



**THE ARCHAEOLOGY OF THE WATERSHED OF THE
SOUTH SASKATCHEWAN RIVER WITHIN ALBERTA**

**SEAWA Watershed Report 2010-11
SEAWA Web-based State of the Watershed Report**

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Introduction

Archaeological research suggests that Alberta has been inhabited by humans for 13,000 years or more. This section of the watershed report is intended to provide an overview of the history of the watershed in the province and provide links to additional resources should the reader wish to pursue additional information. This section will present the extent of human habitation within the South East Alberta Watershed Alliance area as can be determined through assessment of the archaeological and historical data. As such, the material presented herein is structured in a predominantly chronological manner. The archaeology of the great northwestern plains has been broken into the following chronological time periods: The Early Prehistoric, Middle Prehistoric, Late Prehistoric, Protohistoric, and Historic periods. These periods are broken down further in some cases. Each period shall be addressed in order with additional information as required.

According to the Archaeological Survey of Alberta there are, as of 2010, more than 30,000 sites of archaeological interest in Alberta¹. There are approximately 1,200 recognized sites within the SEAWA area, as can be seen in Figure 1, and a great many more potential sites. As can be seen, many of these sites are within close access to water, particularly the rivers and tributaries. As water is a critical requirement for life, the history of the watershed is the history of the region. With respect to archaeology, the watershed is not something which is often considered in and of itself. Modern science has the technology to determine precisely what portion of a region is within a given watershed, but this particular level of spatial awareness was not available, or necessary, for life in the distant past. Boundaries which we use in the modern world such as political or even sometimes geographical have no real meaning on the cultures of the ancient world. It must be noted here that the boundaries of the SEAWA area had no relevance on the past. As such there are many references in the following pages to archaeological sites, events, and peoples outside of the region.

The place names used herein are relatively modern constructs. They have little meaning for the early historical period and almost certainly have no meaning at all for the prehistoric period. It is true that some place names have indigenous origins, and some modern place names have indigenous counterparts, for the extent of this presentation the names used are to provide the reader with geographical clarity rather than exact socio-historical accuracy. Additionally, modern borders have no bearing on the past. The indigenous populations were not constrained by the borders that we use today. The flux and flow of indigenous peoples, cultures, trade and technology were without borders. The archaeology and its interpretations are, however, often constrained by these decreasingly temporary lines. Of the more than ten thousand years which this paper deals with, only within approximately the past 160 years have national and international borders played an active part.

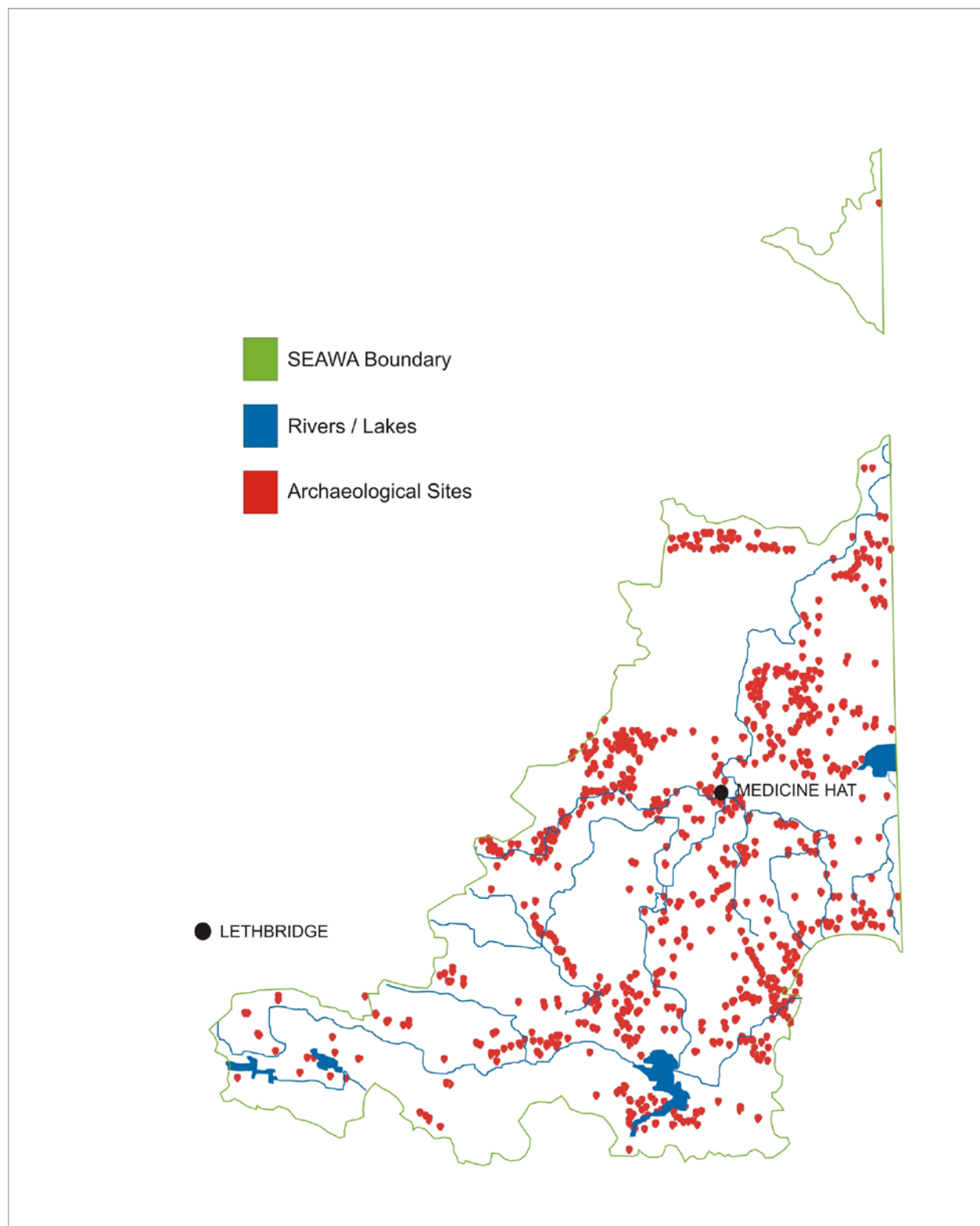


Fig. 1 - Archaeological sites in the SEAWA area.- T. Hulit

Cultural periods and the dates used herein

The dates used in this chapter are, for the most part, approximate. There are no definitive records or precise dates for any of the material prior to the protohistoric period, and even then, few dates are truly specific. Throughout this chapter, the abbreviation *BP* will be used. This stands for Years Before Present. As the abbreviation *BP* has been used in the archaeological literature for many years, the “present” is taken as AD 1950. In the later parts of this chapter, there is a shift from *BP* dates to the more common AD dates, particularly where known calendared dates exist.

Most of the archaeology of the great northwestern plains of North America (the plains of Alberta, Saskatchewan, and parts of Montana, Wyoming and the Dakotas) is based on the divisions of “cultures” based on the styles of projectile points that have been found. Archaeologists have used, and continue to use, these diagnostic specimens to identify the age and, to a degree, the cultural identity of an archaeological site. These cultural and chronological divisions will be presented below. This is not by any means a perfect system, as point styles and technologies sometimes appear to overlap, however it is the best that currently exists and it is expedient. It is necessary to continually re-examine and re-interpret the archaeology of a region, incorporating new information as it becomes available².

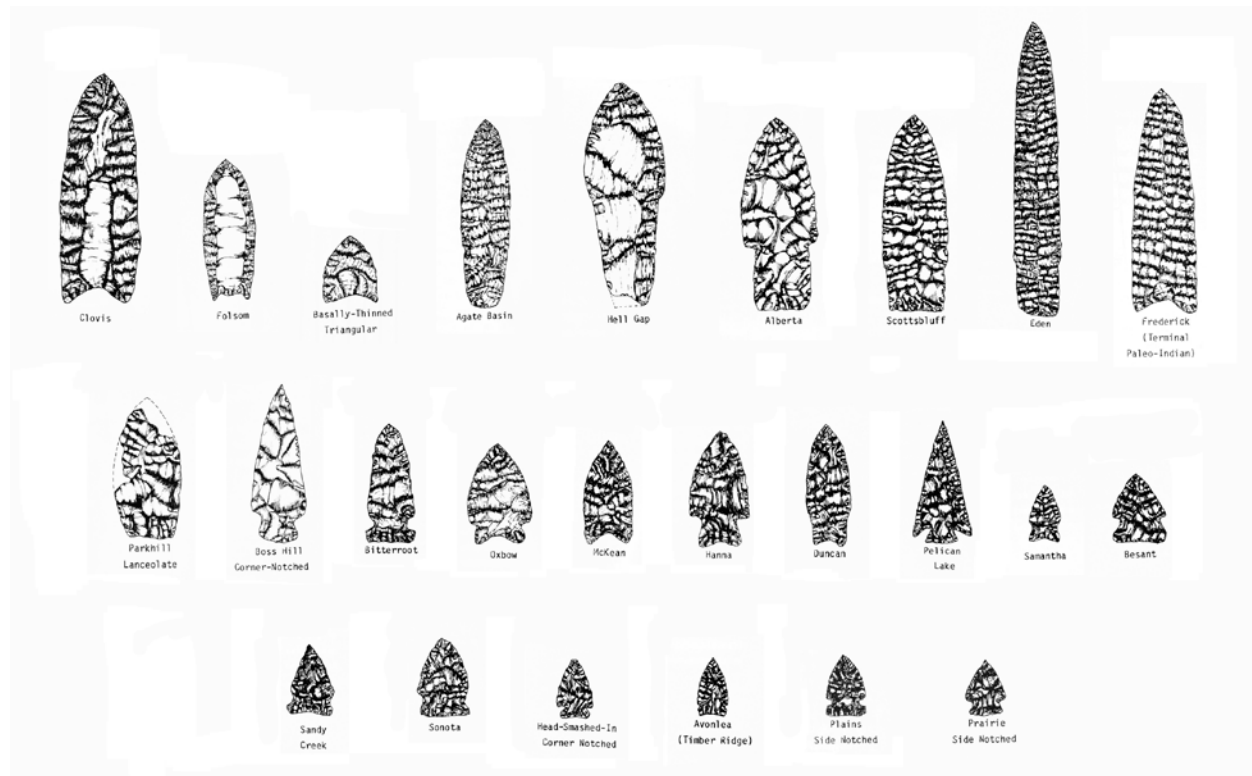


Fig. 2 - Projectile Point Types- Adapted from Vickers, 1986.

There are three main early periods in the archaeology of Alberta, and they conform, very broadly, to changes in technology; specifically, the “weapons” technology². This can be seen by the gradual change in form and decrease in size of projectile points.

The *Early Prehistoric* peoples are considered to have generally used short wooden stabbing or thrusting spears. The Clovis style spear-points, and other similar large points, were the business-end of these spears (Figure 2). It is assumed that the end of the wooden shaft was split a short distance and the stone point inserted into the opening and then the joint wrapped with animal tendon, ligament or rawhide to hold the point in place. These spears were not intended as projectiles as they would have typically been rather heavy to achieve any distance. Very short range throws or simply thrusts are considered the typical method of use.

The *Middle Prehistoric* period is characterized by a decrease in the size of the projectile points. This decrease in size is a reflection of the shift from short thrusting spears to the atlatl and dart combination. An atlatl is simply a spear thrower. Although there are many variations across the globe, an atlatl is typically a short stick approximately as long as a person's forearm which has a pocket or hook in one end and some form of grip or handle on the other. The dart resembles a long, heavy arrow, anywhere from 80 centimeters to almost 2 meters in length (Figure 3A). The points affixed to these darts are generally smaller than spear points but larger than arrow points. In use, the rearward, or butt of the dart is placed on the hook (or in the pocket) with the user gripping the atlatl firmly and the shaft of the dart lightly. The atlatl is then used to effectively extend the length of the user's arm, thus increasing the mechanical advantage (Figure 3B). The atlatl and dart combination afford the hunter the protection of some distance from the intended target, perhaps 50 meters or more for a skilled user. The arrival of the atlatl in southern Alberta most likely occurs at some time between 7,000 and 5,000 years BP. A more precise date, or a precise origin, is not possible at this time.

