectangular, with fine retouch along one of the long margins, what would be dorsal side of the flake's distal end. A total of 22 worn and microchipped facets are present, probably produced through a combination of deliberate retouch and incidental usewear.

DlPo-8:2999. *Unit 201N 200E, 44 cm N, 54 cm E, 19 cm b.s.; Occupation 1c.* A triangular

reduction flake of buff-coloured siltstone. Most of the right margin is retouched, consisting of 12 facets, some of which terminate in hinge fractures. The row of retouch scars ends near the distal end, where the otherwise straight margin curves inward.

DlPo-8:3017. *Unit 201N 200E, 48 cm N, 53 cm E, 20.5 cm b.s.; Occupation 1c.* A long, triangular flake fragment of buff-coloured siltstone. Retouch is present on the right distal margin, consisting of eight broad, slightly carinated facets, the last of which forms a distinct notch at the distal right corner. Proximal to the notch along the right margin, a series of eight tiny facets is also visible, probably edgewear rather than deliberate retouch. The steep angle to the distal retouch may suggest use as a scraper; however, the heavy wear patterns of crushing and chipping expected from such use are not visible along this edge.

DlPo-8:3048. *Surface, near south end of disturbed area near trailhead.* A small, teardrop-shaped bipolar flake fragment of black pebble chert. The left side of the pointed distal margin is retouched, with four facets forming a broad notch. The edge within this notch is slightly worn, possibly from use as a scraper or spokeshave.

DlPo-8:3099. *Unit 93N 104E, Level 4, screen; Occupation 1a.* The proximal end of a pink and red chalcedony reduction flake. The distal margin terminates in a broad, linear step fracture; the left and right margins are straight. Patterned retouch consisting of three broad facets occurs on the right margin; this retouch is overlain by numerous smaller facets, interpreted as edgewear.

DlPo-8:3421. *Unit 200N 201E, Level 2, screen.* A large flake fragment of coarse, buff-

coloured siltstone. Flat and roughly rectangular in shape but with one of the narrower ends pointed, the left side of this pointed end features fine regular retouch, with nine facets on the dorsal margin and one on the ventral.

Net sinkers

DlPo-8:2011. *ST 4, 0-25 cm b.s.* A flat, discoidal grey siltstone cobble with one broad, bipolarly flaked notch in each of the longitudinal margins. The left notch is 23.6 mm wide and 3.6 mm deep, and the right notch is 22.0 mm wide and 5.0 mm deep; each notch appears to have been made by one percussive blow to both the dorsal and ventral margins. Three similar tools previously collected from the site were interpreted by Richard Forbis as net sinkers (King 1960, p. 17, Glenbow Archives M2105-4; Figure 6.38).

Although rare on the Plains, notched cobbles are regularly seen in the Plateau region, and are interpreted as evidence of fish being a significant food resource. A notched cobble net sinker from the Hatawai site on the Lower Columbia River likely predates 12,000 B.P., while others found at Kettle Falls were found below Mazama Ash. However, they did not become common, particularly at floodplain sites in the Eastern Plateau, until ca. 3500—2000 B.P. (Ames 2000*c*; Ames et al. 1981; Chatters and Pokotylo 1998:77; Johnston 1987).

While net sinkers tend to display considerable inter-site variability in terms of size, Johnston (1987:36) noted a remarkable consistency in the size and morphology of net sinkers within individual sites in the Columbia Plateau. "Apparently, the inhabitants of these locations had definite ideas about the weights most useful for their particular river conditions" (Johnston 1987:36). With the small sample available, is would be premature to say whether the same

Figure 6.38: Net sinkers, DlPo-8 (actual size); DlPo-8:2011 is from 2010 excavations, DlPo-8:39, 45, and 51 are from 1960 Glenbow Foundation survey

pattern holds true at DlPo-8. An inspection of the three specimens from the 1960 Glenbow Foundation Survey at the University of Calgary Department of Archaeology shows that while all three specimens show identical medial notching, only two, DlPo-8:45 and 51, are of similar dimensions to DlPo-8:2011. One, DlPo-8:39, is considerably larger.

Ochre/pigment

The 16 pieces of material collected during the 2010 excavations that have been classified as ochre or pigment are summarized in Table 6.13. Evidence of use or cultural modification is highly speculative; these items may better be considered as manuports, or unmodified pieces of raw material, rather than tools. Some colours, for instance white and dark grey, are uncommon as pigment specimens; ash or charcoal would presumably have as easily achieved

Table 6.12: Ochre and pigment specimens, DlPo-8 Areas A and B

Cat. #	Depth b.s. (cm)	Occupation	Weight (g)	Colour
Area A				
DlPo-8:2159	17.5	1b	0.3	10R 6/8 Light red
DlPo-8:2178	10-20 (scr.)	1b or 2	1.0	7.5YR 5.4 Brown
DlPo-8:2238	31.0	1a	3.1	2.5Y 7/4 Pale yellow
DlPo-8:2269	15.0	2	0.7	5YR 6/8 Reddish yellow
DlPo-8:2270	15.0	2	1.8	10YR 5/4 Yellowish brown
DlPo-8:2353	20.5	1b	0.4	5YR 6/6 Reddish yellow
DlPo-8:2387	14.0	2	4.8	5YR 6/4 Light reddish brown
DlPo-8:2388	10.5	2	10.5	7.5 YR 6/4 Light brown
DlPo-8:2395	0-10 (scr.)	2	6.3	10YR 8/1 White
DlPo-8:2396	0-10 (scr.)	2	8.3	2.5Y 7/3 Yellow
DlPo-8:2397	0-10 (scr.)	2	8.0	5YR 6/6 Reddish yellow
DlPo-8:2417	10.5	2	43.3	10YR 8/1 White
DlPo-8:2418	10-20 (scr.)	1b or 2	8.7	2.5Y 7/3 Pale yellow
DlPo-8:3119	23.0	1a	7.1	10YR 4/1 Dark grey
DlPo-8:3120	23.0	1a	1.7	10YR 4/1 Dark grey
Area B				
DlPo-8:2907	10-20 (scr.)	1c or 2	0.2	5YR 5/8 Yellowish red

these colours. Extreme softness, and a tendency for the material to rub off and leave traces of coloured residue on contact with such materials as paper or human skin are the characteristics used to determine a piece's inclusion on this list.

Bipolar Cores

DlPo-8:2013. *Unit 93N 101E, 30.0 cm N, 67.0 cm E, 35.0 cm b.s.; Occupation 1a.* A bipolar core of mottled grey and buff pebble chert; cortex is present at one end of the long axis. Battering and flake scars emanating from this and the opposite margin indicate that the pebble was first split along this axis, and then rotated. A series of bifacial scars is present along one of the long margins, while the opposite margin is crushed and battered. The piece exhibits a colour range seen on much of the debitage collected in Area A; despite their colour variation, flakes of grey and buff chert in this area are evidently the same material.

DlPo-8:2119. *Unit 93N 101E, 84.0 cm N, 70.0 cm E, 20.5 cm b.s.; Occupation 1b.* A complete bipolar core of black pebble chert. The piece is oblong in shape, and striking platforms are present on opposite margins along the piece's shorter axis. Along the resulting wide distal margin, flake removals are regularly spaced but have abrupt hinge terminations; the proximal end meanwhile is crushed and crumbling. Striking platforms are also present along the lateral margins, suggesting that the core (presumably a pebble, although no cortex is evident) was first split along its long axis and subsequently rotated.

DlPo-8:2315. *Unit 100N 100E, 83.0 cm N, 64.5 cm E, 40.0 cm b.s.; Occupation 1a.* A lon-

gitudinally split cobble of banded Banff chert. Weathered cortex covers the entire dorsal face of the piece. One end on the long axis is crushed and battered, while a small step fracture emanates from the opposite margin. As with DlPo-8:2487, this bipolarly oriented longitudinal split follows the natural banding pattern present in the material. The piece appears to have been rotated; two small flake removal scars are present along one of the wide lateral margins, although these are not continuous to the opposite margin, nor is that margin crushed or battered.

DlPo-8:2487. *ST 1, 40-50 cm b.s.* A complete bipolar core of grey and black banded Banff chert, oblong in shape. Striking platforms are present along opposing margins on the piece's shorter axis. Thus oriented, the opposing proximal and distal platforms are aligned with the banding pattern inherent to the material, which runs longitudinally down the piece. Cobble cortex remains present along one of the piece's lateral margins, while the other lateral margin is shattered; the core does not appear to have been rotated.

Closer to this cortex, the material is a dull dark grey in colour (10 YR 3/1), but farther towards the opposite margin, where no cortex is present, the material is a lustrous black (10 YR 2/1 or N 2.5/). Similar colour range can be observed in other pieces of evenly banded Banff chert from DlPo-8. This core demonstrates that the dull and the lustrous pieces are derived from the same cores. It is possible that the changes in colour and lustre are the result of heat treatment.

DlPo-8:2617. *Unit 200N 200E, 96.0 cm N, 21.0 cm E, 20.0 cm b.s.; Occupation 1c.* A small, ovate Banff chert core. Flake removals from both the dorsal and ventral faces origi-

nate from opposite ends of the piece, indicating bipolar application of force. On one narrow margin, the striking platform consists of a narrow band of cobble cortex, from which three ventral and three dorsal flakes have been removed, several terminating in hinge fractures. The thin band of marginal cortex extends around part of the wider margin, and bifacial flake removals also originate from this point. The two portions of margin opposite either flat cortical section are crushed and battered, with bifacial flake removals originating at these points.

DlPo-8:2621. *Unit 200N 200 E, 77.0 cm N, 78.0 cm E, 18.0 cm b.s.; Occupation 1c.* A small black chert pebble, 35.1 mm in length, with two flake scars at one end of its long axis. Given its size, it is classified here as a bipolar core; the flaking is presumably from testing the piece, which, after failing to split longitudinally, was discarded.

Core fragments

DlPo-8:2625, 2666, 3426, and 3427. *Unit 200N 200E, 85.0 cm N, 55.0 cm E, 19.0 cm b.s.; Occupation 1c.* These four fragments of tan and black banded Banff chert refit to form a single multidirectional core. The four pieces were found *in situ* at the same location, and no platform scars are present along any of the fracture planes; breakage appears to have occured post-depositionally. About 70% of the dorsal face of the refit piece is cobble cortex; five flake scars are visible on this side, but none of the platforms are preserved on this section of the core. On the ventral face, seven platform scars radiate around the full permimeter of the piece, with the direction of flaking oriented towards the center of the core.

DlPo-8:2679. *Unit 200N 201E, 69.0 cm N, 27.5 cm E, 18.5 cm b.s.; Occupation 1c.* A mottled grey-black pebble chert core fragment with oxidized red cortex and a gritty, sandstone-like core. The fragment is irregularly shaped; one face features five flake removals, two have been removed from the a second face, and another two from a third. The piece refits with at least eight reduction flakes, core rejuvenation flakes, and pieces of angular shatter found elsewhere in Feature 8 to form part of a multi-directionally worked and heavily reduced cobble.

Several macroscopically visible attributes of this piece correspond with both the microblades and blade-like edgeworn flakes in the Area B assemblage. While some sections are almost uniformly black, faint mottling is evident in lighter-coloured sections that corresponds with the microblades. Weathered portions have a vermiculated appearance; many pieces are also heavily red-stained with oxidization. No clear pattern for where either the vermiculated weathering or oxidization occurs can be discerned. Unlike caliche, the iron oxide coating sometimes appears on multiple faces of a flake, and often it appears on one side of a refit, but not on the adjacent piece. Similar weathering and oxidization are evident on at least one microblade fragent, DlPo-8:3062.

These refits probably comprise the outermost portions of the cobble that was reduced to produce the microblade core from which the observed ridge flakes, rejuvenation tablets, and microblades in Feature 8 were struck. Heat treatment could explain the highly variable macroscopic attributes, perhaps darkening the outermost portions of the cobble while leaving the innermost portions of the

core relatively unaffected—this practice would account for the light-coloured mottling being most visible on the microblades and ridge flakes. Refitting has shown that a considerable portion of this core is represented in the debitage from Feature 8; further refitting attempts may shed more light on the reduction sequence that ultimately led to the manufacture of the microblades at this site.

Faunal analysis

A total of 882 pieces of tooth and bone weighing a total of 1,886.2 g and sorted into 219 unique catalogue entries, sorted by identifiable element or size and degree of fragmentation, were recovered in the 2010 excavations. All faunal remains were mammalian, with identified species including bison (*Bison bison*), bighorn sheep (*Ovis canadensis*), mule deer (*Odocoileus hemionus*), and domestic dog (*Canis lupus familiaris*). Tables 6.13 and 6.14 show the quantities of bone recovered from Areas A and B, respectively, with *in situ* material sorted by occupation using slope-adjusted depths (see Tables 6.7 and 6.8). Screened faunal remains are also presented, sorted by excavation level; however, these cannot, in many cases, be assigned to a specific occupation. Faunal remains from shovel tests are presented in Table 6.1.

Recovery of faunal materials was quite poor overall, with a total number of individual specimens (NISP) of 708 in Area A, and an NISP of 67 in Area B. Forty-five specimens in Area A were from identifiable elements; these were usually fragmentary, and fragments could for the most part not be ruled out as being pieces of the same bone. Only in the cases of two bison teeth from Occupation 1a and two mule deer teeth from Occupation 1b can a minimum number of elements (MNE) be derived that exceeds one.

The majority of the faunal material is highly comminuted. By weight, 61.8% of the

Table 6.13: Quantification of faunal remains, Area A

Taxon	Element	NISP	MNE				Total MNE	Weight (g)
			L.	R.	Ax.	Ind.		
Occupation 1a								
Bison	Pelvis	1		1			1	35.3
	Phalanx, medial	1	1				1	24.2
	Tooth	2		1		1	2	34.8
Unidentified scrap		10						40.0
Occupation 1b								
Bison	Pelvis	1	1				1	15.3
	Phalanx, distal	1	1				1	8.8
	Phalanx, medial	2		1			1	27.6
	Skull	1	1				1	13.5
	Tooth	8				1	1	39.4
	Vertebra, thoracic*	1			1		1	42.0
Mule deer	Tooth	4		2			2	4.4
Unidentified limb		13						62.1
Unidentified scrap		65						130.0
Occupation 2								
Bison	Rib	2				1	1	35.4
	Skull	4		1			1	20.8
	Vertebra, lumbar	5			1		1	44.3
	Vertebra, thoracic	1			1		1	37.0
Bighorn sheep	Manus	1		1			1	2.1
Unidentified limb		10						129.1
Unidentified scrap		8						14.9
Screen, 30-60 cm b.s. (Occupation 1a)								
Bison	Scaphoid	1		1			1	22.9
	Rib	1				1	1	12.5
Unidentified limb		2						27.2
Unidentified scrap		74						67.0
Screen, 20-30 cm b.s. (Occupations 1a and 1b)								
Bison	Rib	3				1	1	9.0
Unidentifed scrap		290						167.1
Screen, 10-20 cm b.s. (Occupations 1b and 2)								
Bison	Tooth	8				1	1	51.8
	Vertebra, thoracic	1			1		1	9.3
Unidentified scrap		187						154.9
** Sample submitted for radiocarbon dating, 2670 ± 20 BP (UCIAMS 89683)*								

Table 6.14: Quantification of faunal remains, Area B

Taxon	Element	NISP	MNE				Total MNE	Weight (g)
			L.	R.	Ax.	Ind.		
Occupation 1c								
Unidentified limb		11						19.9
Unidentified scrap		25						25.6
Occupation 2								
Bison	Radius	1	1				1	23.7
Unidentified limb		1						36.1
Unidentified scrap		10						13.2
Unidentified tooth		2						0.3
Screen, 10-40 cm b.s. (Occupation 1c and 2)								
Unidentified scrap		11						5.1
Screen, 0-10 cm b.s (Occupation 2)								
Unidentified scrap		6						4.2

remains from Area A are classified as unidentified limb or scrap fragments. A total of 280 fragments weighing 177.8 g are burnt or calcined—39.5% of that area's faunal assemblage by count, but only 13.9% by weight. In Area B, 81.5% of the faunal specimens are unidentifiable, comminuted fragments; only nine fragments (21.7 g) are burnt or calcined (13.4%/ct.,16.9%/wt.).

The low volumes of faunal material may signal that activities typically associated with residential use of a site such as butchering and meat processing were not a significant aspect of prehistoric occupation at either Area A or B, and that other activities, such as fishing and root preparation, may have been more important activities. The methodology employed in this project has not been sufficient to capture any evidence of such activity. Faunal elements discarded during the initial phases of butchering, such as the pelvis, skull, carpals, tarsals, and phalanges (MNE=9), are about equally represented when compared with elements typically transported for further processing, such as upper limbs, ribs, and parts of the thoracic and

lumbar vertebrae from retention of bison hump meat (MNE=8) (Brink 2004; Wilson 1924). However, taking into account all faunal remains recovered in the 2010 excavations, including Areas A and B and the specimens recovered during shovel testing, the minimum number of individuals (MNI) represented for each species observed (bison, bighorn sheep, mule deer, and domesticated dog) is one.

That only one bison, sheep, deer, and dog could account for all the material collected from multiple occupations spanning thousands of years is, of course, absurd. Rather, these results exemplify the need for extreme caution to be taken in drawing conclusions from the sample available, or in applying any anatomical utility indices such as those employed by Binford (1978) to interpret cultural selection processes. Variable rates of deposition and preservation, the possibility of periodic reexposure through sediment deflation, and a myriad of other post-depositional processes can impact the survival of faunal remains or mimic human-selected patterns (Brink 2004; Grayson 1989; Lyman 1984, 1985), and these processes have likely considerably impacted the faunal record at DlPo-8.

The Glenbow Foundation survey team of 1960 neither observed nor collected any faunal remains in their 5' x 10' test excavation. Whether this absence is an indication of preferential collection only of lithic artifacts or that bone was not preserved in that part of the site is not clear, but the recovery of any faunal remains constitutes a considerable improvement over the record previously available for the site.

FBR analysis

A total of 861 pieces of fire-broken rock were recovered in the 2010 excavations, including shovel tests, weighing a total of 77.88 kg. In Area A, 468 pieces weighing 42.87 kg

were collected; 310 pieces weighing 28.89 kg were collected in Area B. Spatial distribution of FBR from the excavation areas is presented in floor plans for each area, Figures 6.6 and 6.7 for Area A, and 6.11 and 6.12 for Area B.

While pieces over 5 cm in diameter were mapped in floor plans, three-point provenience data was not recorded for FBR. All material was bagged by unit and 10 cm level; while this procedure means FBR cannot definitively be attributed to individual occupations, general temporal trends can be observed. Totals for each level, sorted by fracture type, are presented in Table 6.15. Under experimental conditions, planar fractures and cortex spalls are caused by exposure to heat, while crenellated fractures result from immersion of hot rocks in water (Dau 1988:8-9; McParland 1977). Unbroken cobbles that exhibited discolouration, either reddening or blackening, were collected as FBR, with the observed alteration probably caused by exposure solely to heat.

Without exception at DlPo-8, in both Areas A and B, and in every level, the major-

Table 6.15: FBR totals by fracture type, Areas A and B

Level (cm b.s.)	Planar (ct./wt.)	Spall (ct./wt/)	Unbroken (ct./wt.)	Crenellated (ct./wt.)	Total (ct./wt.)
Area A					
0-10	36/4.60 kg	2/0.05 kg	-/-	8/0.40 kg	46/5.05 kg
10-20	79/9.07 kg	11/0.10 kg	1/1.67 kg	56/5.83 kg	147/16.67 kg
20-30	101/8.99 kg	16/0.22 kg	2/0.60 kg	43/3.48 kg	162/13.30 kg
30-40	49/3.41 kg	3/0.05 kg	2/1.57 kg	40/2.02 kg	94/7.05 kg
40-50	9/0.51 kg	-/-	-/-	8/0.27 kg	17/0.78 kg
50-60	1/<0.01 kg	1/0.01 kg	-/-	-/-	2/0.02 kg
Area B					
0-10	76/6.42 kg	3/0.04 kg	-/-	56/4.39 kg	135/10.85 kg
10-20	144/15.07 kg	6/0.05 kg	1/0.77 kg	23/2.07 kg	174/17.96 kg
20-30	1/0.08 kg	-/-	-/-	-/-	1/0.08 kg

ity of the FBR recovered shows patterns of fracture consistent with exposure to heat, but not rapid cooling through immersion in water; this interpretation applies both when FBR is measured by count and by weight. There is considerable range in the disparity between heat-fractured and water-fractured rocks, with water-fracture pieces making up only 7.9% of the FBR by weight in the 0-10 cm b.s. level in Area A, and up to 40.5% by weight in the 0-10 cm b.s. level in Area B.

This pattern does seem unusual. For comparison, DjPl-9 is a site downstream on the Oldman River in which large quantities of processed bone were recovered, and FBR features were interpreted to be associated with boiling pits. "All the [FBR] from DjPl-9 exhibit fracture patterns indicative of immersion in water" (Dau 1988:9). At DlPo-8, where low quantities of bone were recovered, processed or otherwise, and a minority of FBR exhibits crenellated fracturing, the logical conclusion is that most of the FBR was not made in boiling pits. Natural events, namely forest fires, can also be ruled out: the quartzite and granite cobbles that make up the majority of the FBR are typical of the Oldman River channel, but rounded limestone blocks are what are found in the matrix of the high outwash terrace. The FBR was not naturally transported in.

One possible explanation is that the FBR was produced by burying heated rocks in roasting pits, together with the food being cooked—a traditional cooking practice common throughout the Interior Plateau. Foods including root vegetables, deer meat, and fish were commonly cooked in pits, surrounded by vegetation such as tree boughs, shrubs, or damp grass (Turner et al. 2000:1283). Access to all three food types was available at DlPo-8; there is some evidence for deer utilization—two mule deer teeth—and plentiful evidence for fish-

ing, in the form of the net sinkers recovered in the 1960 and 2010 field work. The process of reopening roasting pits to exhume the cooked product would result in the buried rocks being scattered, an end result suggested by the condition of several of the FBR features observed in both Areas A and B.

Summary

The archaeological investigation at DlPo-8 sought to address several questions about the site; one was its extent, and the degree to which prehistoric deposits remained intact. The program of shovel testing and excavation undertaken here has shown that the site is of considerable size—the full boundaries remain untested—and a rich one. Even the small number of units opened during this study yielded voluminous quantities of material, with several unanticipated results.

The natural stratigraphy is compressed, consisting of aeolian sandy silt of highly variable depth that has undergone an unknown number of episodes of deposition, coupled with the possibility of periodic deflation. In Area A, despite being separated by only 20 cm of vertical deposition, the two diagnostic projectile points, an early Middle Prehistoric Salmon River point and a Late Prehistoric Wallula Rectangular Stemmed point, appeared in their expected stratigraphic order. These distinctive points suggest that despite the effect of post-depositional processes, some degree of cultural stratigraphy remains intact. Between these two diagnostics that bookend the stylistically dated occupations of the site, an AMS radiocarbon date taken from bone collagen provided an intermediate late Middle Prehistoric date, reinforcing the validity of this claim of stratigraphic integrity. In Area B, cultural materials were even more compressed, with only 10 cm of vertical deposition separating a dense cluster of debitage

including microblade fragments, presumably dating to the Early or Middle Prehistoric, from a Late Prehistoric Avonlea projectile point. Despite the shallow deposition, careful recording of three-point provenience data allowed a high degree of stratigraphic fidelity to be identified in this portion of the assemblage.

In addition to a veneer near the surface of recent historic materials, which despite some bioturbation do not appear extensively intermixed with the older deposits, four prehistoric occupations were identified during the 2010 excvations. These are summarized as follow.

Occupation 1a

Deeply buried materials in Area A are assigned in this analysis to Occupation 1a. The upper threshold for these materials is drawn from two observations: the deep, interrupted Paleosol 1 seen in wall profiles at depths of between 23 cm b.s and 30 cm b.s. and a break in slope-adjusted lithic depositon around the same depth as the paleosol, suggesting discontinuity with subsequent cultural occupations. Materials found deeper than the paleosol and break, up to 60 cm b.s., may be the deposits of a single occupation event displaced through bioturbation and other post-depositional processes, or could represent a palimpsest of multiple earlier occupations for which no defined paleosol or deposition layer was observed.

No radiocarbon dates were obtained for this depth range. A single diagnostic projectile point, DlPo-8:2002, is associated with Occupation 1a. This is a large, shallowly side-notched, straight-based and triangular-bladed point that best matches descriptions of the Salmon River style, from the early Middle Prehistoric period and, following Peck's (2011:151) analysis of similar point styles in the Eastern Slopes region of southwestern Alberta, is assigned to the Maple Leaf complex, ca. 6300-5200 B.P.

Raw material use features considerable dependence on materials that could be obtained locally, either from the Oldman River valley itself, or from outcrops elsewhere in the Eastern Slopes and foothills. This material includes pebble chert, which made up 50% of the *in situ* assemblage, and Banff chert, which at 35% of the Occupation 1a assemblage is more frequent than at any other time period. Low recovery rates of *in situ* materials in Area A makes a definitive assessment of the lithic assemblage from this area difficult. Examination of materials recovered by screen from arbitrary 10 cm excavation levels shows that several materials, including siltstone and Top of the World chert, occur in moderate frequency between 30 and 60 cm b.s., while andesite, Etherington chert, ochre, quartzite, sandstone, Swan River chert, and some cherts and chalcedonies not attributable to any specific source occur at very low frequencies. Scoria and Avon/Bowman chert, of which individual specimens were found in the Occupation 1a depth range, were found in equal or greater numbers above. Considering their rarity, particularly the scoria, these materials probably entered the archaeological record at the same time; however, they cannot with confidence be attributed to the earliest occupation.

Despite a comparatively large sample (75 lithics *in situ*), few tools were found other than the Salmon River point. These include four unimarginally modified flake tools, four edge-worn flakes (one of them blade-like), two bipolar cores, and three ochre or pigment pellets. Of the latter, two are dark grey, not typically identified as a pigment colour. Their inclusion as a possible pigment here is highly tentative, based solely on observation of their softness and tendency to transfer their colour onto other materials.

Scant faunal materials are available from depths that are associated with Occupation 1a. Most consists of unidientifed scrap and longbone fragments recovered in the screen; those

pieces that were identifiable were from bison. These consisted of lower limb elements, rib and pelvis fragments, and teeth. The high degree of bone comminution and lack of identifiable elements could be related to exhaustive processing, for instance, through bone-boiling and grease rendering; however, uncertainty as to their degree of preservation allows little to be said to characterize this portion of the faunal assemblage. When coupled with an analysis of the FBR from Area A, low quantities of rock broken by rapid cooling after immersion in water may suggest that meat and bone-boiling were not overly significant activities at the site, at this or later time periods.

Occupation 1b

Materials from intermediate depths in Area A were assigned to Occupation 1b. While attribution of materials to this occupation is partially based on the observation of Paleosol 2, only a short segment of this paleosol was found intact. Identification of the occupation relies heavily upon observed breaks in the slope-corrected depths of *in situ* lithics, and again, bioturbation and/or a palimpsest of occupations is suspected.

A single AMS ^{14}C date of 2670 $\pm$ 20 BP (UCIAMS 89683) was recovered for this depth range; though taken from a bone sample found in close proximity to the Salmon River point described above, the date falls well later than expected for the Maple Leaf complex. A plausible explanation for this result is that Occupations 1a and 1b are separated by only a small amount of vertical deposition, as suggested by the narrow separation of Paleosols 1 and 2 in the Area A wall profile. No diagnostic artifacts were found within the depth range for Occupation 1b material.

Raw material use in Occupation 1b features a very heavy reliance on local materi-

als, particularly pebble chert, which makes up 78% of the *in situ* assemblage from this depth range. Banff chert is of far reduced significance compared to the previous occupation, making up 12% of the assemblage. Again, poor recovery of *in situ* lithics coupled with breaks in deposition not corresponding with the arbitrary 10 cm levels excavated makes quantification of material use difficult; however, Etherington chert and siltstone appear to be of secondary significance at this stage, while Avon/Bowman chert, chalcedony, ochre, porcellanite, and Top of the World chert are noted in very low quantities. The scoria and obsidian recovered in the screen are also probably attributable to this occupation.

Tools attributed to Occupation 1b include two bifaces, a scraper, a wedge, a bipolar core, five edgeworn flakes (one of them blade-like), and two pellets of red or reddish yellow ochre. The groundstone scoria fragment found in the screen is tentatively also assigned here.

Faunal remains associated with Occupation 1b are slightly more diverse, including trace remains of mule deer (two teeth). High rates of communiution and low amounts of identifiable fragments continue; the overall trend of higher numbers of planar-fractured and heat-broken rocks rather than crenellated and water immersion-broken rocks seen throughout the rest of the excavations is mirrored here.

Occupation 1c

A distinct assemblage was noted in the earlier deposits of Area B, positioned deeper than the single observable paleosol in this area and featuring a discrete cluster of debitage that included two complete microblades and other debris associated with microblade manufacture. Lacking more temporally specific diagnostic artifacts or radiocarbon dates, it is not currently possible to associate this portion of the assemblage from Area B with either of the early oc-

cupations in Area A. Based on the presence of the microblades, these materials are probably Early or Middle Prehistoric in origin, and are provisionally designated Occupation 1c.

Lithic materials from the basal sediments excavated in Area B, below a depth of approximately 14 cm adj. b.s., show a clear contrast with materials excavated above this depth; it is the shallower deposits which correspond with the paleosol observed in the east and south wall profiles. The deeper materials, attributed to Occupation 1c, consist mostly of locally sourced materials, with particular emphasis on a distinctive mottled pebble chert from which the microblades were made. Feature 8, a dense lithic concentration, is a workstation at which this material was reduced from a cobble through secondary and tertiary reduction stages to the point of production of finished microblades. Other pebble chert, Banff chert, and silicified siltstone are also strongly represented in the Occupation 1c assemblage; chalcedony, quartzite, and Top of the World chert appear in trace amounts, as does brown chalcedony, possibly Knife River flint. However, the occurrence of six fragments of mottled pebble chert above the 14 cm adj. b.s. occupation boundary, almost certainly from the same single cobble as the Feature 8 materials, shows bioturbation has had some effect on these deposits. Particularly in the case of the brown chalcedony, which trends heavily towards the shallower 0-14 cm adj. b.s. layer, deeper-buried pieces may be similarly displaced through bioturbation.

In addition to the microblades, of which three fragments exhibit edgewear, several other tools were found. These include the tip of a pebble chert projectile point, unfortunately too fragmentary to allow a style-based assessment, as well as a limestone cobble chopper, a Top of the World chert wedge, four unimarginally retouched flake tools, five edgeworn flakes (three of them blade-like), two bipolar cores, and fragments of two multidirectional cores.

Only trace amounts of unidentifiable limb and scrap bone fragments were found at the depth range associated with Occupation 1c, allowing no definitive assessment of resource use. Additionally, no associated FBR features were found; FBR shown in floor plans for the 10-20 cm excavation level in Area B is mostly attributed to Feature 6, part of Occupation 2.

Occupation 2

Shallowly buried materials in both Areas A and B are designated here Occupation 2. In both areas, a single paleosol in or immediately below the Ah horizon marks a tentative lower boundary for this occupation, coupled with observed breaks in slope-corrected lithic deposition.

The relationship between the Area A and B materials is unclear. They feature different diagnostic projectile points of the Late Prehistoric period, Wallula Rectangular Stemmed, ca. 2000-150 BP, and Avonlea, ca. 1350-1100 BP, respectively; the time ranges for these styles overlap, and the possibility of contemporaneity cannot be ruled out. Charcoal associated from a soil stain associated with Paleosol 3 in Area A yielded an AMS ^{14}C date of 150 ± 25 BP (UCIAMS 89771). If the later deposits from Area A are from a single occupation, these would be significantly younger than those from Area B. Further work is needed to clarify whether the Late Prehistoric material in each area represents a palimpsest of multiple occupations and whether there is any spatial continuity between the two areas: the deposits could represent debris from different groups utilizing different parts of the site at different times.

Lithic material utilization from the two areas shows some commonalities—a heavy reliance on locally sourced pebble chert, Banff chert, and siltstone is evident, but by count, all three are of lower frequency than in the earlier occupations. Top of the World chert, Avon/

Bowman chert, quartzite, Etherington chert, and other unsourced chalcedonies and cherts occur in low numbers, and some materials, including Montana chert and Mudstone, are only associated with the later deposits. The occurrence of Brown chalcedony is strongly associated with Occupation 2 in Area B; the single piece found in the screen in Area A is probably also attributable to this later occupation. The single piece of Kootenay argillite found in the screen can be attributed either to Occupation 2 or 1b. Finally, though only one piece was recovered in Area B, ochre comprises a significant portion of the Occupation 2 assemblage from Area A, with between eight and ten associated pieces suggesting a much greater emphasis on the use of this material in the Late Prehistoric compared to earlier occupations.

A broad suite of tools were recovered in association with Occupation 2. These include a finely worked projectile point tip that cannot be assigned to a particular style, as well as two biface fragments, one of them square-stemmed. Other tools includ three scrapers; a uniface; unimarginal, bifacial, and composite flake tools; and three edgeworn flakes.

Some variability is evident in the faunal remains, which include both bison and big-horn sheep specimens. As with the remains from other occupations, most bone was highly comminuted, and few elements were identifiable. A majority of FBR in each area showed evidence of being fractured by heat, but not immersion in water.

Discussion

Reliance on local materials, particularly pebble chert, Banff chert, and siltstone, can be seen in the basal Occupation 1a; in Occupations 1b and 1c, pebble chert approaches 80% of the lithic assemblage. This material declines in Occupation 2 to 50% in area A and only 26.5% in Area B. Particularly for the occupations dating to the Early or Middle Prehistoric, the lithic

assemblage does not tell a story of groups from east or west of the continental divide visiting the Gap, as suggested by Yanicki's (1999) analysis of predominantly Late Prehistoric collections from the Gap. Rather, the story in these earlier periods is of a people who were primarily local. Lithic sources used by Occupations 1a, 1b, and 1c suggest direct access or trade affiliations extending primarily along the Front Range to southern sources—the Crowsnest Pass for Etherington chert and andesite; the Glacier National Park area for Bowman chert; as far south as the Helena area for Avon chert and the Yellowstone National Park area for obsidian. Low levels of Top of the World chert utilization, and some degree of contact with the Interior Plateau, remain constant through every occupation.

Projectile points, for the most part, tell a similar story. Salmon River style projectile points are found in Alberta in the Front Range and Eastern Slopes, where they are assigned to the Maple Leaf complex (Peck 2011). This distribution is probably but the northeasternmost extent of a cultural expression present throughout much of the Eastern Plateau by about 6200 BP, including western Montana and parts of Idaho (Swanson 1972:110; Swanson and Sneed 1966). Other projectile points found during the 2010 field work including Bracken and Avonlea are also typical of either side of the continental divide, while being far more abundant than Salmon River style points throughout the Northwest Plains.

The Wallula Rectangular Stemmed point from Area A is an exception: few if any points of this style are known from southwestern Alberta. The nearest reported finds are from deep in the British Columbia interior. This is but one artifact type that is not common to the Eastern Slopes; also included in this category are the groundstone scoria fragment and notched cobble net sinkers. The microblade assemblage, too, may be considered here—

though the microblades at DlPo-8 compare favourably with those of the High River microblade tradition, the relationship between this rarely recognized technology and the Plateau microblade tradition, which is much more frequently reported, has not yet been well explored. Very much worth considering here is the strong correlation between microblades and evidence of fish processing at numerous Plateau sites. Authors including Chance and Chance (1972) and Johnston (1987) identify microblades as fish processing tools based on their frequent occurrence near traditional fishing areas on the Upper Columbia, particularly along the margins of streams where fish would have been cleaned, and on their being cached together with net sinkers and fish remains at some locales (Johnston 1987:23; Shiner 1950:196). Taken together with evidence for a diversified subsistence base at DlPo-8 that included only low reliance on bison, as well as fire-broken rock fracture patterns that deemphasize the use of boiling pits in favour of other practices, possibly pit roasting, a considerable portion of the assemblage demonstrates the Gap as a locus, for a considerable duration of time, of a montane and plateau-oriented way of life extending out into southwestern Alberta.

The anomalous Wallula Rectangular Stemmed point, meanwhile, was recovered from an occupation level dating to as recently as 150±25 BP. This date was well into the equestrian era, judging from Peter Fidler's observation in 1792 that the Ktunaxa were already renowned for their horses (HBCA E.3/2; Brunton 1974:33; MacGregor 1966:76). Once horses were available, individuals and groups from far-flung parts of the Interior Plateau could make the journey over the Rockies to participate in seasonal bison hunting activity, a practice suggested by much of the ethnographic literature of the Ktunaxa. Through the earlier pedestrian era, small numbers of Lower Ktunaxa would join the Upper Ktunaxa on their bison hunts (Boas

1890:818; Brunton 1998:225). During the equestrian era, Ktunaxa bison hunts on the Eastern Slopes could also include not just other Ktunaxa, but members of neighbouring Salish communities and even the Shoshoni; the increased numbers provided a degree of security from hostilities with the Blackfoot that became exacerbated during the Protohistoric period (Anastasio 1972; Brunton 1974:21-22, 33-34; Schaeffer 1940:46-47, GA M-1100-54 and 55).

Concurrent with the appearance of this unusual projectile point, three trends are conspicuous in the record of the Late Prehistoric at DlPo-8. One is an overall deintensification of site use. Lithic materials, by count, as well as quantities of faunal material, are considerably lower in Occupation 2 than in the earlier deposits, both in Areas A and B. A change is also evident in the exotic materials present at the site: they make up a larger proportion of the overall lithic assemblage in Occupation 2 at the expense of local lithic materials. Included in these exotics are two materials with sources in the Northwest Plains, brown chalcedony and mudstone, which make their first appearance at the site. Finally, there is a dramatic rise in the occurrence of ochre, possibly signalling the emergence of ceremonial practices at DlPo-8 in the uppermost occupation.

These trends are difficult to compare with the findings from earlier research at DlPo-8. While test excavations were conducted by the Glenbow Foundation, limited documentation and stratigraphic control made the chronological interpretation of the recovered materials difficult (Yanicki 1999). In spite of these challenges, patterns including decreased Banff Chert utilization and increased Top of the World chert utilization over time were identified (Yanicki 1999:87). Kennedy et al. (1982) reported similar trends at DjPq-1 in the Crowsnest Pass, while Fedje (1989:46) and Gorham (1993:107) reported the phenomenon as occurring in the Middle

and Late Prehistoric at sites in Banff National Park. These findings were replicated in the 2010 field work: Banff chert decreases, and Top of the World chert increases, proportionally to other materials from the same occupation or excavation level.

While several projectile points were recovered in the 1960 field work, these all dated to the Late Prehistoric (Yanicki 1999:83). The co-occurrence of Cayley series points, representative of the Old Women's phase, and Tobacco Plains style projectile points helped serve to demonstrate that two groups were visiting the site in the Late Prehistoric period, and suggested DlPo-8 to be the meeting place between the Piikáni and Ktunaxa that was reported by Fidler in 1792 (Yanicki 1999:44). These findings were not replicated in the 2010 field work: neither of the projectile point styles found by the Glenbow Foundation team were found in the Area A or B excavations, and no further insight can be offered as a result of this work into the possible relationship between the Old Women's phase and Tobacco Plains style.

Further, the statistical correlation between black pebble chert and Top of the World chert discussed by Yanicki (1999:82, 96), in which these two materials made up the bulk of the DlPo-8 assemblage in earlier collections, does not hold up in comparison to the material excavated under more rigorous stratigraphic control. In Areas A and B, Top of the World chert makes up only a small fraction of the total assemblage, while pebble chert is by far the most dominant material. This distribution is particularly true of the earlier Occupations 1a, 1b, and 1c, and the Occupation 2 assemblage from Area A. The results from Occupation 2 in Area B, in which 13 pieces of pebble chert were found in comparison to five of Top of the World chert, come closer to reflecting the numbers reported from earlier collections: 24 pieces of black pebble chert, 29.3% of the DlPo-8 assemblage up to that point, compared to 16 pieces

of Top of the World chert, 19.5% of the total assemblage (Yanicki 1999:82).

Possible explanations for this discrepancy include: 1) the area excavated by the Glenbow Foundation team having only a Late Prehistoric component, in which the higher proportion of Top of the World chert was in fact the norm; 2) their fortuitious excavation of an area in which Top of the World chert was extensively processed on a highly localized scale, resulting in a disproportionate skew in that material's abundance; or 3) differential selection of materials during surface collecting, which led to an overrepresentation of the more visible, shiny, and appealing Top of the World chert in the resultant collections. According to Yanicki (1999:87), nine of the 16 Top of the World chert specimens from DlPo-8 were collected from the surface, suggesting this last explanation to be the most accurate. Further research may be the only means by which this uncertainty can be resolved.

In summary, earlier occupations at DlPo-8 show a strong trend towards reliance on local materials, accompanied by a focus on material culture linked to the Rocky Mountains and Interior Plateau. This trend continues up to an as-yet undetermined point in the Late Prehistoric, after which three shifts in site use occur: overall intensity of site use decreases; exotic lithic materials, particularly from the Northwest Plains, become more prevalent; and ochre becomes abundant, perhaps associated with ceremonial activity. The significance of these three trends in association with stories about Old Man's Playing Ground, and how the patterns may relate to gaming, trade, and the role of the Gap as a cultural boundary in the Late Prehistoric are discussed in the following chapter.

Chapter VII
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Synthesis & Conclusions

Archaeological evidence for the destruction of Old Man's Playing Ground may be disappointing from a heritage management perspective, but the fate of the rock alignment may have little bearing on the significance of the site. Textual sources suggest it was built in close proximity to the Oldman River (Fidler, HBCA E.3/2; Dawson 1886; MacGregor 1966), and that its degradation was a gradual process that occurred over the span of a century or more. The low-lying flat that best corresponds with descriptions of the playing ground's location has indeed been severely impacted by numerous recent flood events (see Chapters IV and V). At this location, even prehistorically, periodic maintenance of the site would have been required to keep the site in the excellent condition Peter Fidler observed it in in 1792. The slow process of attrition by which the site was destroyed was as much a function of a failure to keep the rock alignment maintained, then, as it was a result of any cataclysmic natural event.

The abandonment of the site may have been triggered by a number of factors in the period following European contact: disease, escalating warfare, and a disruption of traditional modes of trade. All access was abruptly interrupted, however, by the imposition of the reservation era, accompanied by severe restrictions on First Nations' abilities to perform traditional practices including intergroup gatherings such as were decribed at Old Man's Playing Ground. In spite of this, memory of the place is maintained in the oral traditions of several First Nations communities; it is here that the true significance of the place lies.

There is much that can still be preserved in the Oldman Gap: in this chapter, I will discuss the reasons for associating archaeological site DlPo-8 with Old Man's Playing Ground,

and what the data from DlPo-8 can tell us about prehistoric occupation of the locale in which the playing ground was a major part. The field work conducted in 2010 was only a preliminary assessment, though. Much of this discussion is directed at identifying fruitful avenues for future enquiry, particularly as pertains to linking historic groups to the prehistoric occupants of the Gap, and to the social implications of the site as an intergroup rendezvous point where gambling occurred. The discussion of intergroup meeting at the site goes beyond the purely academic. Oral traditions and other sources indicate which historic groups have a continuing connection to the site; this connection is particularly well expressed among the Piikáni, but also appears in other communities. While further collaborative research with First Nations members is called for to preserve existing knowledge about the site, the data available are sufficient enough to advise that meaningful consultation with these communities be included in any future management plans for the locality.

Old Man's Playing Ground and DlPo-8

A connection between archaeological site DlPo-8, on a high terrace at the south end of the Oldman Gap, and the rock alignment described in Peter Fidler's journal (HBCA E.3/2, fo. 17) was first proposed by members of the Glenbow Foundation archaeological survey team in 1960 (GA M2105-4). No stone features matching Fidler's description were found during that study. Remains of a possible rock alignment and scattered cairns in a badly disturbed context were identified on this landform by Yanicki (1999); as discussed in Chapter IV, these do not conform with Fidler's description of the site, and their origins are not speculated upon further in this report. A low riverside terrace that more closely corresponds with historic descriptions of the site's location was not investigated in these previous studies. Archaeological

testing conducted on this landform in the summer of 2010 revealed no traces of buried cultural features, but did show considerable impact from flood events, probably within the past century. If this was the location of Old Man's Playing Ground, all trace of it appears to have been destroyed.