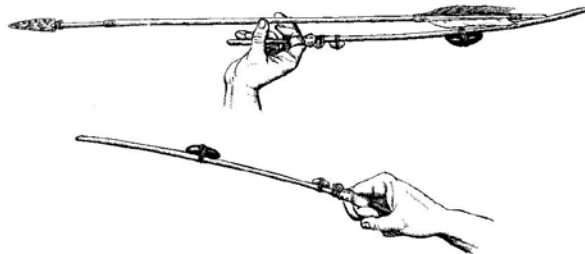


Fig. 3A - The Atlatl and Dart

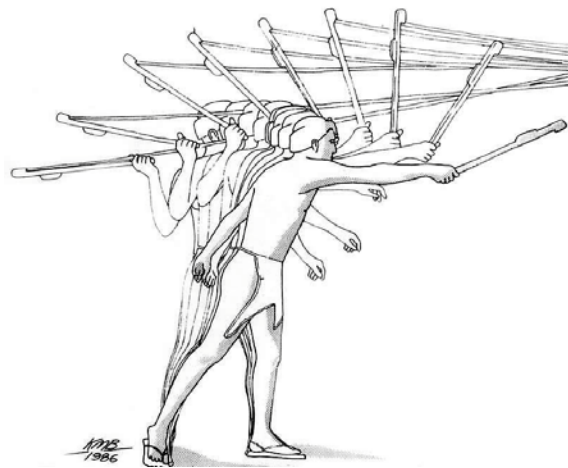


Fig. 3B - The Atlatl in Use

The *Late Prehistoric* period is characterized by the use of archery equipment. Bows and arrows eventually displace the atlatl in most parts of the Americas; however some of the Inuit in the arctic and some Central American peoples used both technologies concurrently. Arrowheads are typically smaller and lighter than atlatl dart points just as the arrows are lighter and shorter than the darts that preceded them.

Many thousands of years later, in the later *Protohistoric Period*, archery was eventually replaced by firearms with the first firearms probably arriving in southern Alberta in the first half of the 18th century AD, perhaps not long after the arrival of the horse. This introduction of

technology was, for the first time, a system where the indigenous peoples could not produce the equipment themselves, but relied on outside trade for the entire system. The firearms and ammunition were desirable items, but entirely supplied through the trading networks. As such, the use of archery equipment did not cease immediately. Prior to the beginning of the 20th century AD it was still a viable, and often necessary, technology. Archery equipment saw considerable use well into the *Historic Period*.

The Archaeology of the SEAWA Area

For most of the time periods discussed here the existence of the indigenous peoples of the great northwestern plains revolved around and with the changing seasons. The winter months, November through March were spent in valley bottoms, foothill regions, and sheltered areas, where the populace focused on communal hunting. The people could come and go as the weather and resources permitted. The people tended to begin to disperse with the arrival of spring and by June, the large winter campsites had been mostly abandoned and communal life and hunting had given way to individual pursuit of game and smaller groups or bands.

The summer months, from June through September, were a period of great mobility. Camps were small and dispersed throughout the available territory and the only times when large groups might gather at communal sites such as the sacred medicine wheels where ritual and religious activities would occur. Beginning in October, the indigenous peoples would typically begin to move out of the open plains and return to the periphery, once again occupying the winter sites and return to communal hunting strategies ². A great deal of information is available through the analysis of the information gathered from the archaeological excavations in the province, however the further back in time one looks, the less is known.

Pre-Projectile Point Horizon - Prior to 11,500 Years BP

The last glacial period, part of the Wisconsin Glacial Episode, began approximately 20,000 years BP, with the effects of the melting ice sheets continuing for some time after. The ice sheets made the majority of the land mass which is now Canada an almost entirely uninhabitable environment. The ice sheets were at their maximum at approximately 18,000 BP, and almost the whole of Alberta was covered except for some small high points in the Cypress Hills and along the Milk River Ridge. The ice sheets, up to one kilometer in thickness, extended as far south as the 49th parallel, which is now the boundary between Canada and the United States ³. Around 18,000 BP the climate began to change and the ice sheets started to recede. By approximately 15,000 BP small areas around the Cypress Hills begin to emerge as well as the beginnings of a corridor along the foothills on the east edge of the province. It is this “ice free corridor” which is of paramount importance to many hypotheses on the earliest inhabitation of Canada.

By 13,000 BP some 85% of the province was still under the ice sheets, however quite a long corridor had opened between the Cordilleran (western) and Laurentide (eastern) ice sheets, extending north of Edmonton. The whole of the ice sheets had retreated about as far north as the

latitude of Lethbridge³. There is still some considerable debate as to the extent of the ice-free corridor and how this promoted or inhibited human advancement into Alberta. It is postulated by some^{2,4} that the first inhabitants of North America came across the Beringia Land Bridge, what is now the Bering Straits from Siberia to Alaska, while the sea levels were low due to the ice sheets. Others⁴ postulate that the first inhabitants of North America arrived having travelled along the west coast and moved inland once they were south of the ice sheets. Certainly by approximately 12,500 BP some Clovis peoples were inhabiting North America. The earliest dates are always questioned; however the number of sites where Clovis type spear points have been found suggests that these peoples were indeed present.

The Early Prehistoric - about 11,500 to 7,500 Years BP

By 12,000 BP about 60 percent of Alberta still remains beneath the ice, but the ice is melting at a more rapid pace by this time, and by approximately 10,000 BP, only about 30 percent of the province is still beneath the ice, and most of that is in the north and north-east. There was a marked increase in the flora (plant life) and fauna (animal life) at about this time which could support increasing numbers of humans. Accordingly, people are moving north as the ice recedes, creating what will become archaeological sites. Unfortunately, these archaeological sites are exceedingly rare. The vast majority of Early Prehistoric sites involve simple surface finds. Typically these sites are places where one or perhaps more large lanceolate spear points have been found on or very near the surface. These finds are not *in situ* (in place) and do not convey much about the early inhabitants of the province other than the fact that they were here².

As the climate was changing and the ice receding, there were also changes in the flora and fauna. Between approximately 10,800 and 10,000 BP most of the megafauna had become extinct or severely endangered. This period occurs at a time called the Younger Dryas Cold Spell, which lasted from about 10,900 to 9,800 BP. Lost were most of the mammoth and mastodon, camels, sabre-tooth cats, giant sloths, and others². Between 10,000 and 8,000 BP there was a significant long drought which may well have repressed the population of both humans and megafauna in the region⁵. The current known ecological zones of Alberta, the grasslands, parklands and forests, were beginning to form at this time.

There are hypotheses on the cause of the megafauna extinctions (the mammoth, sabre-toothed cats, etc.), with the two most common being overhunting and climate change. The climate change hypothesis includes the possibility that with the changing post-glacial landscape and increasing seasonal extremes there were considerable changes to the flora. This change in plant life may have caused increased competition amongst the herbivores, this leading in part to their decline. This would then perhaps have had an associated effect on the predators^{2,6}. Other research⁷ notes that there were other instances of extinction in terminal glacial periods elsewhere in the world. An important factor to consider is that the megafauna had survived previous glacial periods: the only really new factor at the end of this glacial period (the Wisconsin) was the presence of humans². The additional stress of human predators may have been the final necessary factor, contributing to the extinctions rather than being the sole factor itself.

The human presence in the Early Prehistoric Period is less well defined. Most of the information available for this time period is derived from models of sites in the United States. The styles of projectile points are similar, and there is little more evidence to work with. It is difficult to determine how much the proximity of the ice sheets and the proglacial lakes had on human habitation². Humans are remarkably adaptable, and the presence of large lanceolate points in these areas shows that they were indeed adapting. The landscape south of the ice sheets was likely coniferous forests with the recently de-glaciated terrain a cold grassland similar to arctic tundra^{2, 8, 9}.

The Clovis points (Figure 2) are the diagnostic element of what are most likely the earliest inhabitants of Alberta. These points vary widely in length, ranging from 4 centimeters to more than 13 centimeters in length, and have characteristic fluted sides which are made by systematically removing a single large, long flake from each side of the point as a final stage of manufacture. These projectile points, and others from the Early Prehistoric Period, represent an exceptionally sophisticated method of manufacture, and represent some of the finest knapped (chipped and flaked) stone work in any period of history.

Clovis points, most common from about 11,500 to 11,000 BP, are perhaps closely related to both Folsom and Basally-Thinned Triangular points. Folsom points appear to gradually replace Clovis points over time and are quite similar to Clovis aside from the overall size. They are roughly contemporary for over 500 years (Figure 2), however they appear to continue in use longer than the larger Clovis points, remaining in use until after 10,500 BP^{2, 10}. Folsom points appear across North America, and have been found as far south as New Mexico. The Basally-Thinned-Triangular points are somewhat smaller than either Clovis or Folsom, and appear to be restricted more to central Alberta. A hypothesis has been suggested¹¹ that these may reflect the winter range of early indigenous peoples. The reduced size might reflect careful use of small remaining stocks of suitable raw material (high quality flint) or the reworking of broken points resulting in similar, but shorter, examples. Re-sharpening of these large lanceolate points is a characteristic and important feature of these early assemblages^{2, 12}.

These early fluted points are generally replaced by un-fluted or “plano” examples. They are, in fact, no less impressive, as some are particularly long and well made such as the Eden points which date to about 9000 BP. There is no known reason for the shift from fluted points to plano types. One potential chronological sequence which may help to interpret the material in Alberta^{13, 2} suggests a chronology based on the plano style points excavated at the Hell Gap site in Wyoming. Some of these types of points have been found in Alberta as well as some that are similar and obviously related. Almost none have been found in a secure, buried context. As such, it is not possible to entirely accept the Hell Gap chronology even though it is probably related to some extent².

One particularly important Early Prehistoric site sits just east of the SEAWA area. The Fletcher site (Borden Block number DjOw-1) is located near Chin Coulee west of Lethbridge. This site was found whilst excavating a dugout, and it is thought to date to approximately 9,500 - 9,000 BP. Scottsbluff and Alberta points were found in association with a few scrapers, graters, hammerstones and other lithics (stone tools). These points and tools were found in association with bison bones, and the exposed location of the site suggests a summer bison kill site.

Unfortunately the dating of the site is not accurate as the groundwater has contaminated the bones, giving extreme ranges of dates off pieces of the same sample bone (²).

A site from central Alberta fits well into a transitional Early/Middle Prehistoric Period. The Boss Hill site (FdPe- 4, near Buffalo Lake) is relatively securely dated to about 7875 - 7750 BP. The oldest layer of the site has been interpreted as a late summer or fall occupation of a seasonally dry pond basin. There are a variety of fauna represented, predominantly bison but also including elk, beaver, hares, geese, and others. A variety of stone tools were found including two distinctly different projectile points. There were Parkhill Lanceolate points, which were most likely spear points, and Boss Hill Corner-Notched which were most likely early atlatl points (Figure 2) ^{2, 14, 15}. As such, the presence of the two types of points and the agreeable C14 radiocarbon dates suggest that this site was a transition between the spear-wielding Early Prehistoric and the atlatl-and-dart using Middle Prehistoric. Another archaeological site found on Nose Hill in Calgary, the Hawkwood site (EgPm - 179) is also a transitional site with both spear and atlatl dart points in a context with a slightly older radiocarbon date of 8,250 ± 330 years BP ².

One of the great difficulties archaeologists face in dealing with the Early Prehistoric period in Alberta is that most of the sites of this period are very deep. These sites were most often buried by the thawing of the glacial permafrost and the spread of the associated alluvium (clay, silt, sand and gravel) soil. As of 1986 and the publication of J. Rod Vicker's text (Alberta Plains Prehistory: A Review) most Early Prehistoric archaeological sites that *were not surface finds* were deeper than the typical shovel-probe would go (i.e. the searches conducted by archaeological contractors on behalf of the companies wishing to use the land or build on it). It is simply quite difficult to locate very early archaeological sites in the landscape of Alberta. The landscape itself has changed, and what may appear to be a logical, well-chosen campsite today likely was quite different several thousand years ago. With so few early prehistoric sites with firm contexts, any interpretation is really entirely speculative ².

There are some hypotheses that the atlatl and dart arrived with an influx of people, an actual expansion from the Eastern Woodlands ^{16, 17}. Others such as Vickers (1986) suggest that the technology was a transfer through general trade and did not necessarily involve mass migrations of people.