The archaeological site on the higher terrace, DlPo-8, is then the only remaining window through which to assess the prehistoric occupation of the playing ground. The two landforms are part of the same locality, being adjacent to each other and separated by only 8 m of elevation; should archaeological materials have been found on the lower landform, it is uncertain whether they would be considered to be from a separate site. Beyond this basic association, however, there are other reasons to speculate that DlPo-8 may include occupation areas peripherally associated with the playing ground. Perceptible changes to site occupation strategies occurred during the time period when the playing ground was most likely in use. These include a deintensification of residential activity, evidence for some ceremonial significance to DlPo-8, and indications of the site's role as a meeting place where trade commodities were exchanged.

Key to this analysis is that the hoop-and-arrow game dates to the Late Prehistoric period. Archaeological evidence of polished stone discoidals, or "chunkey stones", make up the earliest evidence for the game from dateable archaeological contexts in North America. At the earliest, these date to 1,350 BP (Pauketat 2004:64-65); perforated stone discs from the American Southwest and sinew-netted hoops from Utah and Colorado all date to later periods. An effigy of an arrow passing through a hoop built into the playing ground itself serves as a further, self-referential diagnostic that can be used to attribute the rock alignment to the

Late Prehistoric, the time period when the bow and arrow was used.

Basal occupations at DlPo-8, dated through style and radiometric analysis at latest to the Middle Prehistoric period, show that residential activities, including food processing, pit roasting, and lithic manufacture, were commonly practiced. Frequencies of faunal remains, fire-broken rock, and lithic debitage all significantly decrease in Late Prehistoric occupations. These changes are not a result of simple abandonment, however: other changes accompany these trends in lower-intensity site use. Ochre pellets are more frequent in the upper, Late Prehistoric assemblage at DlPo-8; used in the manufacture of paint, this material plays an important role in First Nations ceremonial practices. Its relative abundance suggests that the shift in site use was accompanied by increased ceremonial activity. Such a designation is quite broad; although ochre is not specifically mentioned, a modicum of ceremony is known for the hoop-and-arrow game, particularly from Siksikaitsitapi accounts (Ewers 1958:156-157; Stow 1923:45-47). Alternately, the ochre could be seen as a trade commodity that was more frequently being redistributed at the site. This interpretation conforms with a general trend away from reliance on local lithic materials, seen in the basal occupations, towards more distantly sourced materials in the Late Prehistoric. Further, a shift in the directionality of lithic sources can be observed. Whereas exotics in the basal occupations show that trade relations existed principally with groups to the south and west, materials from upper occupations show the additional appearance of lithics sourced from the east, in the Northwest Plains.

Although based only on a small amount of excavation, the coincidence of the timing of these changes indicates that the shift in site use is linked to the emergence of the playing ground. Evidence of intergroup long-distance trade in particular is anticipated as a signature

of the gambling activity associated with the hoop-and-arrow game (see discussion in Chapter III); that this activity is most strongly associated with the Late Prehistoric occupation of DlPo-8 may be the best possible means both of associating DlPo-8 with the playing ground, and of indirectly dating the latter site. It could also be argued that the decrease in residential occupation and appearance of eastern-sourced exotics could relate to the emergence of the historically attested boundary between the Piikáni and Ktunaxa (Coues 1897; Grinnell 1892; Kidd 1986:8; Thompson 1916:238, 345-347; Turney-High 1941:23; Wissler 1910; Yanicki 1999:42). The transition of the Livingstone Range from a residential area for a locally based group to a mutually attested marginal frontier, and the emergence of intergroup meeting and gambling there, are probably quite intimately related. To suggest a date for one is to suggest a date for the other.

Future research

Questions such as the expansion of Piikáni territory, the archaeological identification of the Plains Ktunaxa, and the function of DlPo-8 as a frontier trading entrepôt can hardly be adequately addressed through such limited investigation as has been conducted here. These topics are brought up, rather, as an indication of the implications of continued work at DlPo-8 and directions future research could follow.

Many materials from DlPo-8 show an affinity with the archaeological record of the Interior Plateau; exotic lithics, projectile point styles, and other tools such as groundstone, net sinkers, and potentially even microblades fall in this category. These materials, from both the Middle and Late Prehistoric, intersect with oral traditions that indicate the Ktunaxa, generally considered a Plateau people, were formerly resident on the Northwest Plains. In conjunction

with Fidler's historic account placing the Ktunaxa at this location and ethnographic accounts of Old Man gambling with people here (Ewers 1958:157; Wissler and Duvall 1995 [1908]:24), the opportunity exists here for application of the Direct Historical Approach (Forbis 1963; Lyman and O'Brien 2001), that is, cross-referencing the archaeological record with historic and ethnographic observations to identify the archaeological signature of the Plains Ktunaxa. Such an approach has been successfully used to associate the Late Prehistoric Old Women's phase with the ancestral Blackfoot (Reeves 1983; Vickers 1986, 1994, 2008:217; Vickers and Peck 2009). Similar efforts have been alluded to for the Tobacco Plains phase for the ancestral Ktunaxa (Loveseth 1985:10-11; Yanicki 1999:86-88). Unfortunately, while ubiquitous in the 1960 test excavations conducted by the Glenbow Foundation, neither phase was represented in the assemblage from the 2010 excavations; further excavation at DlPo-8 and comparison with other sites may help clarify this critical aspect of Later Prehistoric occupation of the Eastern Slopes.

Comparison with other sites in the larger region is also required to better clarify Old Man's Playing Ground as a regional intergroup meeting place and trading centre. Such an analysis has previously been attempted which yielded encouraging results (Yanicki 1999), but the present study has not replicated those findings, exposing a possible limitation of the earlier study in its combination of surface finds with excavated material from DlPo-8. Comparison of excavated material from DlPo-8 to assemblages from other reliably dated, excavated contexts has not yet been attempted, and is necessary to characterize the nature of long-distance trade at this site as exceptional compared to other sites in the region. Disproportionate concentration of commodities, indicative of directional trade, is anticipated for a site which had a

trade fair/festival type function (Janetski 2002:349). The numerous historic and ethnographic sources discussing gaming and gambling at Old Man's Playing Ground, and its location on a major transportation corridor between the Northwest Plains and Interior Plateau strongly suggest the site played such a role. However, this conclusion has yet to be archaeologically demonstrated.

Finally, there is the matter of the stories and traditional knowledge about Old Man's Playing Ground from which this research was originally derived. While attempts were made to reach out to elders from various communities who could relate the story of the playing ground as it is presently known, that particular research objective went unfulfilled. Just as the playing ground itself was lost, then, so too is traditional knowledge about the place threatened by a process of attrition. Encouraging the sharing and preservation of this knowledge for future generations remains a key priority for future work.

Recommendations for long-term site management

A major theme of this study has been the exploration of the signficance of Old Man's Playing Ground and its corrollary, the hoop-and-arrow game, in the traditions of a number of contemporary First Nations. Historic and ethnographic accounts show that Old Man's Playing Ground is of particular significance to the Piikáni, figuring in stories that have endured for more than two centuries, and that have been retold in communities on either side of the modern-day Canada/U.S. border. The earliest historic account of the site, by Peter Fidler (HBCA E.3/2, fo. 17), also places the Ktunaxa at the site, and they also figure in at least one version of the playing ground story (Ewers 1958:157). Sadly, while Ktunaxa ancestors without doubt were familiar with the traditions associated with the place, this knowledge no longer appears to

circulate in modern Ktunaxa communities. Other groups, including the Kainai, A'aninin, Apsáalooke, Shoshone, Nimíipuu, and Salish have been named as participants in a 19th century battle near the site (Johnstone 1954:21-22; MacGregor 1981:46); most of these groups shared in playing a similar form of the hoop-and-arrow game (see Chapter III). In addition, the Siksika, Tsuut'ina, Chualpay, Kalispel, Secwepemc, and Ntlakyapamuk shared in this Northwest Plains/Interior Plateau hoop-and-arrow game variant. While their familiarity with the playing ground is conjectural, this distribution would at least appear to define a regional sphere of intertribal gaming, and by extension trading, relationships in which the playing ground was centrally located. Finally, George Dawson's Mountain Cree (Nehiyaw) and Nakoda guides expressed familiarity with the site (Dawson 1886:80). While a shared gaming tradition does not appear to extend to these groups, knowledge of the playing ground's specific location has persisted among members of the Nakoda community.

To the communities that hold knowledge of the playing ground, it is more than a traditional meeting place or a story. To the *Siksikaitsitapi*, Old Man's Playing Ground was, and still remains, a sacred place (Glenbow Museum 2010). This theme is reiterated by the gaming hoop's inclusion in the Beaver Bundle, and by the victory song in the Sun Dance commemorating a hoop-and-arrow gaming victory, both of which, according to Piikáni elder and ceremonialist Allan Pard, recall the cultural memory of the playing ground at the headwaters of the Oldman River (see Appendix A). And as an area associated with Trickster, Nakoda elder Henry Holloway also describes it as a sacred place where people can go to give thanks, leave offerings, or pray (see Appendix A). The locale itself holds considerable significance to these communities regardless of the physical condition of the playing ground.

The Oldman Gap today, including DlPo-8 and the probable location of the playing ground, is located in Bob Creek Wildland Provincial Park; as such, the lands are under the management of several levels of provincial government authority, both as a protected natural area and, in the case of DlPo-8, as a listed heritage resource. The opportunity exists for recognition of the playing ground, and long-term management of its significant cultural heritage value, to proceed in a way that is respectful of, and benficial to the communities whose heritage this locale most fully represents. Respect for traditional ways of knowing goes beyond building cooperative relationships, protecting sites, and educating non-native people about sacred places (Carmichael et al. 1994:7). As First Nations people engage in the process of reinhabitation, reestablishing traditional practices after generations of suppression, a key obligation is that representation of sacred places be culturally informed, most desirable being outcomes that are a product of mutual collaboration (cf. Buggey 1999, 2004; Colwell-Chanthaphonh and Ferguson 2008; Silliman 2008).

Sacred sites under the management of government authorities have on occasion been made into tourist attractions, irrespective of First Nations concerns (Price 1994:263); at the very least, the management of sacred sites off reservation lands usually excludes First Nations peoples from the planning and decision-making processes (Carmichael et al. 1994:5). Truly respectful collaboration on sacred sites calls for meeting more than the minimum ethical and legal requirements, but engaging First Nations communities, and addressing and honouring their concerns. "Traditional knowledge, in the form of narratives, place names, and ecological lore, bequeathed through oral tradition from generation to generation, embodies and preserves the relationship to the land," writes Susan Buggey. "Landscapes 'house' these stories,

and protection of these places is key to their long-term survival" (Buggey 2004:17). Ultimately, partnership with aboriginal communities remains the most effective strategy to document and protect their heritage, with "a focus on human knowledge, rather than on the land or landscape itself [offering] prospects for long-term preservation and even for a restoration of certain ethnographic landscapes" (Krupat et al. 2004:7, 9).

Documentation, interpretation, preservation, and restoration are all options which may be pursued as part of longer-term collaborative initiatives. While the rock alignment known as Old Man's Playing Ground appears to have been destroyed, that is but one part of a much larger story, and perhaps one that has been repeated over centuries. It is certainly not the final chapter. The enduring traditions, together with the archaeological, historical, and ethnographic data, represent a remarkable coalescence demonstrating First Nations peoples' ties to a specific place on the landscape from a period long before European contact through to the present day. That these peoples' relationships to the place have changed is an inevitability; how these relationships continue to change is the prerogative of these communities to determine.

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Appendix A
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Interview Transcripts

Interview with Allan Pard

Date: September 5, 2011

Interviewer: Gabriel Yanicki

Location: Oldman River Campground, Hwy. 2 west of Fort Macleod

Gabriel Yanicki (GY): Ok, recording. This is Gabriel Yanicki. It is the fifth of September [2011]. Allan, could I get you to say your name?

Allan Pard (AP): My name is Allan Pard, and my Blackfoot Indian name is *Mik-skimmisukahsim*.

GY: Ok, and that's it, we're good to go.

AP: Ok. The reason why I'm so liberal with sharing information and knowledge of our customs and ways is because of how rapidly we are losing our traditions and our culture, and how rapidly our elders who were very knowledgeable, we pretty well have lost those real knowledgeable elders. So, I think it's important that if we don't record our history and preserve our history that there's no way our culture's going to ever be preserved. So I do this for the future generations of our people so that if they're seeking information or knowledge of their ways that they have, hopefully, access to this kind of information.. and that's why I allow myself to be recorded and whatnot.

GY: Ok. The first thing that you wanted to talk about was, or that we discussed, was how the traditional knowledge has been lost and the impact of things like the boarding school system, and not just that but like, permits to go off reserve and experiences that you've had with that.

AP: Yeah, well [*coughs*].. In my generation we were still involved… being sent to boarding school, and at those boarding schools, we weren't allowed to use our language, speak our language, and we were told at the time when we were first being indoctrinated by the nuns and the priests at these boarding s[chools].. I went to a Catholic boarding school that was called Sacred Heart Residential School and, I think it was established in 1926, that school.

GY: Ok

AP: And there was some before that, that were established, and anyway, it was probably the third generation of boarding school in my family. And like I said, we weren't allowed to speak our language, and everything that was basically Indian was, we were told that our language was the devil's language, that our beliefs, you know, was basically.. praying to the devil. So a lot of us were brought up with this concept of being afraid of our ways, scared to speak our language. And so [*coughs*] anything that was being Indian, we just basically were losing our self-esteem as a people, and how we were treated and mistreated in those boarding schools. We had a nun, we would be all lined up to go eat or whatever, it was all regimental, we were given numbers, our clothing all had numbers attached to them, and we were given a certain amount of clothing and we had

to look after them. We.. it was all, like I said, regimental, we were given specific jobs to do. My first job in kindergarten was to.. the school we had was four stories and the stairwells, my job was to dust the stairwells periodically throughout the daytime, basically a fairly easy job to learn for a kid at that age. And… [*coughs*]… we were taught more religious studies, the focus was religious studies, because first thing we did in the morning was we said our prayers and our prayers were all in Latin, so we [*laughs*]..

GY: Oh! [*Laughs.*]

AP: We really didn't know what we were saying, you know?

GY: Yeah.

AP: And of course the mass at that time was all in Latin, and so if you were chosen to be an altar boy, you had to learn everything in Latin. The hymns were all in Latin, and so **Latin**, you know, religious studies and Latin. So we'd get up in the morning, first thing we'd do is we'd say our prayers to begin the day in Latin, wash our face, brush our teeth, you know, it was a kind of a powdered soap that they used to brush our teeth with and.. anyway, we'd dress up, go downstairs and line up and get ready for breakfast, and of course the food we were given wasn't.. you know, the food wasn't that great!

GY: Ah!

AP: You know, we were served porridge, without sugar, that type of thing, eh? So

that's, you know, **basic**. The schools back then used to run a farm so it was kind of like, self-sufficient. They'd grow gardens and we'd all, you know, have jobs. You were either working in a garden, taking care of some of the animals, for the older boys, and food was stored in this root cellar. So, you know, **potatoes** [*exhales*], that was my next step to graduate was peeling potatoes before we had a potato peeler. But again, institutional behaviour, you know, was brought in. You had to learn institutional behaviour, that's how you survived? That's where we were kind of taught amongst ourselves to **lie**, you know? To **steal** and..

GY: Hm.

AP: All the good qualities in life, because, if you seen an incident happening, you couldn't rat! So you'd have to tell the nun, "I didn't see anything", you know.

GY: Oh!

AP: We were being taught to lie because if you were a rat, it was more severe consequences for ratting out. And then the food [*sighs*], we used to raid the gardens at night.. so that we could eat. We were **starving** sometimes at the school because the food they were feeding us was.. inappropriate.

GY: Yeah.

AP: You know, like they would slaughter a pig once a week? And I used to watch it from class, just the class was right out there where they'd kill the pig and they would.. use these gunnysacks, steamed, real hot gunnysacks and they would lay

it on the pig and I'd see the guy that killed the pig would be scraping the fur, the hair off the pig. And the next day I knew darned well what I was going to eat. It was basically a big piece of pig fat.. with turnip soup. It was a turnip soup with pig fat. I never tasted the bacon or the ham! [*Laughs.*]

GY: Oh!

AP: But you know, I would see how it tasted. The bacon's, you know, the pig skin and the fat. So that's basically how we were.. and even like I was saying, lining up to go eat, this nun would say, "*Chaa.*" You know, tap us on the head, and.. I thought it was just kind of a French expression, you know, because those were French nuns. Anyway, later on, a few years back this.. guy that now is one of the curators at the Museum of Civilization, he was studying to be a priest and he quit studying to become a priest because of the atrocities he learned about boarding schools and how the priests were, how the church, you know, dealt with the people in inappropriate ways, and anyway, he didn't want to be a priest anymore. But anyway, I told him the story about this nun saying "*chaa*" to us and he was just kind of horrified. He said, "Do you know what that nun was saying?" I said, "No..." He said, well, in French Canadian, the language of what they're, when they say *chien*, it means dog.

GY: Dog.

AP: [*Laughs.*] So basically, that nun was telling us, "Hey, dog." You know? [*Laughs.*] So that's how we were treated [*coughs*], and brought up, and I know, after residential school, at the school, too, we weren't allowed to talk, or talk back, or

anything like that, so we were really **suppressed**. We weren't allowed to express our feelings or our thoughts because.. we were just basically taught to shut up and listen. So.. a lot of our communication skills, our people skills, you know, sort of, we **lost that** in boarding school. And then.. being isolated and alienated from your family, you know, and then it got the point where you were almost embarrassed of your family because of how we were indoctrinated, that, you know, being Indian was wrong. And.. so a lot of dysfunctionality was established, you know, through those boarding schools. I didn't know this 'til I started maturing and later on learnt more about life in itself and.. I knew there was something wrong, you know, because one day when I was in kindergarten, I was small, and on the fourth floor was the dormitory where we all slept and there was the boys' washroom. But there was about five stalls of toilets there, but the toilets were all plugged. And anyway, the nun was trying to get me to put my hands in there to unplug those toilets, and there was just no way I would put my hands **in** there. And of course, you know, being severely reprimanded because I was not following instructions. So I was..

GY: Yeah..

AP: I was **whipped** for not doing that. And I was thinking, well, gee, they're teaching us.. about the Bible and about loving thy neighbour as thyself, and yet these people are treating us like **dogs**, you know? Treating us like **animals**. And so I started questioning what they were telling us, you know, what… You know, I was taught… My great grandmother was a Sun Dance woman. She put up Sun

Dances, and she was still alive at the time. And I used to think, I hear her praying and our ways, and [*laughs*] I never hear her praying to the devil, and in fact the way she lives, and how she conducts herself, it was so **saintly**, how [*laughs*] she conducted herself. And I just never really bought into what the boarding school, how they were trying to indoctrinate us. So later on in life I was able to, once I started, you know, reaching adolescence, being a teenager, I started.. kind of.. thinking more about.. you know, our ways, because basically when I was in Grade Eight that's when.. the first real form of integration started happening… We were bussed off the reserves to start integrating in white schools, eh? And that's when I started noticing the difference of how far behind we were in English and math, and etcetera, etcetera. So a lot of our schoolkids started dropping out of school because they just couldn't catch up. And you know, like it's unpleasant for you when you can't understand what's going on and, you put yourself in an unpleasant situation, pretty soon you start, you know, resenting and hating going to school.

GY: Yeah

AP: So a lot of our people dropped out of school. And I.. kind of was in the fortunate generation, because the generation just before me, at that time [*coughs*], you went to school, it was either Grade Eight education or sixteen of age, whatever came first, that was as far educated you could be, because we were threatened by the Indian Agent, if we went beyond that, to high school, we were threatened with enfranchisement. That we would lose our Indian status.

So a lot of our people never went further than Grade Eight. And… Even at my.. right into the fifties, we were still required permits to leave the reserve. I remember my grandfather, you know, going to obtain a permit so he could visit relatives on the Blood Reserve. And if we didn't have that permit, if the Indian Agent didn't give us that permit, we couldn't leave the reserve.

GY: What was the risk, what was the penalty?

AP: Well the penalty, it was right in the Indian Act. If you looked at the Indian Act in the fifties, it was basically stated right in there, any Indian caught off the reserve, it was a hundred dollar fine or ten days in jail. So we were really.. you know, isolated just to the reserve. And **that** has a lot of bearing to a lot of the Blackfoot territory that we couldn't access. So a lot of the times the stories we were told, we could just visualize the sites [*laughs*], because we didn't have access to those sites, and that's kind of.. the deterioration of our culture was also happening in that way, too. So… boarding school really had an impact, because even for the people who weren't really maybe exposed to traditions, just never looked back and just totally became integrated. So, as a result of that experience, our boarding school experience, a majority of our people have no regard or if they do, they have **some** regard and then some knowledge of our customs and our culture. [*Coughs*]… But still yet as Blackfoot people we are very, very fortunate because we still have a lot of people, too, that fell through the systems, that either didn't go to school because of sickness or **whatever**, but these were the people that basically kept up our traditions. And the good

thing about it is, pretty well everything we **did**, spiritually speaking, was still being practiced. So our Sun Dance was not lost 'cause we still had people that still had knowledge and sacred rites to do our Sun Dances, our Beaver Bundle ceremonies, our Medicine Pipe ceremonies, our All Smoking ceremonies, our offerings, our sweats. So basically we're still fortunate to be all intact. We still had a lot of – I shouldn't say a lot, but we still had elders that were practicing our ways. So even in the seventies, when we wanted to do things, it was still possible because we still had the elders who were capable of instructing us and passing on knowledge to us to continue our ways. [*Coughs.*]

GY: The elders that held that knowledge in the seventies, these are the people that slipped through the cracks and didn't get caught up in boarding schools?

AP: Well, some of them may have had some exposure to boarding school but for some reason or another, they.. maybe went as far as maybe Grade Three or whatever. But for whatever reason, I know some of my relatives that never went to boarding schools, and they're the ones that basically couldn't speak English. You know, those people were alive right 'til, you know, two thousand. [*Laughs. Coughs.*]

GY: And now the people with that level of knowledge, I mean, they're…

AP: Jeez, you know, they're very rare. There's, a handful of people from each community that have that knowledge. [**Recording interrupted**.]

GY: So yeah, in terms of the Indian Agents on the reserves and… this was up until

you were in your fifties? So…

AP: Oh, in the **fifties**

GY: In, in the fifties, ok.

AP: Nineteen fifties. Yeah.

GY: It took permission to go off reserve, and… was anybody in the community able to access sites that featured in the traditional geography of the Piikáni? Was anybody interested in doing that?

AP: Well if they did, sometimes they would have.. it would be done under the permission of the Indian Agent, right? I remember, too, that some archaeologists that were doing field studies in the thirties that, you know, got some of our relatives to go visit these sites and to tell stories about those sites. I'm just trying think of that lady's name… first woman archaeologist..

GY: Alice Kehoe?

AP: Yeah, Alice Kehoe[1]

GY: Ok.

AP: Yeah, she was basically telling me how they had to talk to the Indian Agent and, you know, help the process of getting a permit so that their interpreters, people like that can go with them.

GY: If that process, if someone like Alice hadn't been doing that, would there

[1] Alice and Tom Kehoe were actively conducting research in Southern Alberta with Siksikaitsitapi informants in the late 1950s (Kehoe and Kehoe 1957, 1959).

have been any possibility of getting access?

AP: No, not really. You know, sometimes. We were at the whim and the mercy of how the Indian Agent felt, you know. So if the Indian Agent was **pro**, you know, and was a good guy, it mighta helped. But well, we had some Indian Agents that were.. you know, ruled with iron fist.

GY: Do you think they were interested in suppressing the traditional knowledge in that way, then?

GY: Well yeah, there was laws back then, you know.. where people [*coughs*].. weren't allowed to practice our culture, our Sun Dances. It was in the Indian Act [*clears throat*].. and almost in the sense our people had to go underground. And if you were caught at a ceremony, sometimes those people were cut off rations.

GY: Cut off rations?

AP: Cut off rations because they were practicing their culture.

GY: [*Sighs.*]

AP: So [*clears throat*], somehow or another the Chief and Council at the time were able to convince the agents, you know, through negotiations and whatnot to continue the Sun Dances. And I remember, too, the Indian Agent, of the stories I heard, just our last Sun Dance was done to try and help the war effort, you know, in **our** favour because a lot of our people who fought in the First World War and the Second World War, the reason why they fought under, and joined the Canadian army is basically they were told, you have a choice: do you

want to be ruled by the Germans or do you want to be ruled by the Canadians? So they chose to fight for the Canadian flag. So [*clears throat*]… our people were really subject to the Indian Agent, even to sell. I remember too, my grandfather was doing farming, and any time they'd sell grain, they had to get permission to **sell**. And that permit to sell is still in existence and still possibly, and in fact can be enforced through the Indian Act.

GY: Really.

AP: Yes. Permit to sell any of your property.

GY: None of this was in any of the treaties.

AP: No! No, it was through the Indian Act to how they'd enforce these laws. So yeah, when my grandfather, we'd be cutting hay and putting up hay, and in order to sell that hay, we had to go get a permit to sell from the Indian Agent, and to haul that hay off the reserve. And then that money wouldn't go to my grandfather. That money would go to the Indian Agency. My grandfather would have to go back to the Indian Agent with a note and saying how much he needed, and why he needed that money. And people would wait around the Indian Agency all day for that money, and there was just like, a little sliphole. All of a sudden you see a piece of paper, you know, coming out of there and it was either in the form of a cheque or a requisition to go buy your provisions or whatever. So, I seen that, I waited with my grandfather, you know, waiting for money.

GY: Your grandfather – is he the one that you were learning many of these traditional stories from?

AP: My grandmother.

GY: Your grandmother.

AP: My grandfather did tell the stories but he wasn't probably.. more traditional… His dad was named Runs Among Buffalo. He was one of the first Indian scouts for the Northwest Mounted Police. And when he was too old, he delivered the mail from Fort Macleod to the Indian Agency and, at that time on the Peigan Reserve it wasn't in Brocket, it was where I live. But anyway, he was pretty old and his wagon tipped over and he got killed, eh. My grandfather was fairly young at the time, he was basically telling me he was three or four years old when he had to be raised by his uncle, and basically him and his brothers had to stay in the residential school at the time almost full time. So, he didn't have as much… whereas it was the opposite with my grandmother. Her extended family was still around and whatnot, so my grandmother was a lot more traditional in that regard. My grandmother [*laughs*], we would walk to Bad Eagle. Bad Eagle still had his Medicine Pipe ceremonies when I was a child, in the sixties and fifties. I remember walking to that ceremony with my grandmother, 'cause my grandfather wouldn't support her because she was going to a culture ceremony. My grandfather was a strict Catholic, so I remember walking there, and that's where I remember getting cigarettes for the first time, from Bad Eagle, the Medicine Pipe man at the time. And my grandmother was going to take those

cigarettes away from me and he said, "No, no, no, I gave them to him." So I really felt like **somebody**, you know? [*Laughs.*]

GY: [*Laughs.*]

AP: And, you know, being treated specially like that. And so that's how I was being exposed to our culture was basically through my grandmother. Mostly through my grandmother.

GY: One of the things that I want to talk about with you is the Oldman River. I think maybe we can switch over to that and talk about its name in Blackfoot and where that name comes from.

AP: Yeah, the Oldman River is called *Napitohtai* [**car passes**]

GY: Uh-oh. The car just went by there, just as you were saying that…

AP: Well, the Oldman River is called *Napitohtai*, which means the Oldman River, *Napi*'s River. And the reason why it's called that, the story that was told about, was *Napi*'s gambling place, or *Napi*'s playground was what it referred to. And that's why, because it was right at the Gap at the mountains, where the Oldman River comes out, where they had the gambling playground. And that's why it was called after that playground.

GY: Ok. And that knowledge is still in the community. I mean the school in Brocket, you mentioned is

AP: Yeah, the elementary school is called *Napi*'s Playground. That school was named after the area up in the Gap.

GY: So would you say this is still a fairly well-known story?

AP: I think it's still a fairly well-known story because I know at the time when they named that elementary school, this was in the eighties, and that the elders talked about it. We still had a.. few elders that were knowledgeable of the stories and basically that's what they, they recommended, was that school be called *Napi*'s Playground after that story.

GY: Yeah. And the area up in the Gap, you've mentioned to me before about the Gap being in the Livingstone Range and the…

AP: Yeah, the Livingstone Range is referred to as *Panihtatsis*.

GY: *Panihtatsis*.

AP: The Tipi Liners. If you look at that area, the range kinda just looks like the tipi curtains.

GY: Symbolically, what do you think that means?

AP: Well it's basically.. they call it that because of the chinook winds that we get. When you use tipi liners in a tipi it helps keep the tipi warm. So the Tipi Liners of course help, with the chinooks, you know, keep us warmer in the winter-time. That's why this area that was chosen by our leaders at the time of treaty preferred this area, because it was a favourite wintering area for our people, because of the chinooks, and the easy access to the wood and whatnot for fuel. For warmth. You can't get that way out in the prairies, you know, so our people always camped closer to the mountains and the foothills so they had access to

wood and whatnot for the winter.

GY: Was it exclusively the Piikáni that used this area, then? Or…

AP: Ah, I think it was a preference of our people. It was a preference and a favourite wintering area for Piikáni. And that's basically how we.. we wouldn't tell, if the Bloods or the Siksika happened to be in this area, we wouldn't say hey, this is the Peigan's area. No, it was just, we preferred this area. If they came and wanted to camp here, it was their privilege to do so. There was just our preference to use this area more so in wintertime. So that's basically how we kinda shared amongst the tribes was through preference. And some clans, too, preferred certain other areas.

GY: With the stories of the playing ground, the stories revolve around the hoop-and-arrow game as I am familiar with the stories. Do you have any experiences with the hoop-and-arrow game from growing up in the community?

AP: Yeah. Well, my first.. kind of.. understanding and.. I thought of the hoop-and-arrow game well, when I was first told the story of the *Napi*'s gambling ground. This was back when I was a little, a child. And then later on in life, one of my relatives was fixing a hoop-and-arrow game for the buffalo jump [Head-Smashed-In Buffalo Jump] to be displayed. And that's when he explained to me how the game was played, specifically at that time. And that's how I seen it, and then later on, as I got [*clears throat*] transferred into the Beaver Bundle, my relative, he was the last key Beaver Man. His name was Mike Swims Under. His Indian name is *Akkakinnum*. Many Lights. He taught me about how the hoop

and arrow came to be in the Beaver Bundle, and the hoop is kept in the Beaver Bundle to reaffirm the story of the gambling area and how it's associated to our people. So spiritually speaking, that's how the hoop and arrow game is kinda maintained, it's always in the Beaver Bundle.

GY: OK.

AP: Along with the story, you know.

GY: This relative who made the hoop and arrow game for the buffalo jump, could just anybody do that or was that fairly specialized?

AP: Actually I think it was specialized knowledge. We always had different trades amongst ourselves as a people. My family are known as eagle-catchers. You know, we have this Eagle Catching ceremony, we used to go and trap eagles, and one whole eagle, you could get a horse for that eagle. It was the feathers and that other stuff that we use with the eagles. The eagle bone whistles, there's a lot of things that we use from the eagle that our people needed, and that's how we were. And some people were known as bow and arrow makers, and etcetera, etcetera. So we had trades like that amongst ourselves. And when it came to some arts and crafts, so there were some people who were basically generalists, they could probably be good at fixing anything, they were crafts-men, and my relatives just so happened to be craftsmen and he knew how to fix those hoop-and-arrow games.

GY: Is there anything particular about the hoop or the game to the Piikani or the

way that it was prepared that you know of?

AP: Well, all I know is how the game was played. Basically the hoop was made, and it's almost like a medicine wheel how it's fixed. There's different colours and at the center there's a little area almost like the main target. And each one of those, if your arrow came or spear came closer to one of those colours, that's how they would mark. The closer you were to the centre, you were declared the winner.

GY: Ok. You mentioned earlier about how the game was played, you thought the arrow was thrown…

AP: Well, basically how he described it, he said they would roll that hoop away and

GY: With an underhand motion

AP: Underhand, underhand motion of the hoop, and then the spear was a overhand throw, at least how he was describing it to me at the time, was a overhand throw at the hoop. But he said they would wait 'til that hoop would almost be ready to just stop rolling, and that's when they would throw the arrow or the spear at this hoop.

GY: Throw too soon and…

AP: Yeah, yeah, like if you threw too soon, you would either overthrow or underthrow or…

GY: Yeah. Allan, you're gesturing when you talk about the hoop. You've got your hands spaced apart…

AP: Yeah, it's almost, I would say, almost a four-hand, four-**finger** hoop. There were no

GY: Four spokes?

AP: Yeah, yeah, four spokes

GY: And the size of it was small.

AP: Yeah, you'd almost measure it with four fingers

GY: Four fingers width, I get it, Ok.

AP: Yeah, yeah, yeah. We always measured with our fingers or our hands. So if you were going to talk about the length of the arrow or the spear, you'd use your hand motions – this is how many hands it was. So that's basically how I know how we measured things.

GY: That's really great. Is the game still played today?

AP: Gee, [*laughs*], I've never seen it played, you know? And I've never heard of or why a person wouldn't want to play it. The game just fell to the wayside.

GY: Yeah.

AP: It was always referred to as an ancient game. So yeah.. at least my generation, we never played it.

GY: Ancient because of its connection to the Beaver Bundle or ancient because of its connection to *Napi*?

AP: Ancient, yeah, for **both**, because the Beaver Bundle is really ancient. So when we say ancient, I would make reference to people who still lived off the buffalo, then, really even to the early twentieth century, because we still had a lot of buffalo people that maybe lived on into the nineteen fifties.

GY: Ok. Details of the hoop game within the Beaver Bundle ritual, I'm assuming that's just…

AP: The only th[ing], we didn't keep the arrow in there because it would be too much room. The hoop was just kept within the Beaver Bundle.

GY: As a remembrance of the story?

AP: The game and the story, yeah.

GY: Ok, so we talked earlier about whether the game was **sacred** because of its inclusion in the..

AP: No.

GY: Beaver Bundle.

AP: No, I wouldn't say that the game was sacred, because it was a general game that was played against each other and other tribes. I guess there was different levels of skill levels involved. So, I guess you would match up people according to skill. And of course you'd choose your best players against other tribes if the tribes happened to meet. Or whoever was in that group would select their best hoop-and-arrow player.

GY: Would the gaming, the gambling happen within the tribe, or was it when you

met other groups?

AP: No, from what I was told, it was played amongst one another. It was a game of skill, so if you wanted to hone your skill in spear throwing and spear chucking, that's what you'd learn your skill like that. What was still going on in my generation when I was a child, was I was brought up to fix basically a survival bow. Not your real hunting bow, but a survival bow. So we were taught how to select the wood and how to fix it and how to string it, and what kind of a bowstring to use, and basically we were taught how to practice with blunt arrows.. and gophers were the prime targets [*Laughs.*]

GY: [*Laughs.*]

AP: 'Cause it wasn't a vertical delivery, it was a horizontal, you held your bow, a side delivery. So you would just point at, say at a gopher, and then you would shoot from here [*gestures a crosswise shooting motion*].

GY: Ok

AP: So we were never taught like the Robin Hood style of

GY: [*Laughs.*]

AP: using the bow. So the bow was still kinda used, was being taught up to the sixties, at least for the children growing up. At least I was taught.

GY: And so gaming, gambling would be a similar type of skill that you could pick up?

AP: Yeah! Basically, when I was a child I was already taught how to play hand games

GY: Ok, yeah.

AP: Ok, hand games, and so hand games were still being used quite a bit. And we also had a sacred game that we did play, and we were able to hide it underground, it was the feather game.[2] It's a holy **gambling** game.

GY: Did you say the feather game?

AP: Yeah, it's called the feather game.

GY: Ok

AP: And so it's how we used to play that. You know, it was a sacred game. But I never was told that the hoop-and-arrow game was a sacred game. And then when we would play those, like hand games.. people sing victory songs and stuff like that after winning these games and those are basically Scalp Dance songs.

GY: There were songs associated

AP: Oh yeah

GY: with the gaming?

AP: Yeah, yeah. So, you know, I know when they're talking about those hoop-and-arrow games, how they would sing victory songs after winning those games,

[2] Two Piikáni Feather Game Bundle owners, Fish Wolf Robe and Big Spring, explained their bundles to David Duvall in 1912 (David C. Duvall fonds, GA M-4376).

because we'd do the same thing with everything. Like horse racing? Back, way back then? This area here, Fort Macleod, this on top here? was a famous race-track

GY: Oh, really?

AP: Yeah, for racing horses, where other tribes would come, and we would match horseracing with them in this area here.

GY: And so gambling would have been a big part of that?

AP: Oh yeah.

GY: How crazy did the gambling get? How out of hand?

AP: Well you would gamble everything, your whole household. You know, your whole tipi, horses, whatever, and some people were boneheaded enough to [*laughs*] gamble everything, just like people nowadays.

GY: Yeah

AP: You know… and like, the old expression of gambling and warfare is referred to as *gaahtomei*.

GY: *Taahtomei*?

AP: *Gaah-*. *Gaahtomei*.

GY: *Gaahtomei*.

AP: Yeah, *gaahtomei*. So there was no difference between warfare and gambling.

GY: Can you explain that a bit more? I mean..

AP: I know it's a hard thing for a white guy to get his head wrapped around this

GY: [*Laughs*]

AP: But to the Blackfoot people.. gambling was no different than warfare. Basically, you know, you're gambling, you're putting your life on the line when you go into war. And the same thing when you're gambling, you're putting something on the line to play the game.

GY: And by extension, gambling partners were, contestants were often the same people that you would go to war with?

AP: No, no, I don't think so, because there was another process for going to war.

GY: Ok. But in the example of like, gambling, you mentioned groups like the Kutenai, if you encountered them…

AP: Oh yeah, yeah, you had a choice. If it was going to be a friendly encounter, then they would gamble. You know, that was just a part of the way things were. Instead of warfare, you would play the gambling game. So, it's just basically the same thing as this story about the Peigan who was caught in the thunderstorm, and he ducked into this cave and he felt a presence in that cave, and here was another person. So, they couldn't see one another. It was so dark in the cave that the Peigan took this person's hand and made the signing of the Peigan.

GY: The motion of a hand around, fist around the cheek.

AP: The… hand… going in a circle around the cheek, that's the sign language for Peigan.

GY: Ok.

AP: And so the other person took the Peigan's hand and made the sign of the Snake.

GY: That's an extended finger waving forward.

AP: Yeah, yeah, moving forward, it's the sign of the Snake. Snake Indian. Shoshone. So they waited until the storm passed and when they went out, they played the hoop-and-arrow game. And the Peigan lost the first game and so… he gambled his scalp lock, so he lost his scalp lock. And then the Peigan challenged him again and told him, "Let's play for the whole scalp." So they played a[gain]. [The] Snake Indian had the confidence, probably feeling pretty confident, he beat him already. They played for the whole scalp and then the Snake Indian lost. So the Peigan took his bowstring off and tied it around the Snake Indian's forehead, tied it tight and then grabbed all of his scalp and started scalping him, cutting him, following the bowstring. And that's when the Snake Indian cried. He cried, eh? When he started getting scalped. The reason why this story is.. there's a famous song that came from this story. [*Clears throat*.] I'll sing this song. [*Sings*.]

Piiksiiksiinatapiyoomay

Kiinokaasainiiyoomay

So that story [*clears throat*]... this song is a result of that story. And when the Sun Dance people are finished their Sun Dance, they're fasting and they're fin-

ished transferring the holy Sun Dance headdress to the woman and they're all dressed, the men and the women that are putting up [**recording interrupted**]

GY: So, we were just talking about the

AP: Oh, the song

GY: The Sun Dance

AP: The Sun Dance, yeah. So basically when the Sun Dance people are going to come out of the holy tipi to go paint the people before they put up the centre pole, they sing that song, after everything is done, to symbolize the Sun Dance's capability to conquer our adversary. Not only people, but evilness and sickness and death. That's our ability to conquer adversaries. So that's why we sing that victory song coming out of the… There's a altar there that's all painted, and then they take the Sun Dance man's moccasin off and they rub it out, they erase the figures that are drawn on that altar. So that's how those kinda stories have so much significance in our ways and in our culture, because those victory songs or Scalp Dance songs give us encouragement in life that we, and give us hope that we can always conquer our adversaries and meet our challenges in life. So that's how, too, the stories are so significant, 'cause it gives us, too, that hope that we have the capabilities to meet our challenges.

GY: And just to explore that theme a bit further, I mean, talking about something like the hoop game or the scalp songs… That ties into…

AP: The same thing. The same thing. It's the same thing.

Meaning, it has the same meaning, you know.

GY: And ties into such core practices as the..

AP: Yes, yes, as the Beaver Bundle, and.. The Beaver Bundle ceremony and the Sun Dance is almost parallels. Almost one and the same.

GY: I see. And the Beaver Bundle is an ancient ceremony.

AP: Very ancient. One of our oldest ceremonies.

GY: Yeah.

AP: Yeah… So basically, our ways, we say *matiksistapi*, meaning they weren't just pulled out of the air, they weren't nothing, they always have something significant. There's substance to how we, why we do things, and a reason, and usually that reason is told through these kind of stories, how they're related to this victory song.

GY: Is there anything else you want to add about how that knowledge is being transmitted today?

AP: Well, the knowledge, whoever is doing these Sun Dances would get this knowledge. Or **should** get this knowledge. And if you're a Beaver Person, you would be subject to this kind of knowledge, too. Or **should** get this kinda knowledge.

GY: Are there many Beaver People today?

AP: There's a lot of Beaver People, now. [*Clears throat.*] How much depth some of them have is kinda questionable, you know? So we're hoping, I'm hoping

too, that those people seek that knowledge. 'Cause in our way, we don't pass on that knowledge until we're asked. So that's probably one of the dilemmas that's kind of working against us nowadays, because people are brought to school and then they're expecting to be taught. In our ways, in our customs, if you want to learn something, you go ask the appropriate elder, and then he'll share the knowledge or the information with you. The elder's not going to come and impose on you. We don't impose our ways. Our ways are always asked for, so we wait to be asked.

GY: But the door is open..

AP: The door is always open, you know.

GY: Allan, I think that covers most of the questions that we had discussed talking about.

AP: Ok.

GY: I want to keep on going!

AP: [*Laughs.*]

GY: But yeah, did you have any other things that you wanted to mention while we're here?

AP: Ohh-h… Maybe it didn't really come out the way I wanted it to come out? I might have some afterthoughts.

GY: Ok

AP: So [*clears throat*]. I think I can only provide information, I'm only as good as

the questions asked.

Both: [*Laugh.*]

GY: Got it. I hope I've been ok. I'm gonna have more questions I mean, about the song for instance.

AP: Yeah.

GY: If I could get your help, would it be alright to transcribe that?

AP: Well the words, there's only two words in it, and it's just basically *piiksiiksiina-tapi*, 'the Snake Indian', *kiinokaasai*, 'he cried anyway'. So it's kind of a ridiculing of the adversary. Our people were so formidable that if they were to take on a challenge, they were taking it like a man. And not to cry like a baby. The reason why that.. there's another story connected with that crying thing. It's another victory song that we sing. We had [*clears throat*] a very formidable enemy, his name was *Apyoomita*. Now the white people and mainstream nowadays, they always record stories about Sitting Bull and Crazy Horse, but there was this Sioux chief called White Dog, *Apyoomita*. He was a real.. it's almost like making reference to like, Hitler. He was a real formidable foe. No matter what we tried to do, tried to capture him or tried to kill him in battle and stuff, he always, you know, we couldn't. Finally one time we did. I'm not gonna go into too much of the detail, but when, one day we rushed to go scalp him, because they were able to shoot him and broke his leg. He was on the ground and when the Peigans started charging him, he knew darned well what it was coming. Then he started

crying like a **baby**. And our people were just shocked. Such a great man like that, and he cried. So there is another story, another song, that's a victory song that we sing. *Apyoomita kiinokaasai*, 'White Dog, he cried' [*laughs*].

GY: [*Laughs*.] I see.

AP: So, you know, I guess when you're gonna get scalped, don't cry! 'Cause the Blackfoot people will make a story about you [*laughs*], and a song.

GY: [*Laughs*.] Alright. Allan, thanks for your time today.

AP: Yeah, sure.

GY: And I'll transcribe this as quickly as I can and get you a copy.

[**End of recording**.]