The Middle Prehistoric -about 7,500 to 1,800/1,300 Years BP

The paleo-environment is a factor to consider whenever examining the Middle Prehistoric period. It is hypothesized that there was a cultural hiatus from 7,000 to 5,000 years BP which was not perhaps universal, but a factor on the great northwestern plains ^{2, 18}. It is believed that a significant drought, called the Altithermal, existed from about 9,000 BP to approximately 6,000 BP, with the period of 8,500 - 6,600 BP being the warmest and driest ^{2, 19, 20}. This being said, microclimates always exist and it is difficult to determine what occurred in smaller areas. Small regional droughts lasting a decade or less could change the overall population of the region for decades. The likelihood is that the droughts caused a concentration of peoples in river environments and in marginal areas. Essentially, the people followed their prey, the animals ²¹. As the temperature increased and the rainfall decreased, the prairies became

a less hospitable environment. There is also the possibility that with the human inhabitants following the game, and following the water, many archaeological sites have been lost with the rise in lake levels after the Altithermal ended². There is simply not yet enough archaeological evidence to accurately reconstruct the whole of the ancient landscape of Alberta sufficiently to predict the movement of its human inhabitants. Some tentative indications of the behaviour of the ancient peoples may however be inferred from Figure 1 which shows a clustering of archaeological sites near water.

An important natural event which helps date the archeological sites of the Middle Prehistoric (by providing a *terminus* or end date) was the eruption of Mount Mazama in Oregon about 7,625 years ago, creating what is now called Crater Lake. Almost the entire volume of the mountain, and some 800 meters of its height, disappeared in an eruption thought to be approximately 40 times more powerful than the eruption of Mt. St. Helens in 1980. This eruption spread a pinkish-tan coloured ash across more than 1.3 million square kilometers including most of Oregon, Washington, Idaho, northern parts of California, western Montana, and parts of Utah, Nevada, Wyoming, Alberta, British Columbia, and Saskatchewan²². This ash layer provides a very useful dating tool for the north-west portion of North America. Anything below or above of this ash can be dated to before or after 7,625 years BP. There is a considerable increase in the number of known, dateable sites in southeastern Alberta from this time onwards.

The earlier part of the Middle Prehistoric in southern Alberta was dominated by what is now called the Mummy Cave Series. The high altitude archaeological site is located in northwestern Wyoming and was named for a very well preserved indigenous burial found in the cave. The cave was excavated from 1963 to 1965 and contained levels which date from about 10,000 BP to about 400 BP²³. This range of sites, with distinct dateable levels, allowed archaeologists to develop a very clear picture of the different types of stone tools and other artifacts (many of which rarely survive in other sites) in use over a very long period of time. Some of the levels at this site eventually produced a series of stone tool assemblages which are collectively called the Mummy Cave type.

The Mummy Cave type sites are common in Alberta and date to about 7,500 to about 4,500 BP. This series of sites represents the full technological shift from spears to atlatls and with this shift, the projectile points which are often used to date and classify the archaeological sites also change to the smaller, side-notched points suitable for use on an atlatl dart. This change in technology may have been accompanied by changes in other aspects of life and culture. The atlatl and dart are thought to have spread across North America in about 1,000 years³. The Mummy Cave series is typified in the SEAWA area by the Stampede Site (DjOn - 26) on the north slopes of the Cypress Hills. This rich site has been excavated to a depth of more than 6 meters (19.6 feet) with numerous distinct soil levels. Eighteen of these soils have evidence of human occupation. One of the oldest of these levels has evidence of a ring of post-holes (holes where wooden posts were once erected) some 3 meters in diameter which would suggest a very early date of about 8,000 years BP for the labour-intensive construction of dwellings²⁴.

The Mummy Cave Series was gradually replaced by the Oxbow and McKean complexes. These two cultural units appear on the Alberta plains while the Mummy Cave is still present in the foothills and mountains to the west. This would suggest that the Oxbow and McKean,

identified by their distinctive projectile points (Figure 2), may have been distinctly different peoples who arrived from the south and perhaps south-west, in the U.S. Rocky Mountains². An alternative hypothesis is that while the McKean arrived from the south, the Oxbow developed from the Mummy Cave^{2, 16}. Definitive information is lacking. The Oxbow is, however, widely spread, diagnostic points being found in south and central Alberta, the Saskatchewan Basin, southeast British Columbia, northern Montana, the Dakotas and similar points in parts of Wyoming^{2, 25}.

By around 5,000 BP food storage strategies became more common, and features like boiling pits begin to appear in archaeological sites of this date³. The faunal assemblage in the archaeological sites shows that the Oxbow were making use of the available resources as a wide variety of animals are represented. Based on the prevalence of bison, it is most likely that the Oxbow were engaged in some form of communal hunting^{2, 26}. An important Oxbow site near Medicine Hat, the Southridge Site (EaOq - 17) includes two activity areas with pairs of hearths and boiling pits. The activity areas are dated to about 4,400 to 4,000 years BP and have a large assemblage of stone implements and faunal remains^{2, 27}.

The McKean complex in Alberta Archaeology is well represented in the SEAWA area by the Cactus Flower Site (EbOp - 16) located near Medicine Hat on the South Saskatchewan River. The site has been excavated extensively²⁸ with more than 180 square meters of surface area excavated. There have been 10 occupational levels distinguished, the lower eight of which are linked to the McKean complex. Levels 8 through 4 are dated from about 4,215 to 3,525 years BP. Based on carbon-14 (radiocarbon) dates, the McKean were perhaps present in Wyoming, Montana, and Colorado earlier than they were in Alberta^{2, 29, 30, 31}.

It is thought that the Cactus Flower site was chosen for the easy access to the river, as much of the South Saskatchewan in the area is bounded by steep cliffs. The Cactus Flower site area would provide easy access for water for both humans and animals and provide an ideal ambush point for bison coming to both drink and cross the river. This appears to be a clear use of the topography as an aide in hunting. While the site was in use for several centuries, it is thought that it declined in use after Level 8 as the people begin to favour the use of bison jumps and pounds instead of individual hunting². A variety of hypotheses have been put forth on the origins, extent and eventual replacement of the Oxbow and McKean complexes.

From approximately 4,000 years BP wetter, cooler winters resulted in a small recurrence of the ice sheets. Meltwater in the summers increases the lakes in the basins in central Alberta and overall the grazing conditions improve, promoting larger herds of animals such as the buffalo³. With this increase in rainfall and rising lake levels, it is quite possible that some of the archaeological sites along the shores of lakes have been inundated, and are thus lost to us now². The increased size of the herds likely also allowed for an increase in human inhabitants. As food became more readily available, the need to move decreased slightly and developments in domestic habitation occurred, and by 4,500 BP tipi's were fully developed, and the tipi rings found on the plains become common from this time onwards³. Additionally, with seasonal campsites and abundant food sources, efforts gradually were put to tasks outside basic subsistence such as the development of permanent ritual sites.

Sites that have a distinct and obvious ceremonial use begin to appear in Southern Alberta beginning approximately 4,500 years BP³. One major site, while outside of the SEAWA area, is particularly important. The Majorville Cairn and Medicine Wheel site (EdPc - 1) is located west of Brooks and south of the Bow River. The Majorville Cairn site, partially excavated in 1971, is believed to have had significant importance for the ritual life of the indigenous peoples. It is believed to have been used first in the Oxbow period about 3,800 BP^{32, 33, 34}. The site is comprised of a large cairn of stones 9 meters in diameter and 1.6 meters tall surrounded by an oval ring of stones some 29 meters in diameter with 26 to 28 field-stone spokes radiating from the centre cairn to the outer ring². Excavations of the center cairn show that Oxbow and McKean points do show up in the stratigraphy, however this is not conclusive. These points may have been left as an offering at any point in the use-history of the site as the indigenous peoples in the past were certain to have found ancient points on the surface just as they are occasionally found today².

Another important site with religious or ceremonial significance is the Gray Burial Site, near Swift Current, Saskatchewan. Excavations at this site revealed more than 300 individuals in 99 burial units, all of the Oxbow period, dated to about 5,500 to 3,000 BP [C14 dates of 5,100 $\pm$ 390 to 2,915 $\pm$ 85 BP]^{2, 35}. It is believed that the peoples using this burial site would collect the bones of their dead throughout the year, interring them at this site on their seasonal rounds⁽³⁶⁾. Although not within the boundaries of the SEAWA area, this site is important as it indicates that there was a ceremonial use of a site for an extended period of time. This long-term use suggests stability and cultural continuity.

The later part of the Middle Prehistoric Period, about 3,500 to 1,200 years BP, was characterized by two more phases in Alberta, the Pelican Lake and the Besant Phases. The Pelican Lake phase appears at about 3,300 BP on the Alberta plains, Saskatchewan, and Wyoming. There is a technological similarity in the projectile point styles between the earlier McKean phase and the Pelican Lake phase at the Cactus Flower site noted earlier^{2, 37}. The distinction between Pelican Lake and Besant cultural phases is based on the differences in the projectile points. Pelican Lake points (see Figure 2) are typically finely made triangular points with notches at the lower corners for hafting onto to an atlatl dart shaft³⁸. The Besant points are shorter, thicker, and have notches in the lower sides of the point rather than in the corners. Some hypotheses suggest that these forms follow one another as Pelican Lake exists on the plains before Besant, while others suggest that they are of separate cultural origins³⁷. Additionally, there is speculation that the Besant Complex is actually within the Pelican Lake Phase². The Besant phase is common across the prairies, with an example being the Ross Glen site (DIOP-2) which was a meat processing site within the city boundaries of Medicine Hat. It is a large tipi ring site with considerable quantities of debitage (chips and flakes of stone from manufacturing stone tools) and fire broken rock². There is also considerable debate concerning the origins of the Besant and its relations to later cultural phases, such as the Avonlea (discussed below).

As various cultural groups move through the prehistoric western North America, long distance trade begins to occur. By 3,000 BP one particularly important material that is traded is high quality stone for making tools. Obsidian from Oregon, and Knife River Flint from North Dakota are two types of stone that often appear in archaeological sites in Alberta. Decorative objects were also occasionally traded, and shells from the Pacific Ocean and from the Gulf of

Mexico have also been found in Alberta in securely dateable ancient archaeological contexts³⁹. Some mobile groups of people may have taken the raw materials with them as they moved, but it is also likely that groups would trade items, such as partially prepared stone tools (also called blanks), with neighbouring tribes. Over time, goods and materials could travel great distances from their origins.

There are two cultural traditions that are thought to exist in Alberta in the Middle Prehistoric, the *Tunaxa* and *Napikwan*. It must be noted here that there are a considerable number of disparate hypotheses concerning them. The *Tunaxa* tradition is roughly equivalent to McKean, Hanna, Pelican Lake and Avonlea archaeological traditions while the Besant and Old Women's archaeological traditions are of the *Napikwan* cultural tradition². The *Tunaxa* tradition continues from about 4,000 to 750 BP while the *Napikwan* tradition existed from about 2,000 BP to the Historic Period⁴⁰. There was considerable overlap of the two traditions, some 1,250 years ago or so, where the cultural groups would certainly have come into contact. Trade of information and technology would certainly have occurred, however the degree of this interconnection is not known. Archaeological excavations too often reveal too little of the intangible elements which make up the social structure of a culture. These traditions will not be discussed at length here, however another approach to the matter may be found with J.V. Wright's hypotheses³⁸.

The Late Prehistoric - about 1,800/1,300 to about 270 Years BP

Although there is no clear demarcation between the Middle and Late Prehistoric⁴¹, the Late Prehistoric Period can be characterized by two major factors; the arrival of ceramic technology and archery (the bow and arrow). The projectile points of this period are smaller than those found in the Middle and Early Prehistoric Periods. Archery technology spreads into the Alberta plains perhaps as early as 1,750 BP in what is called the Avonlea Phase, and is contemporary with much of the Besant Phase. The Besant points are short, but typically much thicker than the various projectile points from the Late Prehistoric which suggests that they were better suited to the thicker shafts of the atlatl darts. This would further suggest that while the new technology had arrived, archery did not fully replace the atlatl for some six hundred years. It is possible that the Avonlea Phase, and the archery technology associated with it, represents a different culture that coexisted along with the Besant³.