Interview with Henry Holloway

Date: September 5, 2011

Interviewer: Gabriel Yanicki

Location: Stoney Nakoda Resort

In attendance: Henry Holloway, Loretta Holloway, Gabriel Yanicki

GY: This is Gabriel Yanicki, it's September fifth, I'm at Stoney Nakoda Resort with Loretta Holloway and Henry Holloway, who I'll be interviewing tonight. Henry, to begin, could I just have you say your name, and where you're from?

Henry Holloway [HH]: Henry Holloway. I'm Stoney Nakoda Nation with the Chiniki Band, and I've lived here all my life, and went to school here, got my education at the Stoney Residential School.

GY: Ok. I think a simple place to start and kind of direct the conversation towards my research interest would be to ask you if you could tell me the name of the Oldman River in southern Alberta in Nakoda, if you know the name of the river.

HH: Ok. Let's see... *Iśéguinwapta*. It means Old Man River.

GY: Old Man River?

HH: Yeah. *Iśéguinwapta*.

GY: Are there any traditions about where that particular name comes from?

HH: As far as I can understand, it, I think it's through, my understanding from great-grandfather is that it was named after an old man. I think it's had some-

thing to do with the playgrounds of the Trickster in the Oldman River.

GY: Ok.

HH: And that's where that name originated to the Stoney people. And I don't really know if the other tribes have commonality, but that's my understanding.

GY: They certainly do—I guess that leads to my next question. Is there a relationship between the Old Man and the Trickster? Are they the same figure?

HH: They.. I think it's the same figure. It's the same person. It's just that sometimes the Trickster can be anybody, anywhere. And he can be identified as a bear or any animal, so a person of clairvoyant power, and he could change himself to anything he wanted to. So, he could be something related to that, the name of the Oldman River. And.. a lot of times these stories have been told about him around there. How there came to be the spot of that Oldman River, about Trickster.

GY: Ok, so you're familiar with the story of the Trickster's Playing Ground.

HH: Right.

GY: Do you know a version of that story that you'd be willing to talk about?

HH: Well, my grandfather used to talk about Trickster there. He had is own playground where he had played with different species, different animals, or even people. And he called the shots, what kind of games they played, and ninety-nine percent of the time the Trickster wins it

GY: [*Laughs*] Of course…

HH: But it was a game of teaching. It wasn't that he wins all the time, but it was a teaching of the people, how to win, how to win life itself, how to survive in life, how to live with various species, and how to coexist with one another. This is what the teaching… Trickster was a teacher. He was the person that taught our people, he taught all tribes of North America how to survive, how to live together, and what depends on the other. It's like Mother Nature. Trickster created Mother Nature. Each species depends on one another to survive. One has to be a prey, and one has to be the victim. Sometimes it's the other way around, everything. But that's the way… The Trickster was the Creator to us. He taught men. He developed men. My great-grandfather… he told me, when he first developed men, he made black men first. He decided, when he was first walking around South America, he had already developed different animals. He had already developed the bears, all the wild animals that live in North America were already developed when Trickster came to understand that these animals that he created had to have somebody to control, watch over, play with, and to live with. So he decided, "I must build a man." And… he took white sand, built it into the form of a person. He laid it under the sun, right under the sun, and went away. He was away for about four months and he came back. And the clay, the sand-clay that he made the man out of turned **black**. He looked at it, and he lifted it up and he looked at it, and said, "I've created the first human person, but it's black. I've got to put him where it's hot, to look after the animals in the hot area." So he set that black man in Africa. He told him, "You look

after this area, all the animals that live here. I will make another one." And he started to build another one, then he set it there. Went away for four months. He came back, and he was kind of an in-between black and yellow, it was kind of a red-brownish colour. "Well I think I should put this in North America. This is the Indian. This is the First Nations. I will set you in North America. This is your land. You look after all of this." So he set the second human that he made in South and North America, and throughout South America, and then he built another one. He left it there, and he went away. Four months later he came back, and that clay form of human that he developed turned yellow. And he said, "Well, these yellow people, I've got to put those people in Asia where there's swamp and all these tropical areas. You stay there, and you will adapt to that land, and you look after everything there." And then he built another one. When he built that last one, he kind of set it further north, and he went away. Came back. It was still white. This is the white man. "I will set him in Asia, in Europe. Northern Asia and Europe, that's where I'll set this white person." But he said, "This white person, because he's been created last, he's going to have knowledge, all the gardens of everybody, that one day he will come to the earth, live with everybody. He will help all the people that I created. And he will have the knowledge to do a lot of things that you other people do… The other people I created were to look after that land where I put you. The white people will help you someday." And that's the story that I heard from my great-grandfather of creation of human beings.

GY: It's very interesting that the story incorporates the four sacred colours, black, red, yellow, and white. Those are the four colours of the…

HH: Yeah, the medicine wheel.

GY: The medicine wheel, the four directions. Does that also apply to the hoop? Would that be appropriate?

HH: Yes, I think so, yes. So anything that relates to that, the one we talked about, the medicine wheel, it had four colours, and four directions and everything. That's what the first spirituality of native people built on, and that's where it, you know, everything, all native people in North America believed it and accepted it. And you go to anywhere in Canada and United States, First Nations people, they have that symbol. It's always with them. And when the Trickster developed that and gave it to the people, he did not give it to just one tribe, he gave it to all the people. And then he showed them how to pray… He told them that one day, a white buffalo from the east-southeast continent, a White Buffalo Woman will come with a pipe to you people. And then he gave the pipe to the native people, the White Buffalo Woman. That's where our spirituality and beliefs of our religion came from, and the Sweat Lodge and the Sun Dance. Sun Dance was the church of our people. We only use it once a year. We only go to church once a year. We only **confess** once a year. And when we do go to church once a year, we leave everything in that Sun Dance when we come out. After you come out of that Sun Dance and you live for one whole year, you don't tell a lie, you don't steal, you don't murder. You love everybody. And

if you break any one of these in one year, you come back and repent at that church. It's funny. White people live seven days a week, they repent every seven days. We do it once a year. That's our church.

GY: [*Laughs.*] White people must have a lot to repent for.

HH: Right. [*Laughs.*] But really, getting back to the Oldman River, where Trickster first started to teach our people how to survive, and… See, Trickster talked to everything. He talked to the water, the rivers, the creeks, the trees, the rocks, animals. They all talked to him when he was here. And when he talks to them, he tells them how the humans will use you. Like the buffalo is a supermarket. The buffalo supplies us with everything.. our blankets, our food, our weapons, our dishes, like our knives and spoons, all the bones, everything. Everything in the buffalo was used.

Loretta Holloway [LH]: Shelter.

HH: Shelter… And you know, the bear is sacred. Not just anybody kills a bear, nobody, unless you have a spiritual relationship, or understanding, that you have to kill one, then you kill one. But then again it goes the other way around. You cannot kill a bear for the rest of your life, if the bear was your mentor or something. Some people are the bear, some people are the buffalo, some people are the horse, or some people are the eagle, the cougar, wolf, all of that. Those are like the… Trickster developed that, that one of these animals will be your..

LH: Spirit twin

HH: Like.. you can use one of those things for your clairvoyant powers and doing all kinds of different things.

GY: Is that then the concept of a spirit guide?

HH: Yeah, a spirit guide. Yeah, it's your spirit guide for the rest of your life.

GY: And you're not allowed to harm that animal?

HH: Yeah, you're not allowed to harm it.

GY: Do you have to help him if you see him and he's..

HH: You can help him, and he'll help you. He'll help with you for the rest of your life. That's the way that Trickster taught the people.

GY: So all of this sacred knowledge comes from Trickster.

HH: Yes.

GY: Does that mean that a place, a physical place on the ground that's associated with the Trickster, is that then a sacred place?

HH: Yeah, there are various areas in southern Alberta that I've heard is a special place that they've met the Trickster. One is somewhere around Okotoks, there's a great big rock there, and they say they met him there, they talked with him there. There are spots everywhere in southern Alberta where Trickster has showed up. People have seen him there, talked with him there and everything. And that's one location that I can remember, other than the one on the Oldman River.

GY: Now as far as that location on the Oldman River goes, is there a specific loca-

tion that's talked about in the stories, or would there have been anyone in the Stoney community that remembered until recently?

HH: I don't really know of any specific areas where they've always, you know, I've always been told that that's where he comes to play, that's where he meets with people.

GY: In general?

HH: In general, yeah, and I think sometimes we, some of our people went there and played with him and did some games and stuff like that, but I don't recall where a specific place where they call it.

GY: Somewhere up on the headwaters of the river, then?

HH: Yeah, yeah. Where the present rocks are, where it leads in around there, at the Oldman River? That's where, usually the place where they go meet him.

GY: The rocks?

HH: At Oldman River. Have you ever seen it?

GY: Do you mean the Gap?

HH: Yeah, there's a gap there, and there, did you see where all the rocks are sitting in the circle in the Oldman River?

GY: I haven't seen a spot where the rocks are sitting in a circle.

HH: Yeah, there's one there.

GY: Ok. Inside the mountains?

HH: Inside, right, just right go in the middle there. You can see the big rocks laying there. And that's, Trickster laid that. They call it *Sičáŋyuški škáde*, the Trickster's Playground, that's what it is.

GY: Ok. You've been through that area then.

HH: I've seen it in the distance, I've never been there. I went there with my grandpa. But I've never been right exactly at the spot where I'm talking about. But he told me rocks were set in a circle right there. That's where he, that's his playing ground, and we call it *Sičáŋyuški škáde*, that means Trickster's Playground.

GY: So Trickster in Nakoda is…

HH: *Sičáŋyuški.*

GY: *Sičáŋški*? Ok.

HH: *Si-čáŋ-yu-ški.*

GY: I'm going to have to write that down..

HH: It means a very clever, foxy, person. And cute person.

GY: Cute? [*Laughs.*]

HH: Yeah. He'll beat you with anything. He'll use anything to beat you with. And he always gets in an argument with the fox. He always challenges… The fox is the only animal that challenges Trickster all the time. He never beats him. Fox, mind you, he wins it, too, but he's the only animal that challenges the Trickster. There's one story about the fox and the Trickster. I think the Trickster.. tried to do a feast, but he didn't have nothing, no nothing to feed the people that come,

or anything. So he made a big round Sun Dance form of a lodge

LH: Kind of like a Sweat Lodge.

HH: Sweat kind of a lodge, Sweat Lodge, like it was round… And he called all the prairie chicken, he called all the prairie chicken in, and he told them, "We're going to have a celebrating dance. We'll put you all behind here, and when I sing a song, you all close your eyes and dance." So he had about twenty to thirty chickens running around inside that lodge. He starts singing: "*Si-cha-sa-ba-maŋ-a-taŋ-a-gu-wa-gi-či-hey-Hey-HEY*." He was singing that. It means 'Old lady blackbird dancing', he was saying that song. And everybody closed their eyes and started to dance, and the Trickster went around cutting their heads off, all of them. [*Laughs.*]

GY: [*Laughs.*]

HH: And there seemed to be a quietness in the dance, so one of them at the end opened one side of the eyes and seen Trickster cutting everybody's head off and said, "Oh, Trickster gonna kill everybody. Everybody run for your lives!" And everybody took off.

GY: [*Laughs.*]

HH: But he already had enough to kill to make a feast, so he started dressing the chickens all up and putting them in the boiling water, and boiled all the chickens, he did it nice. And then he had it prepared and along comes the fox, he was coming toward the Trickster. And the fox says, "What are you doing, *Thúŋk*?"

It means Trickster in, you know, the way he identifies them. And Trickster calls him *Tokán*. It means fox. So the Trickster, *Thúŋk*, he said, "Well, I got a whole bunch of chicken cooked here. We can eat it together, or we can have a contest over it. Who wins it will eat all the chicken." And the fox said, "Oh, jeez, I don't think I can challenge you." And there's a big lake right there. "We'll race around this lake. You go that way, and I'll go this way. We'll go meet around, we'll meet each other at the centre, whoever gets back here will get all the chicken." And the fox said, "No, I'm sorry, *Thúŋk*," he says, "I can't run. My leg is sore," he said. "I've been chasing too many other stuff. My leg is so sore. I can't run. You're going to beat me." So the Trickster, he said, "No, I'll handicap myself. I'm gonna tie a rock to my leg. And then, this way, the rock will slow me down. We'll be even. You got a sore leg, you'll be limping all the way, and I'll be carrying this rock around the lake." So the fox kind of, you know, the fox was lying, eh?

GY: [*Laughs.*]

HH: He said, "Ok, ok, ok. I'll accept that." So the Trickster handicapped himself with a rock, tied it on his leg. Said, "Go!" then started running. Trickster was just running, boom, boom, boom, with one rock on his leg, all the way around. And the fox went limping off, out of sight, and several hours later they met on the other end of the lake. It's the end of the lake, and the fox went by and the fox said to *Thúŋk* here, "Come on, try harder. I'm going to beat you!" "No, I'll beat you." And they went by each other and they started running towards each

other. So the fox, when he went out of sight, he wasn't lean anymore, he just ran for the chicken. He got there first, he was eating the chicken up. And the Trickster was coming slowly, eh? And all of a sudden he stopped and thinks, and he said, "You know fox, he always fools me. He's always got something up his sleeve and gets rid of everything and gets the best of everything. I think he's up to something. I'd better check out this." He loosened his rock and started to run. When he got there, sure enough, all the chicken was gone. Just the bones were there, and he was really mad. He said to fox, "You old fox, you're not going to get away. I'm going to kill you. I'm going to catch you and kill you." You know, the fox was gone and just left some tracks behind. Trickster went up and followed the fox. There he was, the fox was really full and couldn't go any further. He was lying there beside a lake sleeping. "Oh," he says, "what am I going to do with him? I'm gonna burn him up. I'm gonna burn him up, and then I'll kill him." So while he was sleeping, he piled all kinds of wood around and he set fire to it, and now the fire was going and he talked to *Tokán*. "*Tokán*!" he said to fox. "Hey, you're gonna burn. Wake up, you're gonna burn!" *Tokán* looked up, looking around stretching himself and there was fire all around him. Then *Tokán* took two jumps, he jumped over here, then right across, and he jumped right over the fire and took off. And Trickster got mad. "I'm gonna catch you. You're not gonna get away." So he chased him. Then I think the third time he came to some kind of an area where he was sleeping right on the foot of a tree. So again, he said he's gonna hit him with a big tree, I mean a big stick. So he

piled some stuff again, he made a big fence… He only made one gate he could come out through. But again he woke up and he jumped over the entire fence and took off again. The third time he come to, he was sleeping right on the edge of a bank, and he was gonna scare him. And if he scares him, he's gonna fall over the cliff and kill himself. So then he was just running towards him, the third time, and he said to the fox, "*Tokán*! Look out, here I come! I'm coming after you!" And the fox looked at him, here he was coming and everything, he just digs.. he just dug away and Trickster went straight into that cliff, and he rolled straight down that cliff, just about killed himself. And then the fox took off, and the Trickster was sitting there thinking. He said, "Well, the fox got me. First time I tried to burn him. Second time I tried to knock him on the head, I couldn't do it. Third time I did it, I went over the bank myself. This fourth time," he says, "I think.. he's going to make myself kill myself instead of me killing the fox. I might kill myself the fourth time. Everything takes four times, four tries. I will not try the fourth time." And he walked away. [*Laughs.*]

GY: [*Laughs.*]

HH: That's the beliefs of First Nations people. Everything takes four times. If you can't succeed on the fourth, don't try it. Or don't even try the fourth. Something will happen.

GY: Unless you're sure.

HH: Unless you're sure. You know, that's one of the teachings that the Trickster taught our people.

LH: What about that story with how the bear got, why his tail is really small? Because of the fishing? The Trickster told him that's how he got his fish.

HH: Again, the bear. You know, the bear was hunting, and he met up with the Trickster or something.

LH: He never used to hibernate before.

HH: He never used to hibernate. He had a long tail, the bear had a long tail and everything. And the Trickster was fishing himself, and Trickster was walking home with a bunch of fish. He met the bear. He said, "Oh, how did you get your fish? I want some fish." And he told him, "I'm not gonna give you any of these. You go get them yourself. Go fishing." And the bear said, "Oh, how do you do it?" He said, "I dig a hole in that ice, and I put the bait down there, and when they…"

LH: No, my tail!

HH: "My tail. I put my tail in that hole. When the fish grabs it, I pull him out, and I keep doing that. You got a long tail, why don't you try it? Go to that lake. Cut a hole in there and put your… every time you go, you kind of feel it going up and down. If something heavy is catching on to your tail, then **pull it out** as fast as you can." So the bear went to the lake and cut a hole in the water, stuck his tail in the lake. He sat there waiting for the fish to grab his tail. He was moving, there was no weight on it, it was sensitive. While he was sitting there it was getting colder and colder and the water freezed over,

the lake, his tail got frozen up by the ice, and the bear was going like this [*makes a lifting motion*], trying to do it. "Hey!" he figured, "I've got a big one!" So the bear jumped up and snapped his tail right off.

GY: [*Laughs.*] Right off!

HH: [*Laughs.*] This ice was frozen onto his tail, eh? And that's the way the bear got his short tail.

LH: And that's how come they hibernate.

HH: That's how come they hibernate. [*Laughs.*]

GY: He'd rather not go fishing in the winter? [*Laughs.*]

LH: No! [*Laughs.*]

GY: I'm confused. Trickster said he had a tail? And you mentioned his name's *Thúŋk*?

HH: Well, Trickster had everything. He's a man that had everything.

GY: Is he associated also with Coyote, then?

HH: Oh, oh yeah. Yeah. Coyotes were… He used them like we use dogs. Coyotes were, before they became coyotes, they were man's dogs, just like they were… dogs that we have now. But I think coyotes were turned wild because of various places where the Trickster made a mistake with them and the coyotes were set free to roam on their own, like the fox. But the fox was the only one that challenged the Trickster all the time, always, always trying to beat him. Always trying to get power over the Trickster, but he never succeeded. But he was the

next animal that he really played with.

GY: Ok, so in the Nakoda tradition, Old Man, or the Old Man can be a version of the Trickster, but Coyote isn't the Trickster himself.

HH: No.

GY: Ok.

LH: He was kind of like a tool, like something that he used to teach people.

HH: Mm-hm.

GY: You mentioned that the fox would play games with the Trickster, so the race is one. Are there any stories about games specific to the Trickster's Playground? Or is it all games that were played there.

HH: I think it's different games that they played there, but mostly at the place where the Trickster plays with people, they developed different kinds of plays for them and played with them so that they can use it for their leisure time. That's what my grandpa used to say. He taught them how to play various games, and… there's a game that he, they call it, uh, *nagijitámin*. He taught them how to play that, too. It's like similar to sumo wrestling, but they make a ring, like this [*makes a circling gesture*], and you go in there barefooted, they tie your hands behind your back, you cannot use your hands, and two of them enter the ring, and they kick each other out of the circle.

GY: Kick?

HH: Yeah, just like.. karate or kickboxing.

GY: Ok.

HH: Yeah, but you cannot use your hands. They're tied like this [*indicates hands bound at the thumbs behind the back*]. They won't tie it right here, like this, so that you can't hit a guy with your hands, but you can kick them, kick the person til you knock them out of the ring, and you stay there until you get knocked out. And the person that stays in there longest is the winner. Like if a person hangs on and kicks out five guys, he's got five points. If he gets kicked out and the other guy stays in there and he gets kicked out, then four, four guys? So he's got four points. So that's the way they play the game. So the more you kick people out of there, the more points you get. And at the end of the day, or they have a certain time limit, and when that time comes, they say, "I got six guys I kicked out!" "I got five." "I got four." You know, he's the winner, he kicked six guys out, he's the champion for today or something like that… That's for young men. It's a young men's sport.

GY: Was the purpose of the gaming to develop physical skills then?

HH: Yeah, I think so, it was to develop physical skills, and you know, mostly.. if they ever go to war against another tribe or defending their territory, you know, it always comes in handy to be ready.

GY: Was gambling a very big aspect of these games?

HH: Gambling, gambling, yes they were. They'd, a lot of times when these things were going on, elderly people sat around. They'll bet on, "I'll bet on this guy,

this guy is gonna win." They might, you know, bet a blanket or whatever. A guy would say, "You know, I'll cover you, I'll take the other guy." These kinds of things, bettings, were always going on. Yeah. And just east here, there's a big hill there. It's called *Atakyí Binwída*. It's called Racing Island.

GY: Is that for horse racing?

HH: Yeah, they raced around that big hill, and they bet. People, even the Shuswap people come over here, and they bring horses. And they have the horses, they challenge each other here. They race around that island. People sat on top of that big island slope there, that was their viewing place. You went to stand on there, they can watch the race, you know, going on both sides. When they start here they watch them and when they come out here they step on the other side and watch them. That's where they used to have horse racing, and that's just related to gambling.

GY: Yeah, oh definitely.

HH: Yeah. And it's ironic that we have a casino here, right beside. It used to be [*laughs*] betting horse racing going on by our people.

LH: When you head out on this highway forty and Trans [Canada Highway] you'll see it. It's like a, a hill there. That's where it is..

HH: You know where the helicopter sign is?

LH: It's just up beside it.

HH: Just over here, just coming into this place.

GY: Ok.

HH: Just south from there, you see that big hill with trees on it.

GY: Is it the highest hill that you can see?

HH: Yeah, just over here.

GY: To the…

HH: East. East of the..

GY: Ok.

HH: Yeah, I'll show you when we go out.

GY: Sure. So gambling can be associated with the gaming. What about things like, could it be used to settle disputes? If someone was having an argument, could a game or a wager help resolve a difference?

HH: Well, I don't think settling disputes in our tribe.. was ever settled by competitiveness. I think it always goes to the council, and the leadership, and the clan, if there's an issue with one clan or the other, or with one family or the other, they'll sit down, listen, hear both of them out. And the leadership, the elders, decide the verdict. So that's usually the way it's handled. You'd never see two families going at it at each other, or bet or compete against each other. That was always prevented because they always wanted to prevent fighting amongst each other. But if, **if** it was another tribe, then the competition falls in place, because they can't decide [*gestures with one hand*], and they can't decide [*gestures with other*

hand]. The elders on these sides will not negotiate unless it's.. it's not very commonly practiced. If we're having a quarrel with the Blackfoot people, either we walk away or we settle it on the plains and fight with them.

LH: Or steal horses.

HH: Or steal their horses.

LH: Or steal their women.

HH: Yeah. You got options.