An important Avonlea site in southeastern Alberta is the Ramillies Site (EcOr-35). The Ramillies site is a bison pound site north of Medicine Hat². A pound site is similar to a buffalo jump site in that the bison are directed into a natural or artificial depression or enclosure where they can then be dispatched at will. Both pound and jump sites utilize long "drive lines" which are lines of small stone cairns which may extend for several kilometers. Hunters would hide behind the cairns as the herds were driven along, and stand up only as the herds were alongside thus preventing the bison from straying outside of the determined path to the pound or jump.

The Ramillies site is located in a glacial outwash channel which was walled off with a manufactured earth and rock wall approximately 10 meters long and up to 2.2 meters in height. The core of the wall was formed from large stones, some of which were up to 1 meter in length

and weighing upwards of 200 kilograms. Excavations revealed few artifacts within the basin, but many on the adjacent slopes, including both Avonlea and Late-Side-Notched points (Figure 2). It is suggested that the basin was periodically cleaned out. The manufacture of an earthen wall of such size suggests a considerable investment of time and energy and shows a high level of sophistication and organization committed to the communal hunt. It is most likely that this site was used repeatedly over many years ².

The Old Women's Phase follows the Avonlea complex in Alberta and continues into the Historic Period and represents the Blackfoot and Gros Ventre cultures from approximately 1,400 to about 300 BP (or the beginning of the Protohistoric Period), and perhaps later. Some earlier radiocarbon dates suggest that there may be overlap with the Avonlea and Besant phases ². The phase is named after the Old Women's Buffalo Jump site (EcPl-1) south of Calgary which was excavated in the 1950s ^{42, 43}. This archaeological site is particularly important for the study of projectile point typology on the western plains ² as a solid chronological sequence of the various types of projectile points was found at the site ⁴², and the resulting series has helped archaeologists form chronological links with other sites across the region. It must be noted however, that the Old Women's Jump site itself was in use as early as the Middle Prehistoric Period.

Ceramic technology arrives in Alberta at some point between about 1,800 and 1,300 years BP. The debate concerning the date of the beginning of the Late Prehistoric Period is based somewhat on the various hypotheses on when ceramics arrive in the area. The ceramics that are associated with the Avonlea phase are simple globular forms with net or fabric decorations impressed into the surface. The necks of the vessels are sometimes decorated with sharp shallow punctured indentations, and the rims are either flat or sometimes decorated with ridges, and these decorations do increase and change over time (Figure 4) (⁴⁴). These ceramic forms are classified as an early variant which are called the Saskatchewan Basin Complex Early Variant, and they may be linked to the ceramics from the Old Women's Phase ⁴⁴.

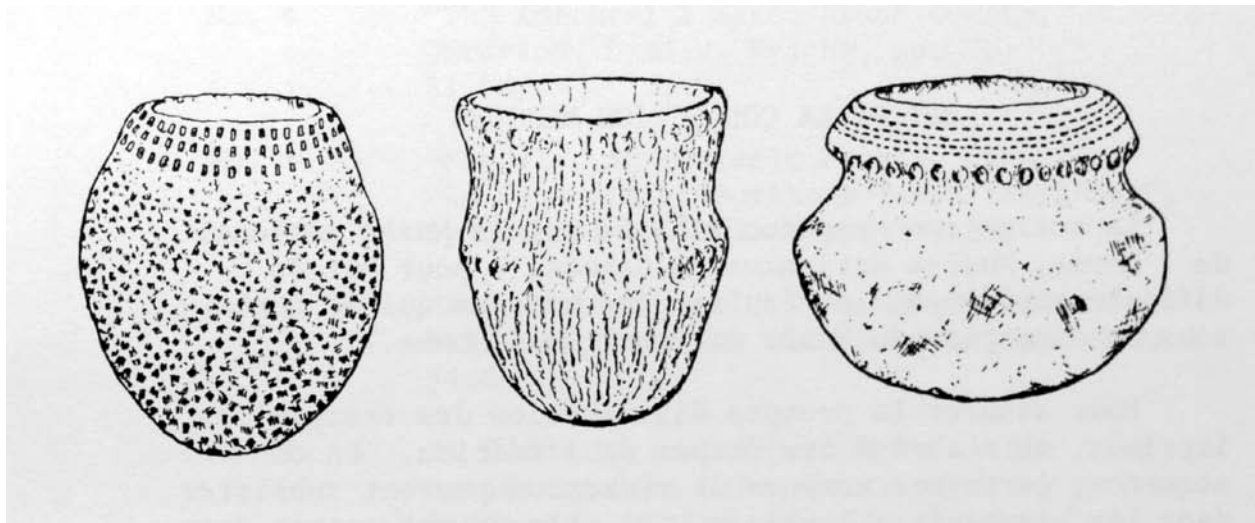


Fig. 4 - Indigenous Ceramic Vessels from Alberta

The nomadic nature of the indigenous peoples of Alberta's past was such that they left little trace of their specific cultural identity. It is unfortunate that early ceramics are rare in Alberta as they could be a very useful indicator of ethnicity of the Late Period archaeological sites². It is very difficult to assign ethnicity to the early archaeological sites and those who created them when all the diagnostic material is restricted to all-to-infrequent finds of arrowheads. It is worth noting here, also, that the ceramics may not have been a good which was carried during the mobile summer months. It may have been an item which was more restricted to a winter, somewhat sedentary, lifestyle and would therefore be a technology that would be a little bit slower to diffuse to other regions².

Despite the general lack of culturally diagnostic artifacts, there are many hypotheses on the ethnicity of the indigenous people of the Late Prehistoric Alberta plains. Based on the Saskatchewan Basin ceramics the indigenous peoples of southern Alberta and Saskatchewan, and northern Montana are thought to be the ancestors of the Blackfoot people and also possibly the Gros Ventre^{45, 37, 2}.

The Protohistoric/Historic Period - about 270 to 100 Years BP

The Protohistoric Period for southern Alberta begins with the arrival of the horse and the European traders that followed soon after. The Protohistoric Period ends with the arrival of the North West Mounted Police in 1873 and the establishment of Fort Macleod in 1874. The Historic Period may be considered to be from 1874 through to the present.

The Old Women's Phase of the Late Prehistoric continued into the Protohistoric Period and the only great change to it was the arrival of European goods. The first European trade goods appear in the Protohistoric Period, but it is not known precisely when this occurred. Long distance trade was certainly known as far back as the Middle Prehistoric Period as tools and securely dateable projectile points have been found in Alberta that were made from stone originating at great distances. Knife River flint from North Dakota is common as well as obsidian (natural glass from molten lava) from British Columbia and Oregon. Additionally, some early arrowheads and decorative items of natural cold-worked copper have been found that are believed to have come from the Lake Superior region⁴⁶. With these trade systems in place, some small amounts of European goods, often beads, knives and bits of scrap metal, were traded and arrived in Alberta before the Europeans themselves. These items are rare in the archaeological record as they were rare at the time. As a traded-for item that could not be manufactured from local materials, it would be an item that would be more precious and less likely to be lost.

An important, and rare, Protohistoric Period site in the SEAWA area is found in Medicine Hat. The Saamis Site (EaOq-7) is an Old Women's Phase site in the wooded valley of Seven Persons Creek in the southwest of the city. The site is split into two terraces along the creek, one at 3 meters above the creek and the other at 2 meters. Radiocarbon dates put the upper terrace at 210 ± 80 years BP and the lower terrace at 435 ± 125 years BP². After calibration, the upper terrace dates to sometime between AD 1680 and 1820, and the lower terrace to AD 1390 to 1640. The upper and lower terraces might be contemporary, despite the radiocarbon dates, representing two functionally distinct activity areas. The campsite on the upper terrace is much

like a Late Prehistoric site except for a very few trade goods; one metal projectile point and a few glass beads. The site may represent a winter or early spring hunting site as it sits in a sheltered area and excavations have shown that a wide range of animals were present in the faunal assemblage but there was still a reliance on bison. As there were no horse bones and limited trade goods, it is reasonable to suggest that the site may date to about AD 1700 - 1725 ^{2, 47}.

One of, if not the, most important European introductions to indigenous culture was the horse. It is not known precisely when or from whom the indigenous peoples of Alberta received the first horses, but it was through their own trade networks rather than from the Europeans directly. It is thought that horses were in use in Alberta at some time around A.D. 1730 to 1740 ². From this point onwards, the mobility of the indigenous peoples increased dramatically and their cultures adapted. Individual hunting from horseback developed and, to some minor extent, replaced the communal bison hunts. The importance of the bison hunts for the indigenous peoples continued until the mass hunting of the bison by Europeans and their descendants resulted in near extinction by about AD 1881. The lack of traditional bison hunting forced the indigenous peoples to adapt more towards the European lifestyles ⁴⁸.

Europeans began moving into the territory that would eventually become central and western Canada in AD 1670 after the Hudson's Bay Company received its charter to trade in what was then called Rupert's Land. The Hudson's Bay Company (hereafter called HBC) based their trading operations at York Factory on the southwest shores of Hudson's Bay ^{49, 50}.

During the early years the local indigenous peoples and the Metis did most of the trapping for the growing fur trade, delivering the furs directly to the main trading ports on Hudson's Bay. They usually were paid in trade goods, which often included inexpensive metal tools. By the early 1700s the French had begun using a different method to secure the trade by establishing numerous small trading posts along the waterways and encouraged their traders to live among the indigenous peoples ⁵¹. To encourage more trade from greater distances, the HBC asked for a volunteer to travel west to convince distance indigenous groups to begin making trading voyages to York Factory. Anthony Henday, a former smuggler from the Isle of Wight in the United Kingdom, accepted the task and began the journey west in June, 1754 ^{49, 52, 53}.

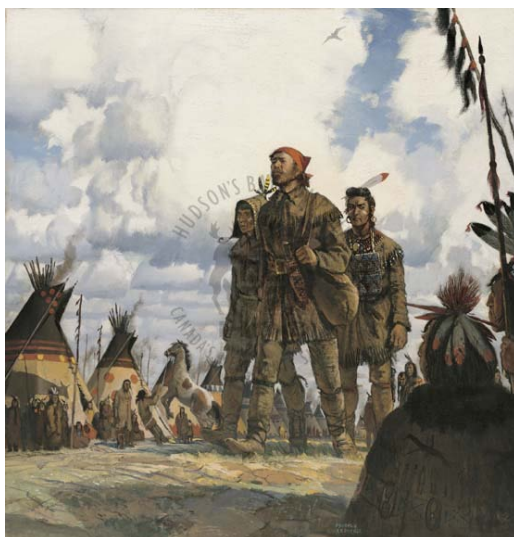


Fig. 5 - Anthony Henday

Anthony Henday's journals are the first European record of the indigenous peoples in Southern Alberta. There are considerable contradictions concerning the exact route that he took after crossing into what would become Alberta⁵⁴, and even though Henday was not a skilled cartographer or ethnographer, his journals are remarkably useful. Henday journeyed with a number of Cree people, one of whom served in particular as a guide and translator. One of the more important observations he made were the numbers of indigenous peoples in the region. In the fall of 1754 he encountered several thousand people (in total) in south-central Alberta. Several times he noted camps with dozens; of not over one hundred tipi's present⁴⁹.

Throughout his journals, Henday refers to the indigenous people he encountered as the *archithinue* which, roughly translated from Cree, meant "stranger"⁴⁹. This was a generic term which was unfortunately applied to almost all the indigenous people he encountered. It is believed that this term actually referred mostly to either the Gros Ventre or the Blackfoot⁵⁴. In AD 1772 another HBC employee, Mathew Cocking, made a similar journey from York Factory to Alberta. In his journals he noted that he encountered 6 tribes or nations on his journey. There were the Mithco Athinuwuck (Blood), Koskitw-Wathesitock (Blackfoot), Pegonow (Muddy-Water or Peigan), Sasewuck (Woody Country or Sarcee), Powestic-Athinewuck (possibly Gros Ventre/Atsina), and the Snake or Shoshoni^{49, 55}.