GY: So those are the accepted options for conflict resolution. Ok.

[**Break in recording**.]

GY: Alright, I've got it recording again. Where were we? It hasn't really come up in our conversation so far, but because of the fur trader's record, Peter Fidler's journal from 1792, where he mentions the hoop-and-arrow game as a game associated with the playing ground, is that game known among the Stoney?

HH: I've heard of it, but I've never seen it done. I've never seen it, the hoop-and-arrow game, how it was played, or how they played the game. I've never learned it, but I've heard that that game existed by my grandpa. But I was very young at the time and I never asked how it was played, you know, "How do you play it?" I just heard it, the hoop-and-arrow game, but I've never seen it demonstrated.

GY: Ok. Do you know, what was the name of the game? Did it have a particular name?

HH: Uh, let's see… I think it's called *indelíbekan skadábi*. It means 'bow-and-arrow

game', but I don't really know about it. I just heard about it.

GY: So this game isn't still played in the community.

HH: No, I haven't seen it played, or I haven't heard anybody talk about it. But you know, mind you, there might still be some elders around that know about it. They know how it was played, and how or what kind of rules or games that they played on. I don't know, but there could be some elders that still understand that game.

[**Pause for conversation on availability of other recordings at band office**.]

GY: Another thing that we had talked about, and you have mentioned, was that you went down to the Oldman River area with your grandfather. Was that an area that your grandfather went to frequently, or that you went frequently?

HH: He just wanted to show me the place, where it was, and where to go to see it, or if I ever wanted to do a ceremony, where to go to do it, that's all. So we just went up there to show me the place.

GY: A ceremony for the…

HH: For myself.

GY: Oh, ok.

LH: Like a vision quest.

HH: Like if I wanted to do a spiritual thanking, or giving, or whatever I wanted to do, I can go down there and do it myself.

GY: So that area was of special significance?

HH: Yeah, it's a sacred place for it, yeah. Like it's, any individual can go there, with your own.. smudge, like sweetgrass or anything, you can go there and pray and use that. For the Trickster, where he taught his people, you can go there and give thanks or ask for help, or whatever you want, or health, or whatever.

GY: Does that apply to the whole upper Oldman River, then?

HH: Uh-huh, yeah. It's kind of a sacred place, but you can go there and pray for yourself.

GY: Ok. I've heard from locals down in the Oldman Gap that until quite recently members of the Stoney community were visiting the area, so that's interesting to know. That really only leaves one more question that I had in mind, and that was to talk about how locations of sites that appear in traditional stories, places like the Trickster's playing ground, how specifics on their location seem to be disappearing over time, the knowledge of where these places are, and I was wondering if you had any thoughts about what's responsible for that, what's causing that, and whether that could be related to particular practices of the residential school era or rules imposed by Indian Agents.

HH: Right. I think that I'm certain that the teachings and the places of the Trickster, where he was, and these other places for other tribes, I know there are other places where the Trickster went and played with other tribes. But through isolation of residential school, and a lot of the information was cut off at an early age. Like, I was put into school when I was seven years old and my contact with my family, my mom and dad and my grandparents was off for eight years,

eight to ten years in residential school. And a lot of history, a lot of the things that my grandparents should have told me have been lost, and a lot of my language, I lost it, because when we were in school, we tried to speak as much Stoney as we can, but we were limited. And a lot of the old Stoney language weren't spoken to us. It's just the common everyday language that we speak to each other. But there were a lot of words that we had to cut short. We didn't know we were doing that, but until later on when we got older and I got out of school, certain words that I said and my grandpa said, "No, you're supposed to say it this way. You said it the wrong way. You cut that word in half." See, this was done through the residential school. That's where all our language was kind of mixed. We mixed it with up with English and our language. So in order to use English in our language, some of our words we had to cut short, so that we can understand it in English. So this is where we got all confused and lost a lot of our language and a lot of our communication with the elders. A lot of the things that should have been passed on to us if we were with our parents right up to adulthood, we might have learned it. But a lot of it, ninety percent of it was lost through residential school. I know there's areas up through the Red Deer River and east of Medicine Hat, I know where there are places where the Trickster has actually been, but I don't really know the locations of it. But through stories I've been told that there are places where the.. Trickster has various places where he met his people. Trickster was Blackfoot, Cree, Stoney, and Kootenay, Shushwap, or Ojibway, and everything. He was everything. He

was all the tribes' Trickster. And when he was here, he taught his people how to live off the land, how to live with nature, and how to preserve it, and how to respect it, and all of those. Water was very pure, you cannot even urinate it the water, it wasn't allowed. That someday when you died, the Creator would make you drink that water. Those were the natural laws that the teachings were at that time. All of those… When Trickster, back when, I don't know. He told his people, "The time has come for me to leave you. I've taught you everything. I've taught you how to live, how to survive, how to preserve, and how to look after one another. I've taught you everything. I must leave you now. I will back-track my life, and someday I will return, and then you will be all set free. And you will live in paradise. Every living thing will talk the same language. Every living thing will live together. And that's when I return. You will see signs when you see my nearing coming back. This country will be full of people. This country will be flooded with people, white people, black people, yellow people. It will be just full. And you will see all kinds of wildlife living with you. Not civilized, but living with you. You will see them on the roads. You'll see them in the towns. You'll see them in the cities. You will see them all over, the wild animals. They will come and start living with you. And pretty soon the people will start getting used to it and start to protect them, and they will get too many of them to control. That's when you will see me coming back, because you will need help then, and the earth will be out of control. The water, there will be shortage. The air wouldn't be good enough to breathe. And you will see me

eventually in various corners of this world. People will see me all over—they won't catch me, but they'll see me all over. When that time comes, I am nearing to the end of this world, and I will come back at the end of this world." That's the promise that he gave to his people, and he left. We've never seen him since, but there are signs out there now of what he spoke of. Right now, if you look around and really take notice of what's happening around us.

GY: That end time is approaching. One thing that you mentioned earlier was that the Trickster's passage around the different nations was like a rotation. He'd spend some time with the Cree, some time with the Stoney. And was it, he'd leave and come back? People could go and meet him?

HH: Yeah, he will go and come back. He won't tell you when he's coming. He'll just show up. And he's gone, next thing you know he's gone. Maybe he's gone to visit another tribe, and all of a sudden he's back again. He never tells you when he's gonna come, when he's gonna go. He knows where to go, he knows where there's help needed. He shows up where there's help needed. He doesn't just show up all over. He goes to places where he's needed, and he teaches people all the time.

GY: But he said that he had taught all that was left and he would come back one last time.

HH: Yeah.

GY: I see. Is there anything you'd like to add about how you'd like to see this re-

search, our conversation, used or shared with people, and any potential for it to help bring people together, or get young people interested in reclaiming pride in their traditions? Some of these things we talked about earlier today.

HH: Yeah, I think to use it to relate to young people. Teach young people about what I've told you. It can be used for the future, and I think our younger generation right now is in desperate need of all the information they can get with what we have lost. And I think I will like to see it used in an educational way, to help, whether it's First Nations, or the white people, or the yellow, or the black people, whoever can utilize it is welcome to do so. Because to save this world, we all have to cooperate together. We all have to understand each other. We all have to know where we're coming from. Because we're at the level where Mother Nature needs us to save it for the future. If we don't, there's nothing left for the young people to survive the next hundred years. I can only see survival here the next twenty-five years.. unless they do something with fossil fuel. That's what's killing us. We've got to get rid of that. There's got to be an alternative. And water, it's getting shorter every year. So I would like to see it used in an educational way, to help young people to preserve the future. You see, our Elders taught us where to survive in the mountains in the winter time, where not to go in the winter time, especially around the springtime, February and March, never to go hunting in the mountains because there are avalanches and stuff like that. They know where the avalanches, and they know when it occurs. They know how avalanches are developed and everything. That's why we

only do our hunting in the fall, fall and the summer. A little bit of the summer, but usually all our hunting is done in the fall. So nobody goes in the mountains in the springtime or in the midwinter.

LH: You never heard of a First Nation getting caught in an avalanche.

GY: [*Laughs.*]

HH: You know where it's going to occur just by looking at it. You don't have nobody, scientifically, nobody can tell us. I know. I look at a mountain, I know where the avalanche is, just by looking at it. And you don't go near there.

GY: Yeah. Ah, people can be so reckless.

HH: Yeah. Well, it's a sport, eh? Young people have [*unintelligible*]

GY: [*Coughs.*]

HH: They like all kinds of sports, extreme sports.

LH: Helicopter skiing.

HH: Yeah, and they go up there in the challenge, I don't know if they get a thrill out of it or..

GY: Snowmobiling…

HH: Snowmobiling, all of that. That's a problem.

GY: Alright. I think that's all for tonight. Loretta, was there anything else that you wanted to bring up while we're here?

LH: No.

HH: I will tell you one last story. Trickster was going to visit this community. He was walking down to the village, and he seen all these people standing around working and doing all kinds of things. And the Trickster told them, "You know, I'm going to go south, I'm going to go south with the geese. When the geese are flying south I'm going to go with them." Nobody believed him. "Oh, you're lying. You always lie to us." He went away. And he came to this big lake, he seen all of these geese, all getting ready to fly south. He walked up to them, "What are you guys doing?" "We're getting ready to fly south where it's warm for the winter." And the Trickster said, "Can I come with you?" "No, you can't. You can't fly." "No, I can fly! I can make myself some wings and act like you guys and fly with you." And finally he convinced them. They said, "Ok, we'll fly with you. Get your wings ready." So he went and got some stuff to make these wings, he got it all ready, he gets all ready to fly and he said, "I'm ready to fly with you guys." So they took off and said, "When you're flying over the people, don't ever look at the people. They're gonna call you everything, they're going to say the geese are flying south, everybody will encourage you to go on and stuff like that. When you hear that from the people, don't look at 'em." And the Trickster said, "No, I won't look at 'em. I'll keep my distance." So they took off, the goose was flying over and he was way behind. They built a V and then one in the middle, and he was way behind, the Trickster. All the geese were flying over this community with all these tipis and they're, "Oh, the geese are flying south, they're all going home!" And the people were just yabbing at the geese

because the geese, you know, they yell when they fly. And they seen the Trickster way behind and they all said, "Oh, Síchányushkí's in there too!" They're calling him, "The Trickster's in there too! Look, he's way behind! Look at him!" And everybody started to laugh at him. And he couldn't help to look at them. He was trying not to look at them [*laughs*], he was flying like hell, and finally he looked. He took a look down, looked back up and he fell, sure enough. When he looked down, you know, they told him not to look down. If you look down, something's going to happen to you. And they persuaded him to look down and the Trickster fell. He couldn't fly no more. He landed where the garbage pit was [*smacks table with palm*], he landed right there. Everybody was going over there and spreading garbage on him. Finally he got up and walked away [*laughs*]. And there's another story, a short one. Trickster was walking around through the woods, and he was looking at berries. There was a strawberry there and he asked the strawberry, "What's your name?" "My name is *čandíd-did*." It means strawberry. And he calls him, "Everything has two names. What's your other name?" "My other name is *čandé*." So he said, "Ohh, *čandíd-did*, *čandé*." It means, *čandíd-did* is kind of a heart, *čandé* is the heart, and so he calls him that. And he was going to another berry that was sticking out there, this was wild rose berries. He came up and looked at it and said, "What's your name?" Told him, "My name is *ožíta*." That means tomato. Tomato. Wild tomato. And he said, "What's your second name?" And that berry was kinda, he said, "*Osínča spéd*." That means itchy ass! [*Laughs*.] So he was standing there looking at it and

he picked one, kind of looked at it, and ate it, huh? The skin was real nice. He kind of ate it, and he was saying, "*Osínča spéd*, itchy ass," he was saying, eating. He ate a couple of them, and he was walking down the road. He went about a mile and can feel his ass starting to itch. He kind of scratched it and went again. He went a little bit further, it started to scratch again. And all of a sudden it started to itch all over, jeez, he was just scratching his bum on both sides with his hands. And he just kinda rashed it all up, red blood was coming out and everything.

GY: Oh no! [*Laughs.*]

HH: Oh, he was so **sore**, he couldn't sit down and he was just standing there for a while. Finally he turned his butt to the sun, make it all healed up. And all scab, eh? All his butt was scab. And he was walking towards the trees. And then he kind of felt it, his pain was gone. Well, the great big scab on his butt, he took it out and he looked at it [*gestures holding something in front of him*], there was great big skin here with a scab on it. He went to the tree and he stuck it on the tree [*smacks hands together*]. He said, "This is the gum for the tree. Some day my great grandchildren, someday when they want some gum, they can chew this." He stuck it there [*laughs*] and then he walked home. [*Laughs.*] My grandma used to always tell me that. She said, "Every time you go see where that gum's on the tree."

GY: The tree sap?

HH: Yeah, the tree sap, that's the trees. They used to use that as a gum, eh? For

coughs and for colds.

GY: Any kind of tree?

HH: Yeah, it's, I think it's a fir tree.

GY: Ok, balsam fir maybe.

HH: Yeah, yeah. And they said every time you take that, it's *Sičáŋyuškí*'s butt.

GY: [*Laughs.*] Thanks for sharing.

HH: Yeah! [*Laughs.*]

GY: Alright, well, thank you so much.

HH: Yeah, sure, you're welcome. Anything to help.

[**End of recording**.]

Interview with Art Calling Last

Date: October 9, 2011

Interviewer: Gabriel Yanicki

Location: Whoop-Up Downs race office, Lethbridge

In attendance: Art Calling Last, Lorette Calling Last, Gabriel Yanicki

[**Recording begins mid-conversation**]

Art Calling Last (ACL): My Native name is *Sahwiina*. *Sahwiina*. It means Hail Chief. My name's Hail Chief. I'm the chief of hail.

GY: Of hail?

ACL: That's my Native name. It goes back to by grandpa. I wouldn't say great-grandpa. That's my late mother's dad, and he's well known. This person is well known. I'm happy to have, I'm proud to be named *Sahwiina*. His real name is, uh, well that's his real name. He's got three names. His name is, you might see it in books that people write about us, his name is Big Wolf. Big Wolf. It's my late mother's dad. Big Wolf has two wives, and that's where I come from. My dad is George Calling Last, Sr. My dad is a traditional person. He doesn't talk, he just understands English, he never spoke a word of English. A traditional person. I'm [*unintelligible*] to school. Out of eight of us, no there were eleven of us, I am the third youngest one in the family. I'm the lone survivor. We're called Many Children's Clan. My grandfather was one of them. I have relatives in Piikáni, Peigan relatives, South Peigans.

I was lucky to be raised by my parents. I'm lucky to know where I come from, about our traditions, our culture, our ways. And what it's like, us going to school, it's big for us to have a good education nowadays, people work with computers. There's not too many manual work, then we're gone. Sixty years ago, we're gone. We're lucky to be where I am, despite that I'm sick. I have a bad heart condition, but I still work.

The spiritual, the sacred things that I went through… I mean they're, just to let people know I could do this. You know, that's my beliefs. My beliefs and our ways. The spirituality that was given to us.. I believe hard to understand. If somebody tells me, "Art, you stop what you're doing, I'll give you the world," I don't think it's going to change. That's my way, my way of doing things. I believe in spirituality – there's a higher power. Higher power. I think different nations, different people, different tribes, they name this higher power in different ways. So I believe in higher power.

And spiritually, us Natives, a really strong traditional Native person has helpers. You don't see our helpers. Sometimes they let us know they're here. They'll tell us what's ahead of [*unintelligible*]. And in our dreams, they come to us. You know, there are signs that we may not get. If we don't pay attention to them, something bad is going to happen to the person. If somebody upsets you or did something wrong, a person that done this to you.. you'll get mad, but your helpers are the ones that will.. get after this person. Your helpers. That's how come in our way a long time ago, our elders, if they're calling for you, you

don't just go and touch an elder, like that [*touches shoulder*], or something's going to happen. So you let him know you're there before you even – we don't touch elders. We respect them. That word respect is always there, but people nowadays don't know what respect is.

Like I said, I'm lucky to go through what I went through in my lifetime. I'm a traditional person. I talk our language really good. I know some old words that we don't use anymore. And like I said, I learned from many different elders, I worked with them. The reason I'm saying this is too many want to be. They want to be elders, but they're not elders. They don't know very much about our culture. They'll lead you astray if you don't watch them. You don't want to go back to Sweat Lodge ceremonies with people that run Sweat Lodges – they're not doing it… you heard about the big Sweat Lodge in Arizona?

GY: The one where people are dying?

ACL. Yeah. [*Laughs*.] There are some on the reserve like that. All they want is money… So, I've done a lot of things. I've went five years straight in the Piercing Sun Dance, I got pierced doing the Sun Dance in the States. We used to have Piercing Sun Dance on the reserve a long time ago, but people in the States picked it up and it went just like wildfire, to these reservations that they have them, Piercing Sun Dance. And again, that thing, with a lot of young people, they want to show they're tough, eh? They do it just to be seen. These are the things that I said, a lot of.. you got to be real to take part in them. You got to have that belief, that belief, that honesty that's real. You don't go in

there just to.. it's not a contest. So, there's many ways that, like on the reserve, [*unintelligible*], there are people that would invite people from overseas. These people know they have a lot of money, so they invite them to take part in their Sun Dance. The money, that's what happens. They don't know nothing. You know, I'll go ask them, "What's this?" I'll tell you this, one time an.. he's my relative, he's older than me, he told me, "Art, my friend is there," his friend is a younger guy. He said, "My friend just got promoted." I told him, "What's the promotion? How can he get promoted? From what?" He said, "Through the ceremonies that he's doing." I told him, "That's the first time I ever heard that word, 'promoted.'" [*Laughs.*] I told him, "You guys are nuts." That's what I told him. There's no such thing in our native spirituality where you get **promoted**! No! That's what I told him. So people have to watch out. There's too many fake people out there. And.. I don't like where, I mean, I can't stop it, but still it's, just where it's going. We're going, we're digging to a direction where it's.. it's going to disappear, it's going to be gone like our languages, we're losing our languages, our traditional culture.

So that's the way I am. What I did in my lifetime, I'm not bragging. There's very few people that know me, what I went through. There's a young guy, he's not very young, yesterday here at the races, at the track, here at the grandstand, he's from the reserve. He came and walked up to me and he called me, "Art, you're a real cowboy. You're a horse trainer. You're a good horse trainer, Art." And this guy meant it! He was straight-faced, he wasn't drinking or anything.

He said, "I'm glad, I'm happy to know you." So it gave me a good feeling. I never bragged or anything, I was just doing my stuff. I'm lucky to be around, and find out about different people, different tribes. I went overseas. I had an art show over there in Europe, in the late eighties, and it was good for me. I had a good experience there. That's the way I am, that's how come I said I'm lucky to go through what I went through.

And my piercing, I'll go back to *Napi* after that, I was just telling you about what I went through. Back in the twenties, over here on the reserve, we had Piercing Sun Dances, too. Our tribe had piercing.

GY: Who did?

ACL: Out here on the reserve, the Blood Reserve. But the law put a stop to it. Our people were all warned, "If we catch you doing this, you're going to be charged." Well, charged for what? That's what we do, that's our religion, that's our belief. What happened at that time, there were tourists who came from the States, and they happened to be at the Sun Dance, and they were there when this guy was dancing in the Sun Dance lodge, you know, he was pierced. They pierce us on our chest. And among them tourists was a white lady, and she couldn't stand what she saw. She fainted. Fell down. And then they went and a doctor talked to her, took her to a hospital. She was OK, she just couldn't stand what she was witnessing. And that's where the law came in and put a stop.

GY: After that.

ACL: No more after this. So we were the ones that didn't have it. We'd have to go to different tribes, we didn't have our own Sun Dance. So this happened, and I saw the old guy that had that piercing, that was the last one on the reserve. I was a witness, I saw him as a kid. He was an old guy.

GY: He had the piercings from the ceremony in the twenties.

ACL: Yeah, yeah. And I saw that old guy. He was old when I saw him. But I went through piercing five years straight. I didn't do it just because I wanted people to know that I'm tough.

[**Conversation interrupted**.]

ACL: We have this, now. We brought it back, the Piercing Sun Dance. I went through it five years, because I was sick. I wanted to get over my sickness. It worked. It worked for me. This happened back in the late eighties, over there [*unintelligible*] Sun Dance ceremony. And I've been in the sacred society on the reserve, it's called Horn Society. OK. I have the Beaver Bundle, my dad's Beaver Bundle. It's been in existence for I don't know how many hundred years. I have the Beaver Bundle, Allan [Pard] knows the Beaver.. he's the one that does the ceremony for me. We're going to have it this month. We've been waiting for a date where a lot of people will come.

GY: A lot of people will come?

ACL: Yeah. We have the Beaver Bundle, these are the other bundles, the Horn Society Bundle.

GY: There's more? Ok.

ACL: And I go on vision quests in Montana for thirteen years. There's other things that I went through. And I'm happy to know these sacred ceremonies that I've been through. I went on vision quests for thirteen years straight. A lot of these guys and their want-to-be medicine men, they don't know [*unintelligible*] what I went through.

[**Conversation interrupted**.]

GY: Alright, so I'm recording again, we just moved into the car to get out of the wind. You were just talking about all the time you spent vision questing down in Montana, thirteen years of that.

ACL: Mm-hm. Yeah. It's one of the things that our people.. I even made a sculpture of a guy doing a vision quest. It's in one of my pictures in my.. they put together when I made, in the stories there..