Serious European disease reached the prairies in the smallpox epidemic of 1781 - 1782. It is believed that the epidemic claimed upwards of half the indigenous people. The smallpox epidemic that hit Alberta was not the first to occur in North America. In the early 1760s a smallpox epidemic on a smaller scale had hit Mexico City, which recovered. In 1778 another epidemic hit Mexico City with devastating effect, killing approximately 18,000 of the 100,000 residents. The horse, which had become relatively common amongst the indigenous peoples by the late 1770s, provided increased mobility to the epidemic. The Comanche, in the southern United States, had contact with Spanish traders probably in New Mexico. These indigenous warriors had adapted to equestrian warfare very quickly and utilized the horse to gain control of considerable territory. It is believed that the Comanche waged war on the Shoshone, who in turn moved north, thus transporting the epidemic to the Great Plains and eventually to Alberta. With no knowledge of infectious diseases and how to control them (mostly through isolation of infected individuals), the death toll was considerable⁵⁶. This decrease in population must have had a considerable effect on the movements and subsequent lifestyles of the various groups of indigenous peoples.



Fig. 6 - Fur Trader

In AD 1792 to 1793 Peter Fidler, another fur trader and surveyor from the HBC, travelled to Alberta. Fidler travelled with a large group of Peigan (sometimes up to 190 tents) through the

central plains to the Rocky Mountains in southwestern Alberta where he wintered with them. During his travels he noted in his journals all the indigenous groups that he came into contact with. The included the Blackfoot, Sarcee, Blood, Peigan, Snake (Shoshone), the Cottonahew (Kutenai), Southern Indians (Cree), Flathead, Stoney, Swampy Ground Stone (Stoney or Assiniboine), Long Hair (or Long Bow), Blue Mud, Pauk Way Quay, and the Slave Indians. Some of these are readily identifiable, others less so. Unfortunately, Fidler did not record anything about the indigenous people of southeastern Alberta ⁴⁹.

The various accounts of the early explorers and surveyors give a vague general record of the locations of the indigenous peoples that they encountered in their travels. It is, of course, better than no records at all, but it does not allow for accurate geographical placement of specific ethnic groups. This is compounded by the fact that the indigenous people were almost entirely nomadic. When one reads through the archaeological and ethnographic information, it would seem to the casual observer that all the indigenous groups lived everywhere at some time if not all at the same time. Fortunately it is not quite that ambiguous. Anthony Henday recorded in his journal that in mid-October of 1754 he encountered a large group *Archithinue* peoples near present day Drumheller. It is believed that these people contained all three of the Blackfoot groups; the Blackfoot, the Blood, and the Peigan. Later explorers, such as Mathew Cocking, also came into contact with the *Archithinue*, and in one instance northeast of Saskatoon he also encountered the Snake (Shoshone) who are generally thought to have entered into Alberta from the south ⁴⁹. The Snake, often at war with the various other indigenous groups in the area, are believed to have retreated south after the devastation of the smallpox epidemic ⁴⁹. This left most of southeastern Alberta open for the various Blackfoot peoples, who moved in and utilized the area even though their numbers were also diminished by the epidemic.

In AD 1783 the North West Company was formed by (mostly) Scottish immigrants along with some Loyalists who had fled the American Revolution. The early formation of partners began in 1776 and through a relatively convoluted history of business dealings, competition, rivalry and the occasional murder, eventually stabilized as the North West Company. The goals of the company were much the same as the Hudson's Bay Company, but breaking through HBC's near-monopoly was difficult. The North West Company had their main trading post at Fort Chipewyan on Lake Athabasca. Along with a great deal of overland inland trade, the North West Company became a rival to the HBC and even to some extent the American Pacific Fur Company. After almost a decade of bitter rivalry the North West Company and the HBC were awarded exclusive rights to trading by the British Government, effectively merging to two companies ⁵⁷.

Throughout the history of the Hudson's Bay Company, another ethnic group was always present, but often relegated to a footnote in the records of the time and the histories thereafter. The Métis were a group of mixed heritage peoples, typically those of French and indigenous origin. While the European settlements, and society, frowned on the intermarriage of their people and the indigenous peoples, it is obvious that it would happen given that the early European traders lived amongst the indigenous peoples. Many of these mixed heritage or Métis peoples, typically ostracized from either European or indigenous groups, formed into their own communities across Canada. In the west they often served as guides and interpreters for the European business ventures as they understood both the European and indigenous cultures and

could therefore serve as effective intermediaries ⁵⁸.



Fig. 7 - Red River Carts and the Metis HBC Fur Trade Caravans

Fewer opportunities were available to the Métis people after the 1821 merger of the HBC and North West Company. With the HBC monopoly on the fur trade, they could set their own rules which increased their profits. As a result, many Métis people became indebted to the HBC as the cost of the goods they needed outweighed the value of the pelts they brought in. Between 1821 to 1871 decreases in wages led to Métis who were effectively indentured labourers. The resulting strikes that occurred included the Red River Resistance 1869-1870 ⁵⁸. Long before the HBC NWC amalgamation and resultant monopoly, the Métis were well known as free traders. They resisted outside influence and attempts at forcing them to conform to company policy. They traded openly with the Americans in the Dakotas as well as provided provisions to the fur trade regardless of which company it was. After 1821 the HBC took a dim view of the Métis trading system and instituted arbitrary measures to attempt to control the Métis. The HBC and the local British backed militia did not have the strength of arms or numbers to enforce these regulations but did occasionally, and unsuccessfully, attempt to do so ⁵⁸.

The bison were an important resource in southeastern Alberta just as they were across the North American plains. The indigenous peoples had made use of the bison for millennia, and the Europeans in Canada did as well. The HBC and others contracted the Métis for pemmican (a mixture of bison meat, fat, and berries) to help feed the workers of the fur trade. This was a true industry in the 19th century and partially accounted for the loss of the great bison herds. With the HBC-contracted mass hunting ^{58, 59} in Canada and the American government policy of exterminating the bison to control the indigenous peoples by removing their major food source in order to force them to comply the government's choice of lifestyle resulted in near extinction of

the bison. In 1830 there were an estimated 40 million bison still on the plains, but by 1878 very few if any bison were crossing into Canada^{58, 60}. By 1878 the last remnants of the great bison herds had moved south into Montana. It is believed that in total some 60 million bison were killed in the late 19th century in Canada and the United States⁶¹. Controversy still exists concerning the last remaining wild bison in Montana.

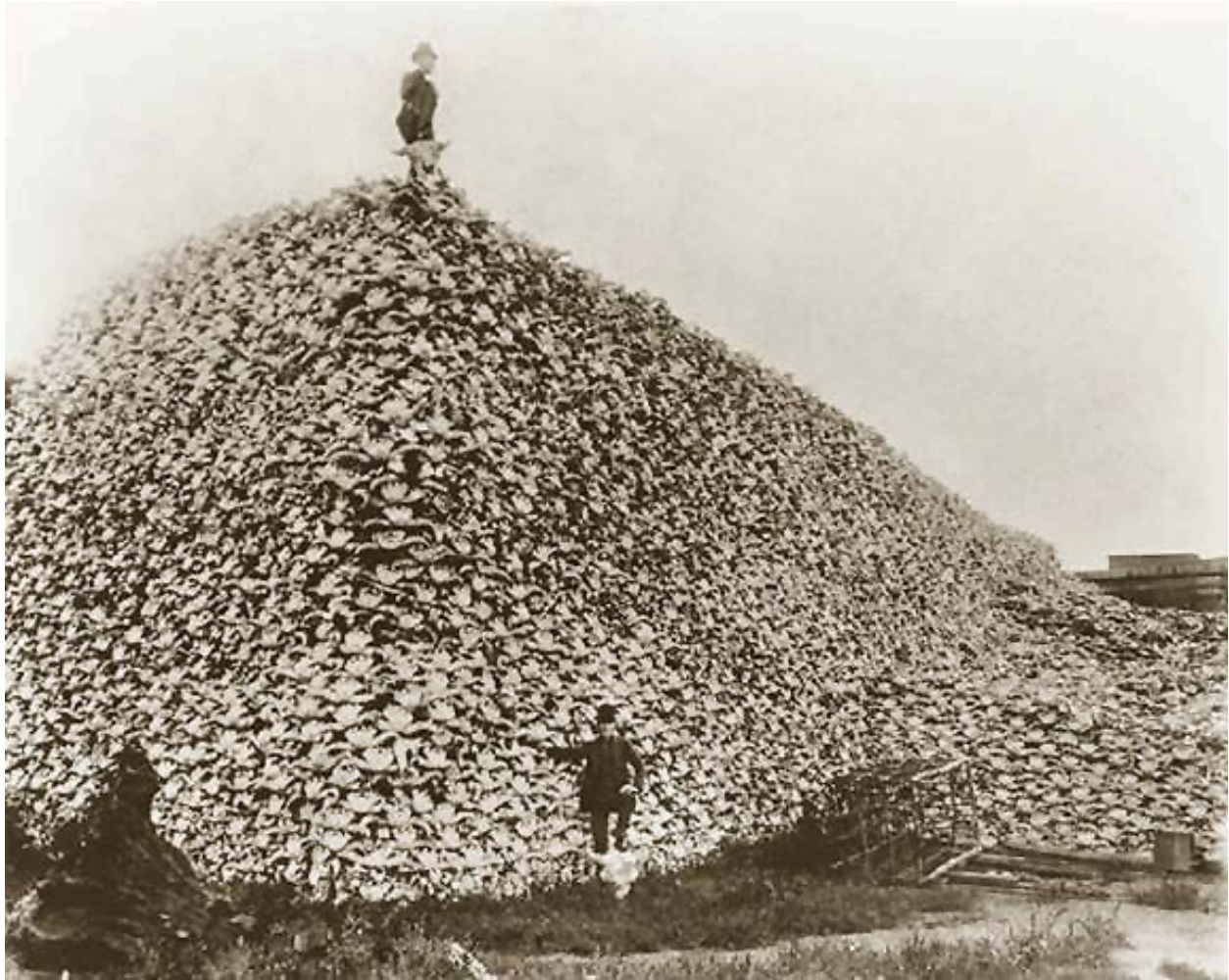


Fig. 8 - Bison Skull Pile about 1870

In 1867 the first British North American Act formed the Dominion of Canada, and with the purchase of the title to the Northwest from the Hudson's Bay Company, this set the stage for the absorption of Rupert's Land and the North-West Territory into Canada via the British North American Act of 1871⁶². With self-governance a reality, western Canada was then able to develop more fully. With the increasing number of people that development brought, the need for laws and controls arose. The Dominion Lands Act of 1872 encouraged settlement in the west with 160 acres (65 hectares) of land available for a fee of 10 dollars provided that the settler remain on the land for 3 years⁶³ and that a minimum of 40 acres (16 hectares) of that land was cultivated^{63, 64}. Additionally, an adjoining 160 acre plot was also available for an additional 10 dollars, effectively allowing the farms to double in size quickly⁶⁴. Emigration to the Prairie Provinces was initially slow, with large numbers not arriving until after 1896. Additionally,

many of the early homesteaders who did not wish to continue farming after the initial 3 years often sold their plots to their neighbours. Some larger farms today have the remnants of several homestead farmyards still visible.

In an attempt to control the early cross-border trade (including the illicit whiskey trade) and provide a general level of law and order in the western part of the new Dominion of Canada, the North West Mounted Police were formed in May of 1873. The force was organized as a paramilitary cavalry unit based on the Royal Irish Constabulary with the first unit of 275 men forming in July 1874 in Manitoba at Fort Dufferin en route to Alberta. Upon arrival in Alberta and the successful construction of the first fort (Fort Macleod) an eventually successful program of controlling international border and the whiskey trade was begun. The generally good relations between the NWMP and the indigenous people, culminated in Treaty 7 (the “Indian Act”) of 1876 which is still the basis for indigenous affairs in Canadian Government^{65, 66, 67}.

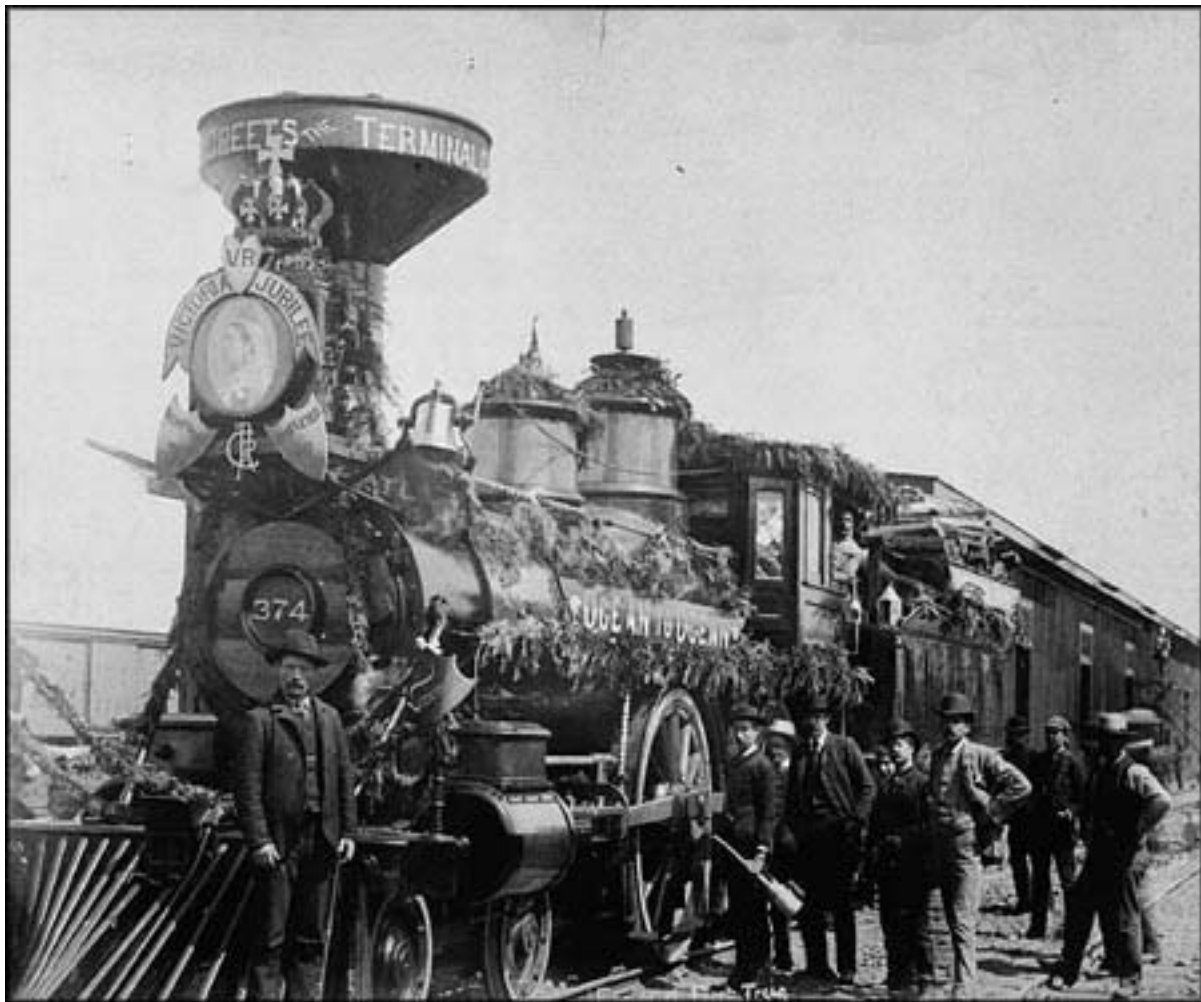


Fig. 9 - CPR Locomotive

A great change came to the Prairie Provinces with the arrival of the railroad. While Europeans had been in the region in increasing number since the 18th century, bringing with them their cultures and goods, the railroad allowed for the eventual flood of settlers. Canadian

Pacific Railroad was formed in February of 1881 with the goal of providing a link from eastern Canada to the frontier, and eventually to the west coast. It required a tremendous investment of effort and capital, the initial syndicate of backers agreeing to build the railway for 25 million dollars credit from the government⁶⁸. Some four thousand working men traveled to the west between 1882 and 1885⁶⁷, and it was not until 1883 that settlers in any large numbers began to arrive in Alberta⁶⁹. It was initially thought that the railroad would follow the North Saskatchewan River through the Yellowhead pass at Jasper, but it was eventually decided to take a more southerly route following the South Saskatchewan River valley through the Palliser Triangle and on to the Kicking Horse Pass west of Banff. This more southerly route allowed for a larger population in the south of the region to better secure the area against American commercial encroachment. Early settlement of the west was encouraged by CP Rail with European agents sometimes offering both sea and land transportation on CP Rail owned ships and trains⁶⁸.

The first homesteading began about 1874 to 1880 with ranchers moving north from the United States into what was then the North West Territories. The landscape was suitable and the occasional warm chinook winds moderated the cold winters, allowing herds to graze year round⁷⁰. Wealthy entrepreneurs began arriving in Southern Alberta in the 1880s, typically after the establishment of the railroad. Once travel across the continent became less arduous, the large settlements began. One of the early wealthy investors in the southern prairie region was Sir John Lister Kaye, an aristocrat from Yorkshire, England. In 1884, having had success in land speculation in California, Sir Lister Kaye purchased upwards of 7,000 acres of land at Balgonie, near Regina, parts of which he proceeded to farm. In 1887 to 1888, Sir Lister Kaye traveled back to England to form, and find funding for, the Canadian Agricultural, Coal & Colonization Company. The CACC Co. eventually purchased 100,000 acres of land from the Government and the Canadian Pacific Railway in ten 10,000 acre lots, each of which had railroad access. These became what was known as the "76" ranches, named so for the cattle brand which took the form of the numeral 76. These ranches stretched from Rush Lake, east of Swift Current, Saskatchewan, to Langdon, near Calgary⁷⁵.

Each of these ranches raised herds of cattle and horses, and often flocks of sheep. Farming was often attempted, including an ill-fated attempt at irrigation at the Stair Ranch in about 1888. Both the farming and ranching were periodically unsuccessful due to droughts, severe winters and other natural and managerial causes. Despite this, the foundation for farming and ranching was established in what was to become Southern Alberta. Over the next twenty years, the lands held and farmed by the early large corporate ranches changed owners many times, and eventually were divided up in various sales and transfers, eventually becoming parts of numerous farms and ranches today.

With the foundation of the railroad and the early large farms, and with government encouragement, homesteaders began arriving in greater numbers, particularly in the period leading up to the First World War. Between 1901 and 1905, some forty thousand homesteads were granted in what was to become Alberta. Immigration was primarily from Europe, the United Kingdom, as well as moving northwards from the USA⁷⁰. In exchange for \$10.00, the construction of a house, a requirement to break a certain amount of land each year, and the promise to remain for three years, homesteaders were given 160 acres of land. The work was

very difficult with many people forfeiting on their contract. These people would simply leave their homesteads, often resulting in more successful neighbours purchasing the abandoned farms bordering their own lands. Large corporate farms continued to exist in Alberta's early days, mitigating the cost of early equipment (i.e. steam engines). With the development of smaller, more affordable petroleum-fueled tractors and small equipment, the large corporate farms were gradually replaced by individually owned and operated farms.

With the influx of immigrants, both as railroad workers and as potential homesteaders, the Canadian government implemented an ill-advised policy to control the indigenous peoples. In AD 1889 they implemented the "Peasant Farming" policy. Essentially, indigenous peoples were forced to attempt subsistence farming, a lifestyle they were largely unfamiliar with, with tremendous additional restrictions placed upon them that other immigrant homesteaders did not face. The indigenous people were allowed no labour-saving devices, and were not allowed to sell their produce and livestock without permits ⁷¹. Indigenous peoples were expected to keep the operations small enough to do the work with hand tools. They were required to manufacture their equipment by hand from local materials rather than buy pre-made equipment ⁷¹. The permit system restricted when an indigenous person could leave a reserve, for what reason, and the duration of the trip. It was done to restrict and control the indigenous people as well as restrict the trading and movement of produce and other goods ⁷². The Reserves were initially surveyed into equal numbers of farming plots and forested/pasture plots. Each family was allotted 40 acres to farm which the government deemed to be enough for them to be self sufficient. The government determined that they should be self sufficient, but not be able to compete on the open market ⁷². All the restrictions severely limited not only their potential profits, but severely repressed their traditional culture and life ways. This policy was effectively abandoned in 1896, but it had had a debilitating effect during its active period.

Irrigation was attempted as early as 1888 by Sir Lister Kaye at the Stair Ranch near the current town of Redcliff, Alberta. This attempt involved hauling water in special tanks ordered from Winnipeg. The attempt was unsuccessful as it required too much effort to haul the water out of the South Saskatchewan River valley up the banks to the farms ⁷⁵. Nonetheless, it was a beginning. The Northwest Irrigation Act was implemented in 1894, declaring all surface water the property of the Crown, and those wishing to use it for (e.g.) irrigation would require permits ⁷³. Considerable attempts at small scale irrigation already existed prior to the Act, including some larger examples such as the system begun by Sir Alexander Galt. Irrigation was first attempted on a large scale by Sir Alexander in the Lethbridge region in about 1893. This attempt involved constructing canals in the Magrath and Stirling regions south of Lethbridge, feeding these canals from the Oldman River ⁷⁴. By 1900, some 184 kilometers of canals existed in the network south of Lethbridge ⁷³. Various additional large scale irrigation projects were attempted, including two begun by the Canadian Pacific Railroad in 1903 (a diversion weir on the Bow River near Calgary) and in 1909 (another diversion on the Bow River near Bassano). Neither of the CPR attempts was particularly financially successful, but it laid the way for the Irrigation Districts Act of 1914 which aided farmers in developing irrigation cooperatives. By 1919 some 7,500 hectares (about 18,500 acres) of land was under irrigation in Alberta ⁷³ and becoming widespread in many parts of Alberta by the 1920s ⁷⁰.

Conclusions

The archaeology and the history of Southern Alberta, and the prairies in general, are the archaeology and history of the South Saskatchewan River watershed. The formation of the landscape by the retreating glaciers, and the gradual change of the region by the rivers, directly influenced the life ways of the indigenous peoples and the later influx of European and other settlers. In the early period the river and its tributaries were a pathway through the landscape. The river was a thread of life through the frequently arid prairies, drawing game animals and providing necessary water: Early indigenous peoples followed the game, and the game followed the water. Essentially, this did not change for many thousands of years. With the arrival of horses sometime in the eighteenth century AD, the indigenous people were able to range farther afield, however the game they hunted most, the bison, always remained within reasonable distance to water.

Early explorers typically followed the rivers as the flowing water provided the same security for them as it did for the indigenous peoples: food, water, and a path that was easy to find and (usually) easy enough to follow. Once the paths were established and the contacts made, the rivers provided a route to send merchandise east. Later, homesteaders also often preferred sites with close access to rivers. Additionally, the railroads also roughly followed the route of the major rivers. The path through western Canada, with the typically dry summers, is essentially a path along the rivers. The South Saskatchewan watershed is a lifeline through the region with towns, and later cities, growing up along it. Only with the arrival of the railroad could towns and cities begin to prosper away from the rivers, and when one looks at the path of the railroad, it too often followed the rivers to a degree. The river, and its watershed is, and has always been, a critical part of life in Southern Alberta; a part that must continue to be used, but which also must be protected.