So, vision quest, or fasting is when you go up in the hills, or any sacred, isolated place, you go.. a person will go over there for four days, four nights, and what happens, what he does is he brings his sacred things a pipe, rattle, a fan, whatever he uses. This person is a holder of a Sweat Lodge ceremony, he runs Sweat Lodges. He's there to seek, to be given a right to doctor people. In a vision quest, spirits will come to you, sometimes late at night, they will come to you. What happens is, when you go up there, you ask for help, you ask for.. it's a power. A supernatural power. But if you're going to use it to gain fame, you'll

never get it. You'll never receive it, because the spirits, they know. They know what you have in mind. Ok? There are times that people go up there.. they're the healers, eh? And anyways, they're called medicine men. They're given the right, the spirits will give them the power to heal. The healer doesn't have to have tool to open up his patient. He's given the power, the supernatural power. It's just like… I could describe this, something like magic, or a miracle. It.. it happened to me. And guys like to be there, to see it to believe. So, otherwise, I'll tell you this, what happened. I don't think you'll believe me. So, this is what happened, when you're out there, and doing this.. I call it fasting. I don't call it a quest, a vision quest when I go out there. What I do is, during my stay up.. I go to them hills in Montana, they're called Sweetgrass. Sweetgrass Hills. That's where I go. I've been there for thirteen years, every summer. Soon people will start hearing about what I'm doing and they want to come check it out. They want to see what's happening, if it's real. And I took a lot of people out there to the big hills. Sometimes they get scared, eh? They don't want to stay up in them hills. So, that's what happened. Power comes to you from the spirits, supernatural power. It's real. A healer, or a medicine man, earns what they get. They didn't pay for it in **money**. No, he paid for it the hard way. Going out with no food, no water, for four days. The hardest thing is the water. You suffer. You're out there in the rain, in the freezing temperature, where there's animals such as rattlesnakes. Like one time I was up there in the hills, late at night, and I thought, I think in my thoughts, "Why should I be doing this? I have a nice

home. I'm in a comfortable home, I'll be sitting in my La-Z-boy chair, watching TV, and here I'm freezing, I'm under the weather." Then my thinking went back, "I'm doing this for my people. I want to help my people. Not to gain fame." That's how come the Elder, my friend, gave me the rights to run a sweat. But [unintelligible] you have to do your own.

That's the reason I've been up there for thirteen years. And it's a hard way. It's tough. It's tough, and I went through the Piercing Sun Dance for five years, I suffered. You know, just think, if you have a sliver in your finger, that hurts! But them sticks, they pull through, they poke you, they're about thing long, they're about the size of your pen

GY: Right into the muscle on the breast there?

ACL: Yeah, right in. They'll pull your skin like this [*gestures by pulling hands ten or so inches away from chest*] up, they're the size of your pen.

GY: Jeez.

ACL: [*Laughs.*] Then you tie it tight so you're up to the ropes, and at the centre pole, they come from above that centre pole. And you dance, and all this time you're leaning back, you're stretching that rope, and your skin will be over here [*gestures again*] pulling. And our skin is very tough. Somehow during your dancing, around about fifteen, twenty minutes, you try and break loose from there, and you won't break loose. The only thing that breaks is the **sticks**, they break and then your ropes come off. So, that's a wow, that's very sacred what you're..

Like I said, there's a lot of guys, they're fake, they want to be seen doing this 'cause people will say, "He's tough. That guy is tough." That doesn't work like that. It will never work. We never learn nothing, our people. They're not real. The days are gone when we're real, when there's people who had the power.

There's a lot of stories that I heard about old people, like this guy, this party, they were on a raiding party going into the States before that country was divided. We.. I have a pipe, I smoke pipe in the ceremonies, but I quit smoking a long time ago. When our pipe, our instruments in the community…

[**Recording interrupted**.]

GY: You were saying about the raiding party into Montana…

ACL: Oh yeah. I'm talking about the pipe, what happened to the owner of a pipe, this raiding party going into Montana. That was the time we didn't have horses. They called it Dog Days, way back. So they're on foot. And one of these, one member of the party, every time they rest, he takes a rest and he always fills his pipe with, smokes that pipe. Somehow, the leader of that party was getting mad at him, and he's telling him, "You're just holding up us. We have to wait for you to finish your pipe." And they were getting close to the, I think it was the Crows, the Crow tribe. Somehow, late at night, they always get close to the river when it's dark, they camp, sleep by a river. Somehow they got too close to where they were going. They camped and the next morning, daylight coming up, and sure enough they were close to a camp, eh? Just like a Sun Dance camp.

They start waking up and the leader of that told his crew, the party, "We're going to get wiped out. That's where we're going, that's the enemy, that's our competitors." And people didn't have a good feeling, they saw the big camp there, and people were waking up in the camp. The leader told his party, "This is what's going to happen. We're going to go in there. We can't sneak in there, it's daylight. We're going to get killed." So he told his party, "We're going to go in there and we're going to pretend that we're visiting tribes. We heard about this tribe, how we could know how well off they are. We'll talk to them. We're going to meet with them." So that's what they did, they went to the nearest tipi, they made a noise outside, and pretty soon somebody stuck their.. It was a lady, a woman that stuck her head out of the tipi. They were talking in sign language, and the leader told that lady in sign language that they were from up north, they were visiting tribes. So then the guy came out and told them, invited them to go in their tipi, their lodge. And that's where he started the story, in sign language, that they're friendly people. And here they were going to raid that camp! And as they were sitting in that lodge, they heard drumming on the other side of the camp. Across from where they were, they heard drumming, early in the morning. And the guy told them, "You guys hear this drumming?" They said yeah, in sign language. And he told them the story that what they're hearing is somebody's doctoring a person that's been beaten up in a, they went on a raiding party too. The enemy pretty near killed him, he was wounded bad, and he is the son of the chief in that camp, the chief's son. So word got to this,

and somebody walked in there, in that lodge, and they were talking different languages. What they were talking about is, the camp heard about what's happening, that these people were there early that morning, they were visiting, and one of the people in that camp told the others, "We heard about how powerful these people from up north are. Let's get them to doctor that young man that's dying." Soon they were ordered to go over there where the sound was coming from. They guy told them to come in. So they all went in there and, sure enough there's a guy dying in the tipi. The guy, the chief, that was his son, told them, "Is there anybody that doctors, that does medicine?" Nobody said a word, nobody did nothing. It took time. And that guy that smokes a pipe along the way, he told his leader, but the other party didn't understand, "Yeah, I'm going to use my pipe to doctor that young guy. I'm going to use it." He demanded to have seven buffalo skins, buffalo hides, and a woman to help him doctor that guy who was dying. "I need a female to help me to doctor him." And a guy, the father of that wounded kid told him, "Yeah, my sister's not married. You'll help him." So everything was arranged, they got the drummers and started. And he used his pipe, eh? The pipe stem. That's what he was using. They were singing and he was using the pipe. And all of a sudden they stopped drumming. He told the father of that kid, "OK, we're going to pull him up. I want him to sit up. He's going to sit up." So the pulled him, the wounded guy sat up. Pretty soon he was sitting by himself, no support. Then they started singing again, and again he used his pipe. And they stopped singing and he told them, "This time

he's going to get up on his feet." And they got him up and we was.. Start singing again, they stop, and now he said, "Now he's going to walk." And that guy walked! He cured him just like magic. That's because he had that pipe. That's his medicine. It was given to him to use medicine, and he got them out of trouble, out of a jam. They were going to get killed. The father of that kid told them, "In return, in my payment, you're going to get horses. We have horses. You guys are on foot." So, he told his people, "Take them back where they come from. Go half way, and let them go. Don't do anything to them." And they sent them riding horses, material things, gifts to them, and they were escorted by the tribe half way. And that's why the owner of the pipe saved them. They were going to get killed. That's how come we respect our pipes. They're sacred. They're instruments connecting to the higher power, to Creator.

That's the reason I take, when I go on a vision quest, my pipe is always there. So I smoke pipe, I pray with my pipe, I offer my pipe to higher power, to Creator, to the spirits. I'm lucky to know this. A lot of people don't know too much about our traditional spirituality. Like I said, I was brought up in our native way by traditional parents, and what I have, I earned it. There's a lot of things that I done in my lifetime which I was never taught to do. I wasn't trained. I wasn't going to art school, or took an art course, or took carpentry, or shown how to tame or break horses, train horses. Things like that. I did a lot of things that I'm very happy to have what I got. And, at eighty, people used to tell me, "I don't think you're eighty. You don't act like an eighty-year-old, you're

still with them horses, you drive like a teenager." I told them, "I **am** eighty." And I'm thankful. I'm thankful every morning that I get up at our home. I have to smudge the bundles that I have. Even if I'm getting late for work, I do my smudging. I don't want to miss to smudge every morning. And if I don't smudge, it's going to be there with me all day, so I have to do it. It's very strict for me.

But *Napi* is, this one story, that's how come I made it, I did this one sculpture. *Napi* was walking with his puppy, that dog, a coyote. Somehow he came up to this rock, a big rock, and the weather was cold, freezing, raining. And *Napi* has a robe, a buffalo robe. He approached to rock and he noticed the rock was cold. And he talked to the rock, and told him: "I pity you. I feel sorry for you. You've got no fur, nothing. You're just bare. I'll give you my robe. The robe will warm you up." So he took his robe and threw it on the rock. He left the robe, he left the rock, and they walked away. Somehow down the way, he was freezing, and he told his dog, the coyote, "We're going to go back to that rock. I want my robe back, I'm freezing." So they went back and got to the rock and told the rock, "I'm going to get my robe back, my blanket. It's cold!" So he grabbed that buffalo hide, and as soon as he got it, the rock kind of moved. He noticed *Napi* was taking his robe back. And that's when that rock got angry, moved, and chased them. And *Napi* knows the rock is going to chase them and crush them, and they took off, him and his coyote, that dog. That's how come we have rocks, and one of the last piece of rocks is in Okotoks. It's our word.

Ohkotok means rock, and over there, you call it Okotoks. And you could see some of the rock over there where I live, west of, around the Glenwood area, there's rocks south of there. So that's one of the stories I was told. I made it, I made the story behind it, I made that sculpture, and I'm sorry I sold it for a cheap price. A lot of guys wanted that sculpture, that bronze. It was a funny looking bronze, I tell you.

So that's one of the stories I heard about. I heard quite a bit. I can't remember them. If I start telling them and somebody will hear them, they'll say, "That's not the way it was told," and so then I have to go through. Allan knows me, storytelling is part of, I love telling young guys about what we went through, our ancestors went through.

Back in the old days, when a warrior or people getting together go raiding other tribes, going on the warpath we'll call it. In order to find out if they were coming back, if they were going to survive their trip, what they do is, when they recruit enough people, like oh say around ten people or more or less, one of them will kill a badger. What they do with the badger, they drain the blood, they take the blood. Well of course they'll skin the badger, lay the skin flat, the fur, the hair next to the ground, and what they do is they pour the blood on that hide. And that's where they make a little ceremony, they smudge and they pray, and they ask for guidance, and they ask that if they're coming back, they're going to be survivors or what they're going to do. And they look into that hide, into that blood. They take it like a looking-glass, a mirror. If they see

their faces, that means they're coming back. If they don't see their faces, they're gone. This is one of the stories I heard elders talking about. One of the elders on the reserve told me, "This is the first time that I heard this." You know, that's the way our people, the power that was given them. He'd never heard it before, but that's the way it was told.

Our people are wise, they're intelligent, they didn't have to have tools to doctor people. That's the faith they have, that's the power. And you go up into them hills, if you go on a vision quest, you suffer for that. It's not that easy. The worst thing is going, the hardest thing is going without water. Four days. Four nights. And that's what I went through in my lifetime. There are other things that I went through, spiritual things that I went through with.

There's stories that I was told, in our society, I'm still an active member of the Horn Society, there's restrictions, there's rules we have to follow. But it's not like that anymore. Things are changing. Before it was strict. Now we don't have it. We're losing it. Just like we're losing our language. There's a conference that I'm going to next week, over at Siksika, two days. And that's one of the.. our language. We're trying to find ways how to bring back our language. I told a lot of people, we lost it, it's not going to ever come back. Our people don't want to talk our language. Our language has long words. English words have short words. And when a person, he gets lazy, he doesn't know how to talk our language, he'll start talking English. My late wife's father, they were from Gleichen, no car. He doesn't talk English, understand English. I used to drive

for him. And when he was making deals with non-Native people, he gets me to translate, interpret for him, and one time he told me, "How come you didn't talk too long? You didn't talk too much. You only talked, you know, short." And I told him, "It's different. They talk different, we talk different. Our language is long, their language is short." He didn't believe me. So, that's the way we are.

GY: What do you think brought about the loss of that language? Do you think the residential school era had a lot to do with that?

ACL: Yes. When I was in school, I went to school school in this.. on the reserve, it's called St. Mary's School. St. Mary's RC School. I went to school in 1938 to 1947. During my school years, they were called Grey Nuns, and they were called Sisters. Sisters of Charity. They were women that wear funny hats, and they wore uniforms. They were from down east, from Quebec. They didn't really talk English, and they don't know us. They **hate** us. And the priests, too. So, they put a stop, over at the school, not to use our language. But a lot of our people, a lot of us, don't talk English. So we're scared if they, if the supervisor caught us talking our language, we're going to get punished for that. So slowly, we started talking English. You know, somehow people got used to talking English. That's the way it was. They.. didn't raise us of talking our language. They took our language away… and our beliefs. When a priest says mass, they call it, the priest will say mass, I used to be an altar boy to the priest, I helped the priest up there in the altar. I even dressed like a priest during the mass. And the priest says sermon, when they start preaching to the people, in no time,

he will say, he will tell us that: "Your parents are going to go to hell." I heard this. "'Cause they go to the Sun Dance. You people worship Lucifer, Satan, the Devil. You people are going to burn in Hell for that." It's just **scaring** us, you know, and I didn't like it. I didn't like the…

When I was working for.. I work over there, at the Kainai Correctional Centre. I've been there for twenty-one years now. I'm still working over there. Back in the nineties, it must be ninety-five, summertime, July. There's a priest over there in Stand Off, that lives in Stand Off. He was new to the community. I met him that morning at where I work, at the correctional centre. He stopped and asked me my name, and I told him, and then he went a little further and told me, "What school did you go to when you were a kid?"… I told him, "St. Mary's School." And he kept asking me questions, and I was in a hurry. I told him, "Father, I don't have time. I have to go. I don't have time to talk to you." He kept bothering me, he wants me to say something about the school. Then I stopped and I told him, "Father, I'm going to tell you this. I don't have good words for St. Mary's School, if that's what you think I'm going to say, I'm going to praise the school system, the school, the Catholic school. It's no good. That school was just like a reform school." I told him. He was looking at me, and I was getting mad, and I told him, "Father, I'm going to tell you this. Since you want me to say something about the school, about St. Mary's School, I told you before, I don't have good words for it, and the way I was taught in school. You guys, you priests, every time you say a mass, you start preaching to us. In

no time, you condemn our way of life, our spirituality, what we believe. In no time. You're civilized, and us, you call us savages. If you were civilized, if you believe in what you have, this so-called Christianity, if you believed in it, you wouldn't be treating us like that. You wouldn't be treating us like.. you always call us down, condemn our way of life, our spiritualities, our beliefs. How come you guys are like that? In order to be ordained as a priest, you've got to have a good education, you've got to have good brains, you've got to be smart. And you guys are not like that." He was looking at me when I said these things. I told him, "Father, let me put it this way. We were here before you guys. The higher power that put us in this part of the world, **here**, gave us our own spirituality, our beliefs, our way of life. That's how come we lived that long. And you guys came over and started killing us, and started messing us our lives. Don't you think, don't you ever think these people are here before us, they have their own spirituality, they have their own beliefs? And yet you condemn our ways, our beliefs. The way we are, we have our medicine men, **our** healers. We respect them, we treat them very nice. We don't mistreat our medicine men, our elders. But I'll put it this way. You guys have your own medicine man, a long time ago. You guys killed your medicine man. You guys were jealous of him, performing miracles, bringing back the dead. You guys were scared of him, and you were jealous of him, so you guys got together and planned how to kill him. You guys killed him! That was your medicine man." He looked at me and he walked away. [*Laughs.*]

GY: He didn't apologize or anything.

ACL: No. [*Laughs*.] That guy told me, "What is your job?" "**Priest**." I thought he wants to find out if I know anything about St. Mary's School.

GY: Well, you told him.

ACL. [*Laughs*.] He was still.. I had the feeling that, you know. The way I look at life is, I'm not racist. That's how come my wife is a non-Native woman. I get along with my wife. She looks after me, I look after her. That's my best friend in the world. I had a Native woman that I spent almost fifty years with. She passed away back in the nineties. And I have non-Native friends here. One of my friends is a judge of Queen's Bench here. He's my good friend. We understand each other. So I have feelings for all humans. We all have feelings, compassions. Like I said in my Sweat Lodge in Claresholm, I sweat over there every last week, on… third Fridays of the month, for twenty years over there. I usually say to newcomers that come into a sweat, my Sweat Lodge ceremony is open to anybody. That's the way I am. There are other people, elders that won't allow non-Natives to come into the Sweat Lodge. But if I start doing this, it's resentment. Resentment is hate. When I pray, when I to higher power and I have this feeling, it doesn't work. Hate and prayers don't go together. You got to be honest, you got to be humble. There is a higher power, I know that. I've been **healed**. There's things that happened to me that I heard.. I don't know how to put them, but they amaze me. That's how come I'm alive today. I'm **eighty**. I have four racehorses here, and them racehorses are always wanting to

move, and they're the ones that kept me going beside my spirituality. I believe in treating animals good, kind. So, like I said, I'm not racist. If a non-Native treats me good, I even treat him better. If a non-Native treats me unfair, or tried to harm me, then I wouldn't like it. Because I said in my Sweat Lodge, it doesn't matter what colour your skin is, what language you talk, you speak. We're all from this earth. We're all from this place. If it should happen we're out it space and landed in some planet out there, alone, way out there, and out comes a human being, landed there beside where you landed, and if he's a white man, or a black guy, or a yellow, Chinese guy, you'd be happy to meet him, because you came from the same place. You wouldn't even notice the colour of your skin, what language. That's the way we are! We shouldn't be hating each other, resenting each other. I've been with these people for a long time, horse racing in Lethbridge. Some of them, you could feel them feeling they don't want us around. They don't appreciate our support for them. But it doesn't hurt me. It doesn't.. I just keep doing what I do.

GY: Do these guys know that horse racing is a big part of traditional culture?

ACL: I don't think that they know it. We have horse races, my dad had racehorses way back then. That's the way I am, and I'm very lucky to learn what I have. You know, I am a person that likes to help other person if they need help. Sometimes people take advantage of what you do to them, and I kind of watch it. You know, I'm an elder for Kainai Correctional Centre in Stand Off. What I do is, my services over there is one-on-one counseling with inmates. Inmates

from across Canada. They come from different reserves, they talk different languages. Some of them inmates, they don't know nothing, they're just like kids. That's what I do, beside running a Sweat Lodge ceremony for them, and we have pipe ceremonies, too, at times. Like I said, I'll say this again. It doesn't matter what reserve you come from, we're all humans, and we pray together. When we go into a Sweat Lodge ceremony, in the Sweat Lodge, we go in as one. As one, what I mean, we're going to pray together as one, we're going to sing together. And that's the way it is. We're all together. Unity is what I'm talking about. We're united in a sweat.

And I'm lucky that I know what a Sweat Lodge, we doctor people in Sweat Lodges, too. Yeah… there are a lot of things I want to talk about, it's going to take a long time. My friend, the judge told me, "You should write a book, because people are losing what you guys got. Write a book."

GY: It's true.

ACL: Yeah, about our spirituality. I know Hugh Dempsey, I know he was married to a woman from here on the reserve across the river. Her maiden name was Gladstone, he married the late Senator Jim Gladstone's daughter. My dad knew Hugh Dempsey, he told him a lot of stories. Hugh Dempsey told me, "I know your dad, he comes and visits me."

GY: There is a lot to talk about.

ACL: Yeah, there's lots, I heard a lot of stories, I know about my tradition, my cul-

ture. In our ways, when you visit somebody, you go to his house. The person, the owner of the house where you're going, he'll tell his wife, "Give him tea." And after he gets his tea they start talking, and his wife knows that this person needs to eat, so will prepare food for him. And the guy, the owner of the house, will tell his friend, "Why don't you sit there and you eat? You sit here and eat." He won't tell him, "You have to pay me after you finish eating. You pay me for your food." No! That's one of our traditions. And it's no good to refuse a cup of tea, or a bannock. It's there, it's the way they these people like each other. They acknowledge each other with things like that. A guy will say, "Sit down and we'll visit. We'll visit." In the old days, back in the forties when I was a kid, my relatives, they'd come and visit my parents, and they don't just visit for one or two hours. They bring their stuff, their bed in, and they visit for two nights, three nights at times, and they live with us. See, that's the way our people visit. I was the guy that looks after their horses, team of horses, go and unhook the horse, take the harness, and put them in the barn. At the end of their visit, they don't get charged for food or lodging, no. You know, our people, food is happiness. You go to a gathering or a ceremony or whatever, a powwow, and if you get served there at the powwow, like food, and people will talk about it, "Ah, that's a good powwow. They served a lot of food over there." That's the main thing. [*Laughs*.] So that's the way we are.

Yeah, there's some good people, there's some bad people. What you see on the streets here, our people on the sidewalk, on the street walking in bunch-

es. They're the ones that never were raised in the right way.

GY: But there's reasons for that…

ACL: Yeah. The reason is they gave up. They don't want to push it or hustle in life. A lot of them are unfit to work. They don't have it. Alcohol poisoned our people, and that's the way it was, it is now. They bum money, they bum money as soon as they see somebody out of town. When they walk up to them they will say, "Can I have your loose change? Can I have a toonie?" It's pitiful. Like I said, I'm lucky to be brought up this way.

GY: What about for someone who's young and wants to learn about it? Is there a right way for them to get involved and pursue the traditional knowledge?