Figures:

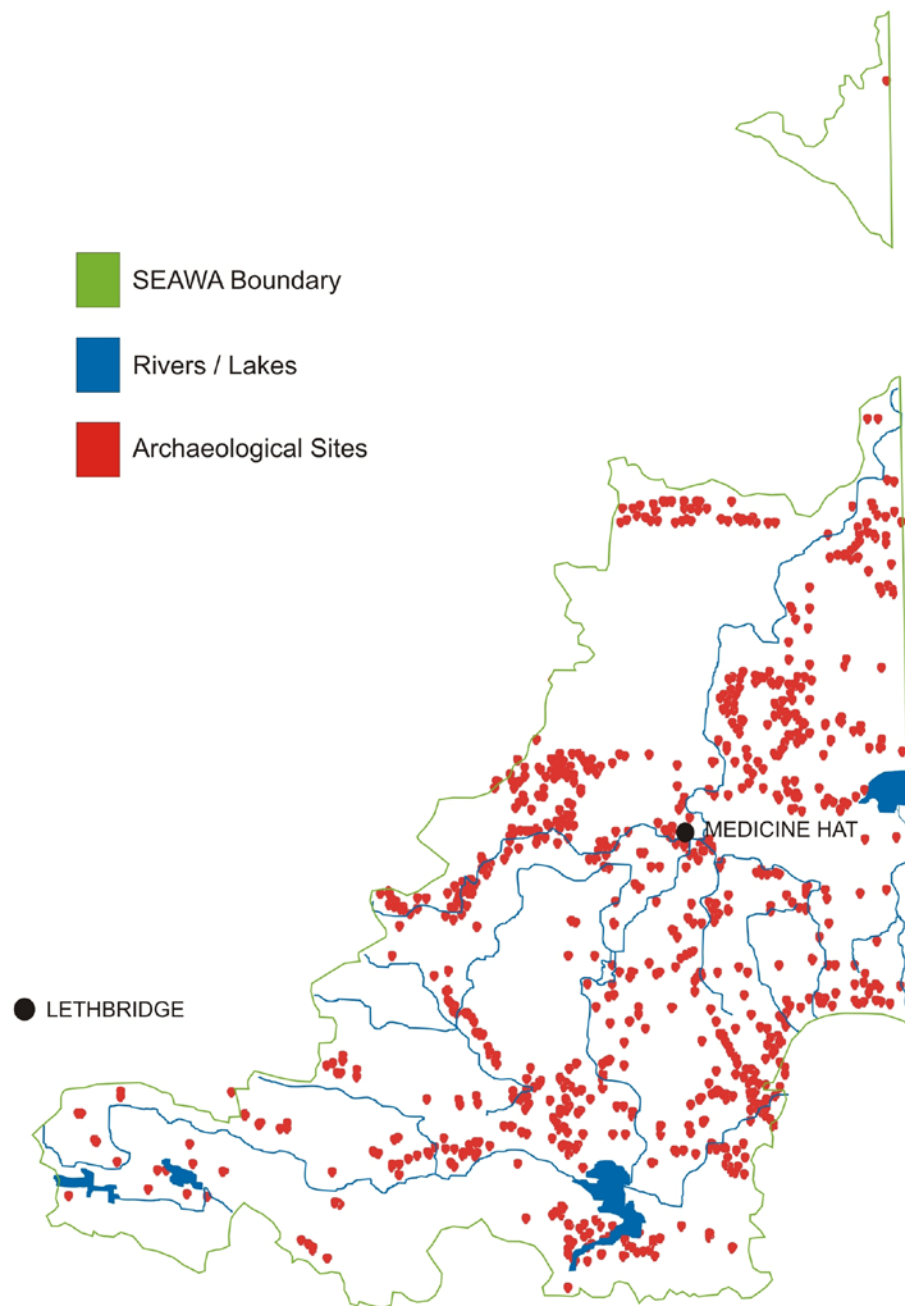


Fig. 1 - Archaeological sites in the SEAWA area.- T. Hulit

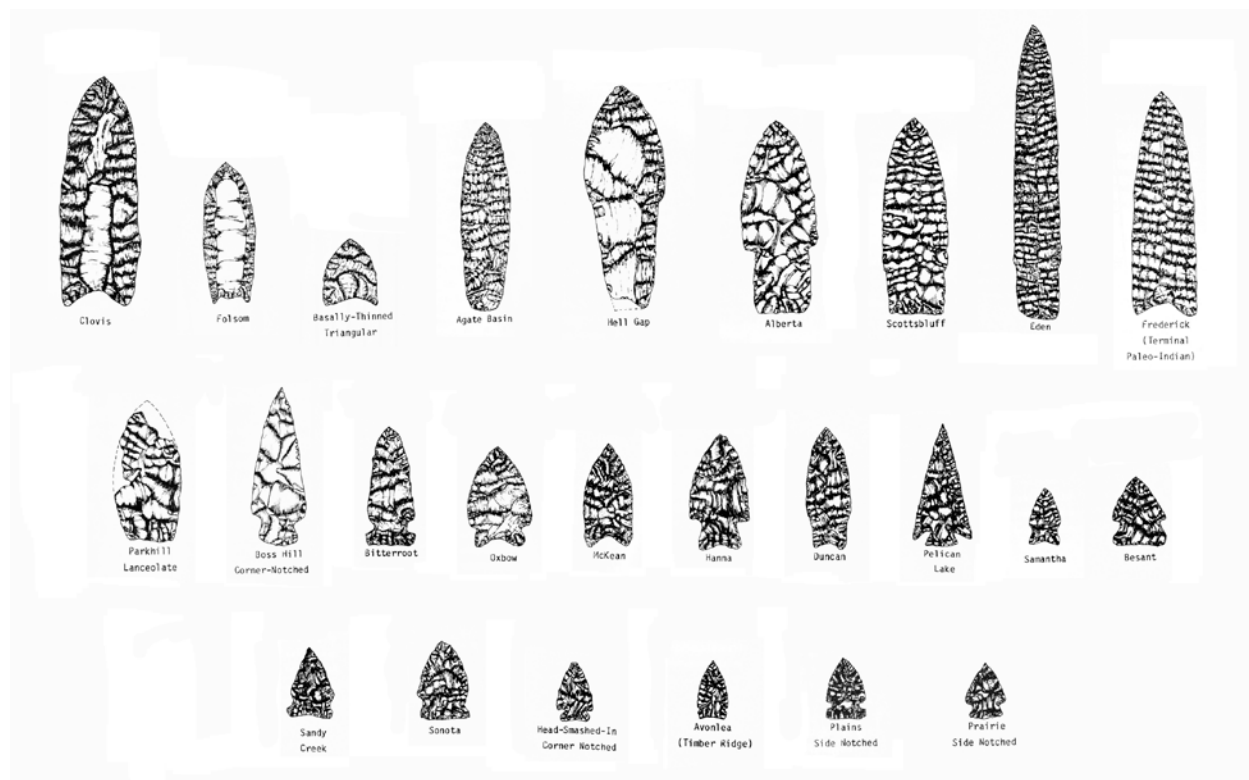


Fig. 2 - Projectile Point Types- Adapted from Vickers, 1986.