ACL: Well, it is good. It is good. As long as he's true with it, you know, I don't mean if he's going to use it for moneymaking, no, it's out of the question. What I am is, I don't make money for my Sweat Lodge or the pipe ceremony or telling stories. This one guy, this elder, was at the treatment centre on the reserve. A guy from a different reserve told him, "How come medicine men, they're very expensive? I pay them a lot of money. How come it's like that?" He was talking, asking the question to one of our elders. This elder's way older than me. But he never was brought up in a traditional way. In the tradition. He's my relative. And this guy told him.. that's the guy that was saying, "Joe over there just got promoted." That's the same gay that I'm talking about right now. He told that guy he could be a Cree from Saskatchewan. He told him, "Well, we're not like this over here on this reserve. As long as you give what you gave me, a

package of tobacco or cigarettes, the medicine man will heal or look after you." No, he was wrong. He was very wrong. If you're sick now, you want to get better, you're not going to give me a cigarette. Your life is important more than a cigarette. If you got relatives or kids that are sick, you want them to get them better. That's how come medicine in the Western world is very expensive, and a lot of people can't afford it. In our way, the Western medicine, doctors, they have good education, they spend a lot of money. A lot of thousands, thousands of money to be trained as doctors, to go to school, medicine school, whatever they call it. In our way, we earn it the hard way. I just finished saying that, we earn it the hard way. That's when you go out there and fast, vision quest, try to get the power to heal people. We earn it. And we come back and somebody gets after us, comes and hires us to doctor a patient, a member of, or him. The healer, he doesn't advertise. He won't advertise. He wouldn't say, "I'm a healer. I'm a medicine man." No, he doesn't. He keeps it to himself. The one that's after a medicine man, I told this to that Elder that was saying that, "A cigarette will heal you." No, like I said, if you want to get better with your sickness, you have to pay for it. You've got to pay for it. So what I told this guy, "Us, we earn it the hard way. We earn what we have, the power that we have. You **have** to satisfy that healer in order for you to get him to help you." You know, there are other healers that are very.. have pity on other people, that person don't have the means. He's going to do it for free, but if he's going to do it for free, his medicine is not going to be that strong, OK? Suppose you go to a drugstore

and buy medicine over the counter. They're not as good as a prescription medicine. That's the way life is, and there are very few guys that will do it, will look after a person, wouldn't charge him anything, he's just doing it for being a kind person. He doesn't want to suffer, like to see this person suffer, so they'll help if that guy is true. There are different ways to look at it. But if I'm dying and I ask for help – I'm sick, I'm a sick person, I have a heart condition – I want help in a bad way, I'll give my racehorse. I value my racehorse. That's the way, in the old days, when a person is sick, you get help. He goes to a healer and instead of paying him money, he'll get one of his good horses and pay that medicine man, that healer, who will take it instead of one cigarette. So which is important, the horse or your life? So that's what I told my relative. He don't know too much about our tradition, he don't know too.. he got mad at me. So that's what we do.

GY: Giving an offering of value.

ACL: Yeah, yeah. Like I said, a lot of our people, especially young people, they want to be known as medicine men, as a healer, but they're fake. I know that. And when I get after them they don't like me. [*Laughs*.] You know, what I went through, I meant it. I meant what I have. There are things that I would sit down, maybe three of us, me and Allan, we spent a lot of time, me and Allan, we spent a lot of times. I have a friend, he's interested in our ways, and he knows quite a bit of Native spirituality. That's the judge, he lives in Lethbridge, he's my good friend. We get together and we talk. So, maybe we should make arrangements to get together one night for maybe four hours, we'll have food, and then you

could tape record what we say.

GY: The whole conversation – that would be something.

ACL: That would be something. That's what my friend told me, why don't you write a book… Yeah.

GY: These are important things to get down.

ACL: Yeah. My friend is, he used to, he was a Minister of Health and, what do they call it, Wellness? His name is Gene… I forgot his name, he's Ukrainian.

GY: Minister of Health? In the government here? Zwozdesky?

ACL: Gene Zwozdesky. Yeah, that's my friend. I gave him a Native name. I went to a conference, he was in a conference in Edmonton four or five years ago. I told Allan and the chief here on the reserve, Charlie Weasel Head, "These are the people that we should give recognition, because he's going to help us. You guys give war bonnets or whatever you call them to people, they don't deserve them, don't support us, don't support the Native culture. This guy is real." The chief and Allan told me, "Well, what are you going to do about it?" I told them, "Well, I'm going to invite him to my camp." We have camps in the spring and fall. Campouts. That's when we have them four-day Sweat Lodge ceremonies, and at times we have powwows. They said, "That will be good." I told them, "Invite him to come over." The chief and Allan told me, "You let us know. Let us know when you're going to put up the dates for your camp, and we're going to get him over." So that's what happened. I set up the dates, and I rented

the big top, invited people for a powwow. Allan invited the minister, Gene, at that time. We had a ceremony for him, the other tribes from up north came and gave him recognition, too. So I called him, his name is Running Wolf. I gave him the name Running Wolf, *Makuyomah*, because wolves are powerful, they're strong. That was the reason I gave him a.. makes, you know, keep him… In any work field that you do, in general, there's always people who wouldn't agree with you. So I gave him the name that he.. whatever he mentioned us in that speech that time in Edmonton, it was right, it was really good. That's how come I invited him. It was our highest gift, that is recognition, a Native name, or if he's a Native, we'll give him another name. We acknowledge his name. And we gave him an Honour Dance. He brought his friend, his whole family, his ministers that were with him, and I transferred a war bonnet. My son makes war bonnets, a nice-looking war bonnet. That's how come we become friends. Ever since after that he calls me "my medicine man.. my elder," not medicine man, he calls me "my Elder". My wife laughs about it, "Gene calls you his elder." And I tell my wife, "Well, he's my Minister." [*Laughs.*] So we became good friends, eh? That's where I'm going Tuesday with Allan. Tuesday morning we're going to Banff. They're having a conference over there, and he wants me, Gene wants me to do the opening there Tuesday at one o'clock. So that's where I'm going Tuesday with Allan. Yeah, so I have other friends like that. Judge here is a nice person, he's an understanding person.

GY: If there's anything I can do to help with what he's saying, helping you write

out your stories..

ACL: Like I said, we'll get together, put in some plans. Allan knows me good, and my friend the judge, he's a good friend, he's honest, he's got knowledge, too. So it's like I said, he always wants us to get together. There are other friends that I have on the reserve, but they're not really knowledgeable persons. So that's the best way to get together, and I have lots to say.

[**Conversation interrupted**.]

GY: While we're still here… One of the things I asked you about earlier, about the work I'm doing up on this site on the Oldman River. What's the name of the Oldman River in Blackfoot? Are you familiar with the story of where the river gets its name from?

ACL: Oldman River is going back to *Napi*. *Napi'htai*, that's what they call it. *Napi-oochita*. That's the "Old Man's River", that's what it's translated. So it goes back to *Napi*. The name is passed on from people that are in the sacred spiritual.. doing spiritual ceremonies. *Napi* means, it's good to be.. it's good to have that *Napi*. When I say hello to an elder, I wouldn't say, "*Oomah'iin*." *Oomah'iin* is a different word. I'll say, "*Oki napi*." That means an old man, an elder. That's what we use the word for… Yeah. *Napi'khtai*. It's the Oldman River. The story behind it, I didn't hear the story, so I can't add another. These are the things that people have to watch, and I said some people don't want to be left out, don't want to get beat, and they're not that honest to come out and say, "I don't know too much about that."

GY: Do you..

ACL: There are people that know.

GY: Do you feel that a story should be told the way you heard it the first time?

ACL: Yeah, yeah.

GY: Did you ever see or play the hoop game when you were younger? The hoop-and-arrow game, making a little hoop and rolling it, and throwing an arrow through it?

ACL. [*Pause*.] I never saw it.

GY: Did you ever hear of it?

ACL: No. No, I never did.

GY: What about with horse racing? You mentioned that your dad raced horses. Another aspect of the research I'm working on is the importance of gambling in gaming events, and the way that that fits into traditional culture, and the way that there were rules for gaming. Certain things it was OK to game on, there were controls, limits, anything along those lines. Is that anything you'd be comfortable talking about?

ACL: Yes. Gambling is, again, like I mentioned when you go up on a vision quest, and if you want to gain fame, become rich, or.. you don't go up there. A lot of people, in gambling, like what they, right now the most popular game on the reserves or anywhere among our tribes, different tribes like in the States, they

call it stick game or hand game, where they bet thousands and thousands of dollars. Sometimes they have.. what's the name for it? Tournament, they call it. And again, a person will try, if he's got anything in him, he'll try his medicine, his power, to gain, to win. It happened a lot of times. But they think they have the power to, which they don't have. Like said, over here I was talking to young people and I told them, people, they think that they have the power given to them. There's no more of it on the reserve. People that had them before are all **gone**. They don't have power, people on the reserve. And again, they think they have the power, they're going to win a whole bunch of money, or they use it for rodeo, they go to rodeos, young people. We used to smudge – you know what smudge is?

GY: Burning sweetgrass?

ACL: Yeah, yeah. They'll use that to, they think it will help them in their competition. Things like that. In what I'm talking about, the stick game, the hand game, it doesn't originate with the rattle. People from Browning, they're the ones that introduced rattle when they're singing. In hand game, all you used way back when I first saw it there, big long board about six wide, an inch thick, and that's what they beat on with their songs.

GY: OK. Hitting the stick like a drum then?

ACL: Yeah, yeah. So it's, the hand game.. I never saw what you mentioned, that hoop game or, what I saw is the hand game. All my life I go and witness them hand games. And again, some people say, "Them guys, they have that medi-

cine, they're using it on them. 'Cause that's how come they're winning." But it doesn't.. what it does, the hand game is a **mind game**. When they, they're called **bones**. They're about this long [*holds fingers a short distance apart*].

GY: That's about, what, two or three inches?

ACL: Yeah, about three inches I think. One is marked in the middle, one is plain.

GY: What kind of mark?

ACL: They have black marks in the middle.

GY: Just like lines?

ACL: Yeah, around. So here's the bone, here's what, around here they put the mark [*makes circling gesture around middle of object*].

GY: A line right around the whole thing. OK, so it's carved right around.

ACL: Yeah, yeah. That's the one. And the other one is plain. It's just plain. You've got to guess that plain one, which side of, if it's in your right hand or left hand. In the hand game, we have hand game for a long time. We have hand game, it's a really original Native game, hand games. What they do is, there's two sets of them bones. They hide them in their hand. And they plant sticks that are about this long [*gestures by holding hands apart*]. Ten sticks.

GY: Ten inches, twelve inches?

ACL: Sometimes about twelve inches. Right around the size of your pen. Yeah. They stick them into the ground, five on each side. In the old days when I saw this game, they used ten sticks. They threw them two bones, they call them

bones, one on each side, and them ten sticks, five on each side. That was the real, original hand game. But nowadays they put one extra stick in there to make it eleven sticks, eh? They call it "kick stick". It's a kick stick to kick start the game. The one that has that kick stick starts the.. the one side, or the team. So when they start singing, there are songs for when that stick game, there are songs, special songs for it. They start singing, and they get that rhythm going, and suppose you're one of the players, you've got them bones in your hand, and you start your movement, you know. You're trying to confuse their captain, the pointer, the guy that's going to point your hand, which side the plain bone is. Then they try to, with your movement, with your songs, it's in the **mind**. That guy is really working your mind. If you show any kind of movement in your face, like your eyes or.. that guy will catch you, and he'll point **this** way, and sure enough, he'll point the right bone. Sometimes, if he misses, that one point when he points to your hand, if he misses, that guy will confuse the pointer. Then he goes back and hides the bones, and that guy will point the other way, and you still have the bone in the same hand, the same side, so he missed again, twice, eh? Then he really gets confused. This time he'll switch the one he's looking for, then he points the other way, then he misses again. That's the way the stick game.. it's interesting. So you've got to have the, well, I'll use the word **power** to overcome his mind game. You know, once you start missing, you're more likely to take all them sticks, and you'll beat them. [*Laughs.*]

GY: Once it starts, you just completely panic.

ACL: Yeah, that's right. When them ten sticks, five on each side, you start taking their sticks on their side, you start taking their sticks. When you get done taking them five sticks, then you start working on your side of the sticks. If they catch you, then you throw them bones to their side and they'll do the same, hey? At times, you only have two sticks left there, and that's when they really try to win. Sometimes you have two sticks left, then you gain back what you lost. Them sticks, taking them sticks back… It's **interesting**.

GY: It sounds like it. I've heard about the hand game, but I haven't seen it.

ACL: Yeah, that's the one. I used to go watch it, and sometimes I'd take part in it.

GY: Is that something that would happen within a community, or is that more when groups get together?

ACL: It happens in communities. They invite, they have tournaments, huh? Like in Cardston, Moses Lake, Brocket they have it, Gleichen. It's a big thing. Sometimes the money goes to fifty thousand. Yeah. So that's one of our Native games. It's been there for a long time.

GY: I guess what I'm meaning, would you gamble with.. if you're traveling down to Browning, it's people from Alberta gambling with people from Montana? But would Kutenai come to something like that, or Salish, at these really big tournaments?

ACL: Well, Salish, they have it too. They have it too. But at times, you don't have to be on your tribe's side. If you want to go to the other side, if you think you're

going to make money with them, then you're welcome to switch sides. It's the money that you're after. If you think your tribe is not good enough to beat them, so you go on the other side and bet with them.

GY: And there's songs, there's rattling. What are the songs about? Are they trying to scare the opponent?

ACL: Well, it's.. them songs are to help you, to build your, um.. to make you try harder, eh? They're things like, they're meant to give you that aggressive feeling. It's to build your..

GY: Confidence.

ACL: Yeah, yeah. It's to build it. And you can't act. It's the same thing as dancing. Native dancing powwows. If you have good drummers, and you dance, if the drum has rhythm, you make a movement with that sound. And they have good singing, yeah, you could dance with it. Same thing as that. And also, when a healer's doctoring a patient, he has his song, and he's got his drummers. Just like that guy that I told that story. He's got his drummers, and that will give him that same thing as confidence in his power to heal. And he's going to do it.

Yeah, you should see my short stories about my bronzes. They have little stories that tells what I make. It's too made they're in my pickup – I brought them over, my pictures and my stories. They're in my pickup, but we're using my wife's car.

GY: That would be something to see.

ACL: Have you got any more questions?

GY: Oh, those were the main ones I wanted to cover today.

ACL: Yeah, it's interesting.

GY: There's a lot to learn, a lot to talk about.

ACL: Yeah, we wouldn't cover what we have in one night, one day.

GY: One afternoon.

ACL: Yeah, there's lots.

GY: Well Art, thanks for taking the time to talk to me today.

ACL: It's my pleasure to, you know. It's, we're learning from what we hear, and that's the way the world is, so you're teaching other people what we went through, and what we experienced… Yeah, we should get together, I'll talk to Allan, or you talk to Allan.

GY: I'll send him a note, let him know that we talked.

[**End of recording**.]

Appendix B
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Hoop-and-Pole Game Variants

Case	First Nation[1]	Source	Diameter - <6""	Diameter - 6-12"	Diameter - >12""	Stone	Netted	Multiple spokes	Single spoke	Bead(s)
1.	*Old Man's Playing Ground*	HBCA E.3/2 fo. 17; Ewers 1958:157-158; Schultz 1919:63	X							
2.	A'aninin	Culin 1907:447; Flannery and Cooper 1946:395-402	X	X			X	X		X
3.	Achomawi	Culin 1907:494		X						
4.	Apache (Chiricahua)	Culin 1907:449			X					
5.	Apache (Coyotero)	Hoffman 1878:480-481		X				X		
6.	Apache (Jicarilla)	Culin 1907:449; Mooney 1898:201								
7.	Apache (Kiowa)	Shaman 1966:41-43								
8.	Apache (Mescalero)	Cremony 1868:302; Culin 1907:449-450		X						
9.	Apache (San Carlos)	Culin 1907:450		X					X	
10.	Apache (White Mountain)	Culin 1907:450-457		X	X				X	X
11.	Apsáalooke	Culin 1907:502; Hayden 1862:408	X	X			X			X
12.	Arapaho	Culin 1907:441-443; Dorsey and Kroeber 1903:181,275,364; Mooney 1896:994		X	X		X			
13.	Arikara	Brackenridge 1814:255; Bradbury 1817:126; Culin 1907:461-462; Dorsey 1904b:15	X							
14.	Bannock	Culin 1907:495								
15.	Bayogoula and Mugulasha	Culin 1907:485; Margry 1880:261				X				
16.	Bellacoola	Culin 1907:489-490	X	X		X				
17.	Caddo	Culin 1907:462-463; Dorsey 1905:35								
18.	Caughnawaga	Culin 1907:474-475; Long 1791:53								

[1] Except where previously referred to in text, group terms as given by Culin (1907) are used instead of autonyms.

Case	First Nation[1]	Source	Diameter - <6""	Diameter - 6-12"	Diameter - >12""	Stone	Netted	Multiple spokes	Single spoke	Bead(s)
19.	Cherokee	Culin 1907:475; Mooney 1902:311, 314, 434; Timberlake 1765:77				X				
20.	Cheyenne	Culin 1907:442-443, 445-446; Kroeber 1900:163; Mooney 1896:994		X	X		X	X		
21.	Chippewa	Culin 1907:446		X			X			
22.	Choctaw	Adair 1775:401; Culin 1907:485-486; Romans 1775:79			X	X				
23.	Chowchilla	Culin 1907:484	X							
24.	Chualpay (Colville)	Culin 1907:457; Kane 1855:276, 1859:310	X							X
25.	Chukchansi	Culin 1907:482	X							
26.	Dakota (Oglala)	Culin 1907:501-507; Mallery 1893:547; Meeker 1901:23, 26-27	X	X	X		X			
27.	Dakota (Teton)	Culin 1907:508; Dorsey 1891:334; Walker 1905:278					X			
28.	Dakota (Yankton)	Culin 1907:508-510	X		X					
29.	Delawares	Brinton 1890:186; Culin 1907:446								
30.	Eno	Culin 1907:510-511; Lawson 1714:57; Lederer 1672:18	X			X				
31.	Eskimo (Aivilirmiut and Kinipetu)	Boas 1901:110; Culin 1907:473-474								
32.	Eskimo (Central)	Boas 1888:568; Culin 1907:472-473								
33.	Eskimo (Western)	Culin 1907:474; Nelson 1899:334	X				X			
34.	Haida	Culin 1907:517								
35.	Hidatsa	Boller 1868:159; Culin 1907:511; Wied 1843:422				X				
36.	Hopi	Culin 1907:496-498	X	X						
37.	Huma	Culin 1907:486; Gravier 1861:143				X				
38.	Kainai	Culin 1907:443-444	X					X		X
39.	Kalispel	Culin 1907:490; Giordia 1879	X							X
40.	Keres	Culin 1907:478		X						
41.	Kiowa	Culin 1907:478	X							X

Case	First Nation[1]	Source	Diameter - <6""	Diameter - 6-12"	Diameter - >12""	Stone	Netted	Multiple spokes	Single spoke	Bead(s)
42.	Klamath	Culin 1907:479-482; Dorsey 1901b:17	X	X					X	
43.	Koyeti	Culin 1907:482	X					X		
44.	Ktunaxa	Turney-High 1941:160	X							X
45.	Kwakiutl	Culin 1907:519-521; Hunt 1902:295	X	X		X				
46.	Makah	Culin 1907:522; Dorsey 1901a:69			X					
47.	Mandan	Catlin 1841:132; Culin 1907:511-513; Lewis 1814:143; Wied 1843:358	X			X	X			
48.	Mohave	Culin 1907:523-525; Whipple 1856:114		X						
49.	Muskogee	Culin 1907:486-88; Hawkins 1848:71; Squier 1850:135								
50.	Nakoda	Culin 1907:502; MacLean 1896:26								
51.	Natchez	Culin 1907:488, Le Page du Pratz 1758:4	X			X				
52.	Navaho	Culin 1907:457-460; Matthews 1897: note 76, 1902:15	X	X	X					
53.	Nehiyaw	Canadian Museum of Civilization 2005		X			X			
54.	Nimíipuu	Culin 1907:493; MacLean 1896:42								
55.	Nishinam	Culin 1907:489			X			X		
56.	Niska	Boas 1890:583; Culin 1907:471								
57.	Nootka	Boas 1891:590; Culin 1907:523								
58.	Ntlakyapamuk	Culin 1907:491-492; Teit 1900:273	X	X						X
59.	Omaha	Culin 1907:514-516; Dorsey 1884:335, 1890:162	X	X	X			X		
60.	Osage	Culin 1907:516-517; Hunter 1823:273								
61.	Paiute	Culin 1907:498-499	X	X			X			
62.	Pawnee	Culin 1907:463-469; Dorsey 1904c:343; Dunbar 1882:749; Grinnell 1901:425; Irving 1835:142; Long 1823:444; Murray 1839:321; Pike 1810: appendix to pt. 2, p. 15	X	X	X				X	X

Case	First Nation[1]	Source	Diameter - <6""	Diameter - 6-12"	Diameter - >12""	Stone	Netted	Multiple spokes	Single spoke	Bead(s)
63.	Pikáani	Culin 1907:444, 447-448; Ewers 1958:156-158; Grinnell 1892:183; McClintock 1910:392-393; Thompson 1916:360-361	X	X			X	X	X	X
64.	Pima	Culin 1907:489								
65.	Pitkachi	Culin 1907:483	X							
66.	Pomo	Culin 1907:478-479	X		X					
67.	Ponca	Culin 1907:517; Wied 1843:160								
68.	Rumsen	Culin 1907:472; La Pérouse 1798:223	X							
69.	Salish	Culin 1907:491; Ewers 1948, pl. 7	X							
70.	Santa Barbara	Culin 1907:472; Hoffman 1885: note 12, p. 32	X			X				
71.	Sauk and Foxes	Culin 1907:448-449	X							
72.	Secwepemc	Boas 1891:641; Culin 1907:491	X							X
73.	Seneca	Culin 1907:476-477; Morgan 1851:298		X						
74.	Shoshoni	Culin 1907:499-500			X					
75.	Siksika	Culin 1907:444; MacLean 1896:55; Stow 1923						X		X
76.	Songish	Boas 1891:641; Culin 1907:491								
77.	Takulli (Carrier)	Culin 1907:460-461; Morice 1894:113						X		
78.	Tigua	Culin 1907:518-519		X					X	
79.	Tobikhar	Culin 1907:500; Hoffman 1886:18	X							
80.	Topinagugim	Culin 1907:484-485			X					
81.	Tsuut'ina	Culin 1907:460; Wilson 1889:246	X					X		X
82.	Tuscarora	Culin 1907:477			X					
83.	Uinta Ute	Culin 1907:500								
84.	Umatilla	Culin 1907:493-494	X	X						X
85.	Uncompahgre Ute	Culin 1907:500	X							
86.	Ute	Culin 1907:500-501		X						X
87.	Walapai	Culin 1907:525		X						
88.	Wasama	Culin 1907:485		X						
89.	Wasco	Culin 1907:472	X					X		

Case	First Nation[1]	Source	Diameter - <6""	Diameter - 6-12"	Diameter - >12""	Stone	Netted	Multiple spokes	Single spoke	Bead(s)
90.	Washo	Culin 1907:523			X					
91.	Wichita	Culin 470-471; Dorsey 1904a:69			X					
92.	Yokuts	Culin 1907:483	X	X						
93.	Yuma	Culin 1907:526; Heintzleman 1853:49; ten Kate 1885:108	X							
94.	Zuñi	Culin 1907:526-527; Stevenson 1903:491	X							