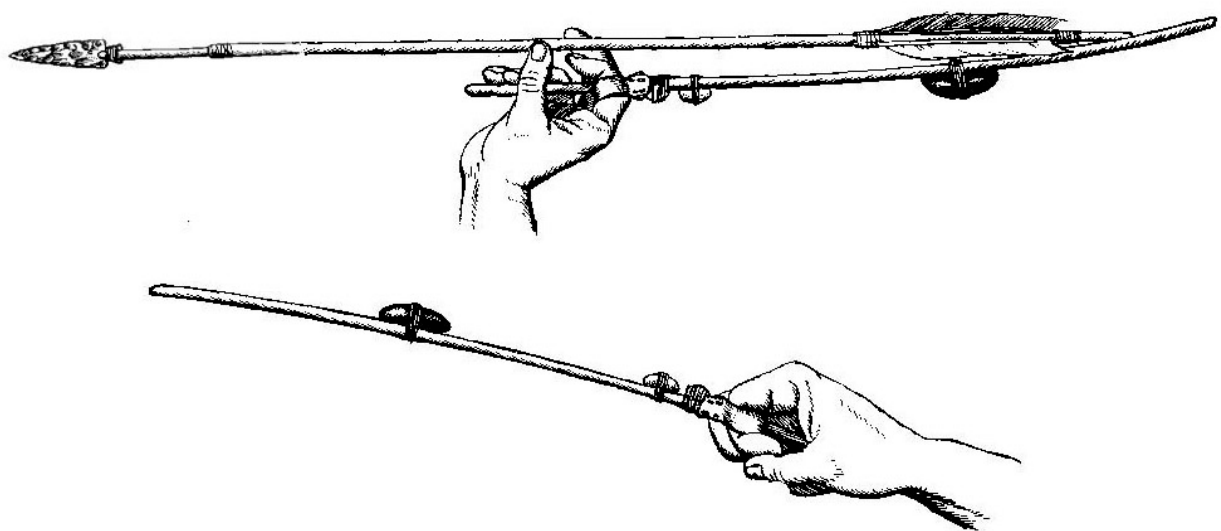


Fig. 3A - The Atlatl and Dart <http://avim.parks.ca.gov/people/early.shtml>

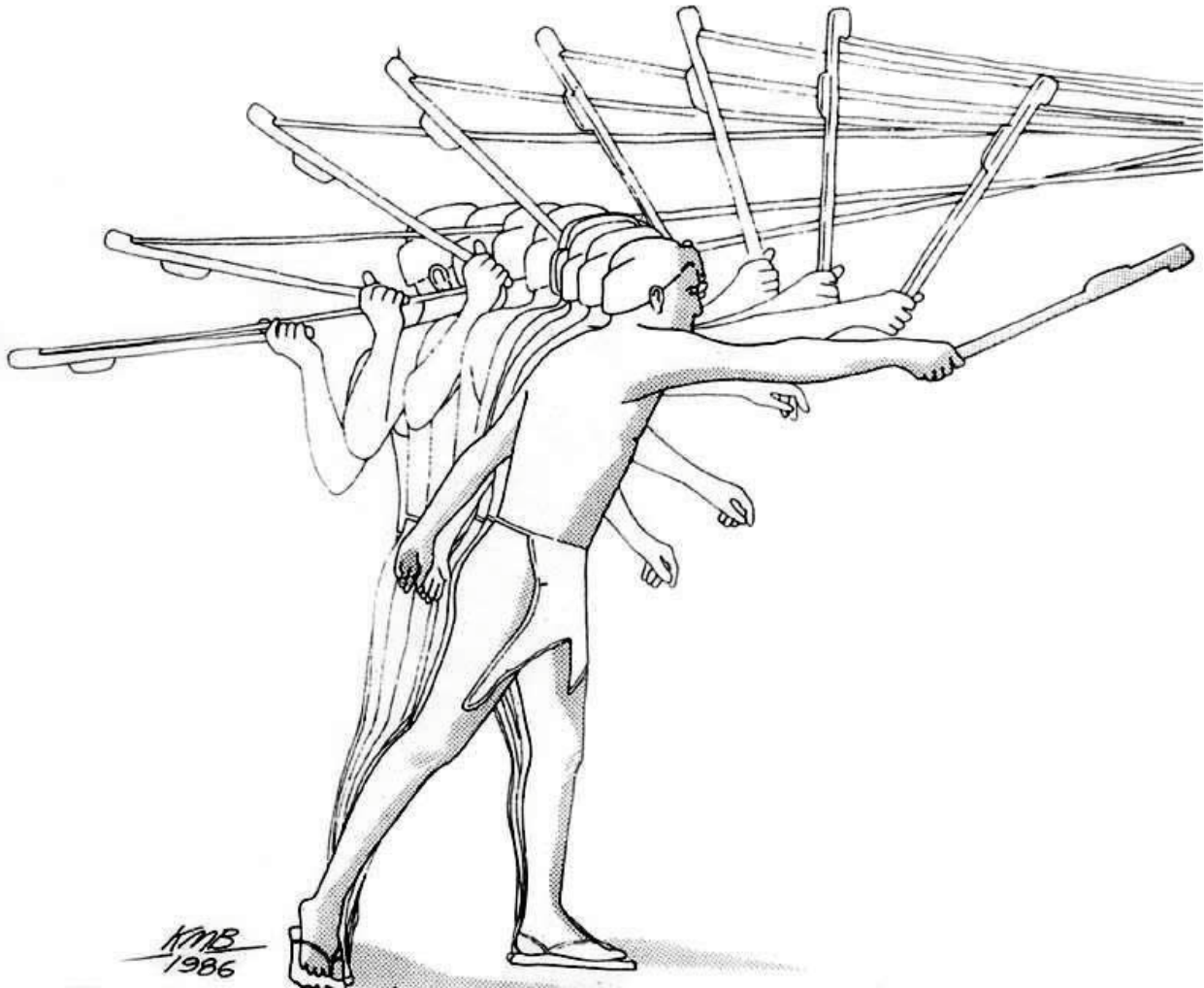


Fig. 3B - The Atlatl in Use

<http://www.texasbeyondhistory.net/glossary/images/atlatl-man.html>

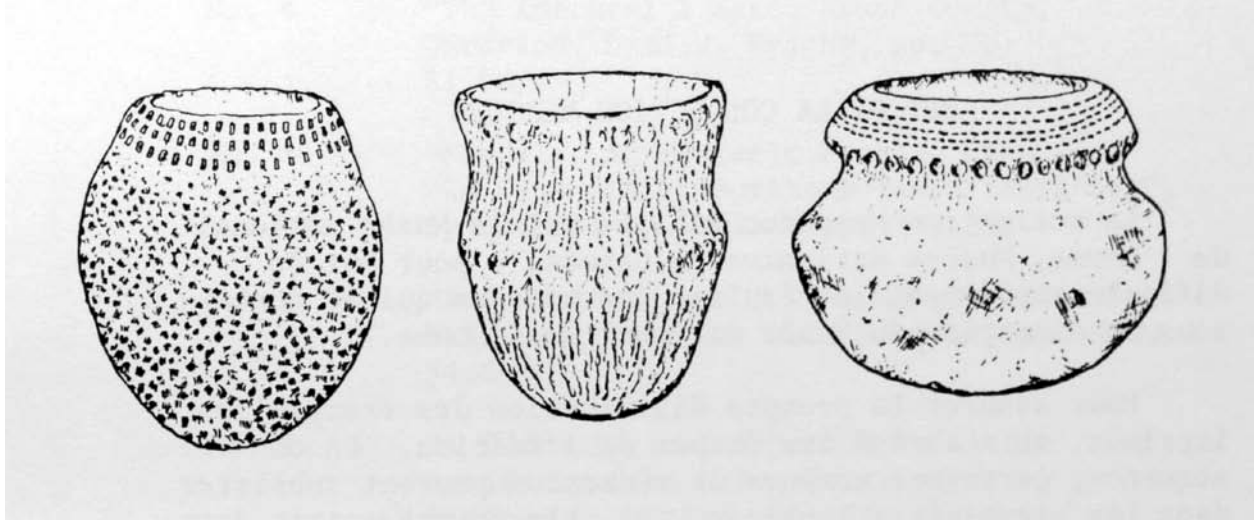


Fig. 4 - Indigenous Ceramic Vessels from Alberta

Byrne, William J.

1973 The Archaeology and Prehistory of Southern Alberta as Reflected by Ceramics.
Archaeological Survey of Canada National Museum of Man Mercury
Series 14.

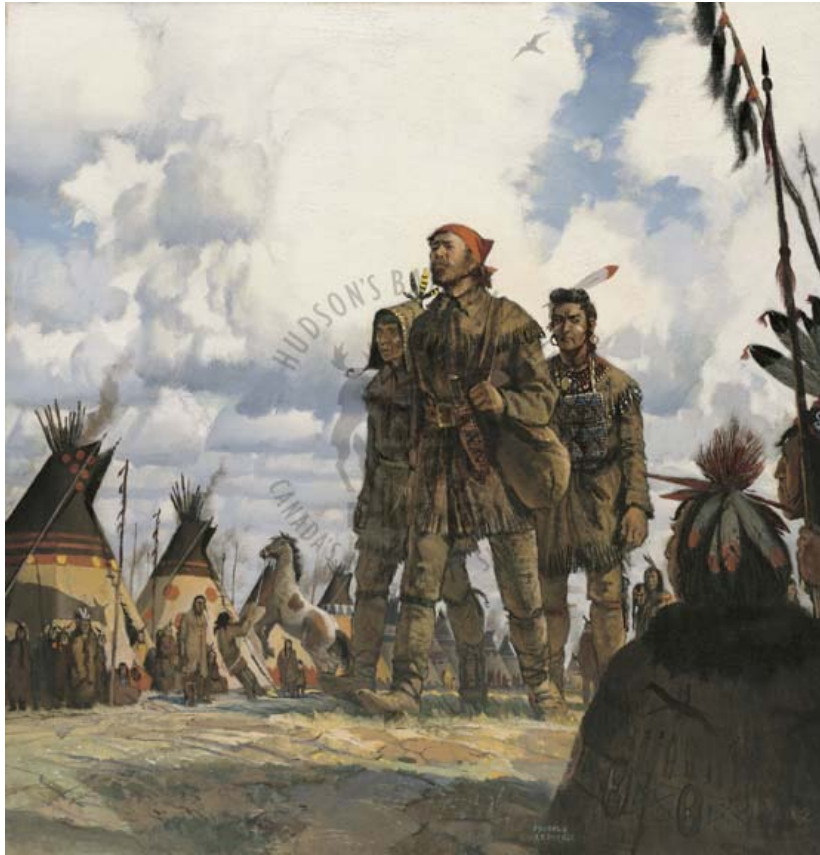


Fig. 5 - Anthony Henday

http://www.furtradestories.ca/details.cfm?content_id=239&cat_id=2



Fig. 6 - Fur Trader

http://www.abheritage.ca/alberta/en/fur_trade/i_fur_trader_canoe.html



Fig. 7 - Red River Carts and the Metis HBC Fur Trade Caravans

<http://scaa.sk.ca/ourlegacy/solr?query=ID:24224%20&start=0&rows=10&mode=results>

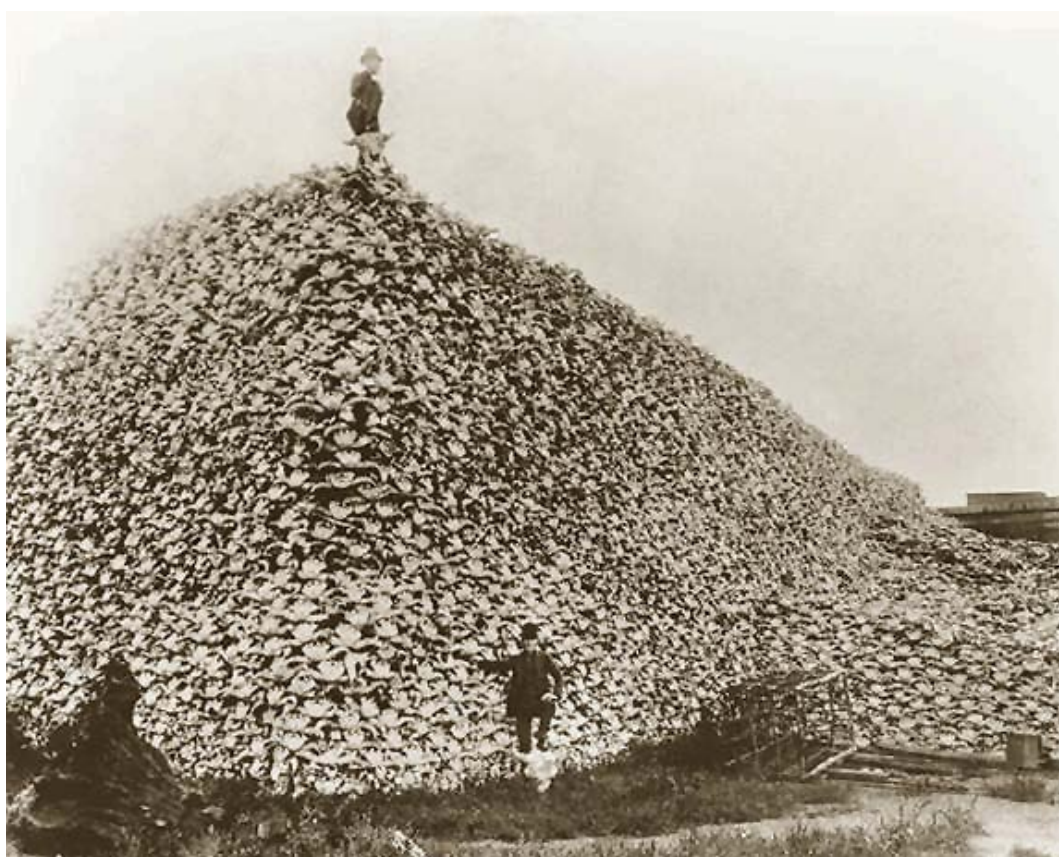


Fig. 8 - Bison Skull Pile about 1870

http://en.wikipedia.org/wiki/File:Bison_skull_pile,_ca1870.png

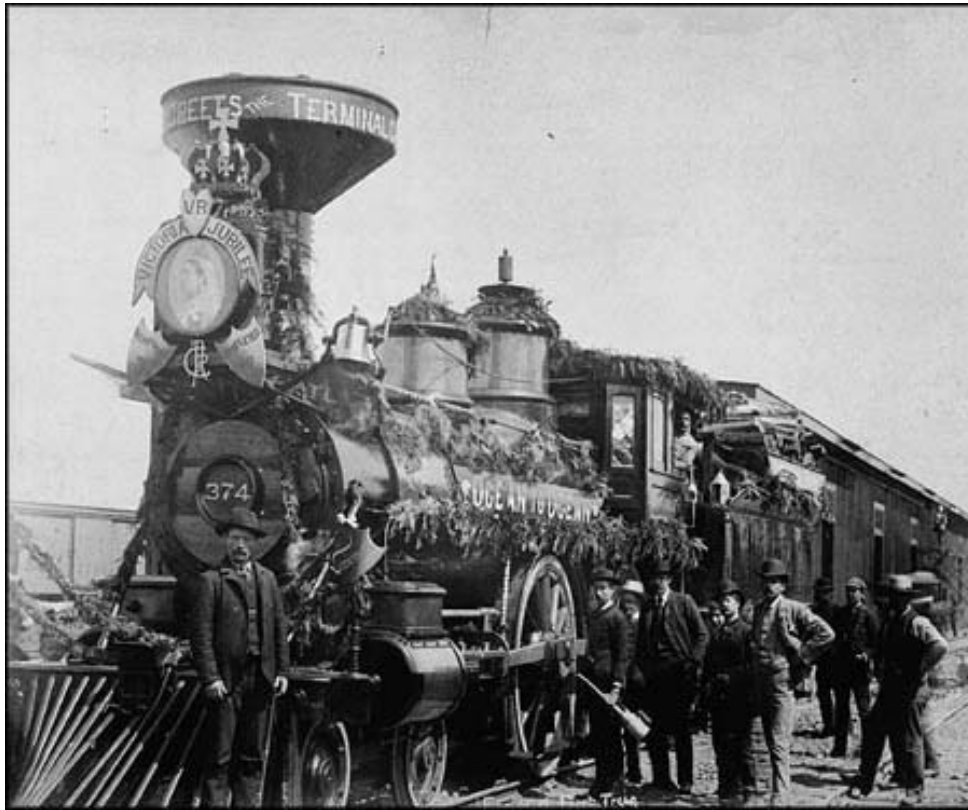


Fig. 9 - CPR Locomotive
http://www.canadiana.org/citm/imagepups/a143155_e.html

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The **South East Alberta Watershed Alliance (SEAWA)** was formed in 2007, incorporated as a non-profit society in 2008, and designated as the WPAC (Watershed Policy and Advisory Council) for the South Saskatchewan River sub-basin.

SEAWA Vision: A healthy watershed that provides balance between social, environmental and economic benefits.

SEAWA Mission: South East Alberta Watershed Alliance brings together diverse partners to plan and facilitate the sustainable use of the South Saskatchewan River Watershed for present and future needs.

SEAWA Members include interested individuals throughout the watershed along with our communities, ranchers, farmers, industries, companies, governments, conservation groups and educational institutions. We are proud to include the following among our founding members:

Government Sector: Alberta Government, City of Medicine Hat, Government of Canada, Cypress County, Palliser Health Region, Town of Redcliff, Town of Bow Island, and Special Areas Board.

Land Resource - Industry and Agriculture Sectors: St Mary River Irrigation District, Murray Lake Ranching, GG Bruins Farms, Short Grass Ranches, Canadian Fertilizers Limited, Redcliff Technology Enterprise Centre, Box Springs Business Park, and Canadian Centre for Unmanned Vehicles.

Academic, Research and Non-Governmental Organizations Sectors: Medicine Hat College, Alberta Research Institute, Red Deer River Watershed Alliance, and Hyperion Research.

Tourism and Conservation Sectors: Grasslands Naturalists, Canadian Badlands, and Medicine Hat Interpretive Program.

SEAWA Web-based State of the Watershed Report is managed by the *SEAWA State of the Watershed Committee (2010 members):*

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