Climate and Aboriginal-Newcomer Adaptation in the South Saskatchewan River Basin, 1700-1800

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Abstract

The 18th century marked a time of unprecedented changes in indigenous adaptation patterns to climatic variability in the SSRB. European influences usurped climactic stimuli as the pre-eminent cause of material and cultural change in the region. Inhabitants of the region had to contend with new challenges arising from the fur trade economy and found themselves increasingly vulnerable to the effects of negative climatic stimuli.

The four-hundred year pattern of westward migration by Woodland peoples into the SSRB dramatically accelerated as they moved to meet the demands created by the fur trade. Additionally, in the mid-1700s, the introduction of the horse led to an equestrian dependency that further compromised the security of groups to the climatic variability. Differential access to horses and European goods, particularly firearms, affected the balance of power in the SSRB and contributed to the forcible displacement of some groups. Finally, in the 1780s, a devastating epidemic struck the plains with such ferocity that some groups ceased to exist as distinct entities; leading to the emergence of new equestrian communities.

The fragility of horse populations in the face of unpredictable harsh weather patterns at the end of the 18th century highlighted the increased susceptibility of Basin peoples to negative climactic stimuli. Herd depletion limited the ability of a various groups to participate in the commercially driven bison hunt. Afflicted parties sought to replenish their herds by engaging in opportunistic raids upon adjacent populations. The ensuing warfare over horses, territory, and status within the fur trade, further endangered the ability of all groups in the region to survive extreme climactic episodes. Once aboriginal societies in the SSRB began making adaptations to accommodate the European controlled fur trade economy, they ceased employing and refining those coping strategies which had previously buffered Basin occupants from destructive climatic stimuli.

Introduction

During the 18th century, indigenous societies in the SSRB abandoned their historic subsistence-based economy, which had evolved as a means of minimizing their vulnerability to climatic change in the region, and adopted one better suited to a largely commercial economy integrated into the European fur trade. As profit became the central consideration in the decision making process of SSRB inhabitants, their communities were increasingly subjected to an unprecedented level of susceptibility to the negative effects of climatic stimuli.

Before the arrival of the commercial trade, climatic change had been the pre-eminent factor driving cultural change in the aboriginal societies of the SSRB and elsewhere on the plains (Lehmer 1977). For centuries, the grasslands of the SSRB served as a refuge for groups driven from their home territories in search of a reliable food supply. The adoption of the environmentally sustainable pedestrian bison hunt was a universal feature of those occupied the SSRB prior to 1700.

European influences not only brought about a market oriented adaptation strategy in the SSRB, they also led to a shift away from the sophisticated, utilitarian, approaches earlier residents had employed to counter adverse climatic episodes. In the early fur trade period in the SSRB, the configuration of the new relationship between human communities and their regional environ was partially owing to the influx of new peoples into the region who had no prior experience in grassland survival techniques.

By the end of the 18th century, all communities in the region – whether historic occupants or new immigrants – were perilously close to the limit of their climatic coping strategies. In addition to the long-term environmental constraints of the Neo-Boreal Climatic Episode, the inhabitants of the SSRB grew increasingly vulnerable to variability at the annual or decadal level (such as drought), and to isolated extreme events (such as severe winter storms) (Smit et al 2002:231).

The adoption of an external economic model (the fur trade), and the appropriation of European technologies and material items, particularly the horse, made indigenous groups unwittingly reduce their vulnerability thresholds to climatic forces (Smit and Pilifosova 2003:13). Crises spawned by severe weather conditions drove the indigenous population into conflict and eventually all out war in an attempt to maintain what was increasingly an unsustainable environmental position in the SSRB.

The expansion of European trade to the Canadian plains was perhaps the singular formative event in the history of the indigenous people of the SSRB. With the end of the Medieval Warm Period five centuries earlier, the relative stability of the plains bison hunt steadily attracted communities away from their marginal subsistence in the eastern and northern woodlands.

By the beginning of the 1700s, what had been a gradual migration to the grasslands was intensified as material gain from trade was added to the relative security of the region's

food quest as an incentive to move. Access to previously unavailable goods of European origin became the primary motivation for the westward population shift. In the historical literature, this period is known as the "middleman" phase of the trade (Ray 1974). At this juncture, First Nations in contact with European traders in the east (either at Hudson Bay or the Great Lakes), undertook journeys westward to collect furs trapped by other groups in exchange for imported goods.

Although groups such as the Cree and Assiniboine had inhabited portions of the SSRB prior to European contact (Russell 1991; Walde 1994), their integration into the fur trade economy served to accelerate the rate of the migration of their woodland kin westward through the 18th century (Ray 1974). Motivated by material gain and propelled by European weaponry, eastern groups increased their influence on the plains and northern forests before the arrival of Europeans themselves.

The migration of woodland peoples westward during the early historic period is essential to any understanding of the shifting adaptations in response to climatic change in the SSRB during the 18th century. By the 1700s, climatically-driven habitat degradation was no longer their sole motivation for migrating. The integration of Basin populations into the global economic system created unprecedented material incentives for incoming eastern groups and this situation fundamentally altered the relationship between human occupants and their adaptation strategies to climatic forces in the SSRB.

For some, the shift to the plains was an indirect consequence of the middleman trade. By the turn of the 18th century, the woodland Cree expansion extended into the forests of north-central Alberta. They drove what Hugh Dempsey called a "wedge" between the Athapaskan speaking Beaver People (Dunne Za) and their kin, the Sarcee (Tsou T'ina) in the woodlands northwest of the SSRB (2001:629). While the Sarcee were ousted from their territory by Cree middlemen, they "were already adapted to a plains lifestyle, [and] the Sarcee abandoned the last vestiges of woodland life and remained on the plains" (Dempsey 2001:629).

By the time the English trader Matthew Cocking encountered them in the early 1770s, they were described as plains dwelling "Equestrian Indians" (Dempsey 2001: 629). The circumstances that led to Sarcee to abandon their ancestral home in the forest may have been unusual but the general shift of woodland peoples toward the grasslands of the SSRB was a significant if not defining cultural trend in western Canada during the early historic period. By the 18th century, the movement of people from the woodlands into the SSRB was dramatic and unparalleled both in the absolute number of people who moved west and the sheer size of the area they inhabited.

The new economic paradigm, the commercial fur trade, was not the only destabilizing force to affect aboriginal communities in the west during this period. An unintended consequence of the integration of the Canadian west into the increasingly global economy based in Europe was the introduction of previously unseen diseases to plains inhabitants. The results were often catastrophic. The most devastating of introduced pathogens was smallpox. Although outbreaks were infrequent, they had profound consequences for the

demographic history of the SSRB and beyond (Daschuk 2002). Losses from a smallpox epidemic in the early 1780s contributed to a large-scale territorial re-alignment on the plains and adjacent woodlands. Many groups were struck with such ferocity they ceased to exist as distinct cultural entities (Meyer and Russell 2004).

Newcomers filled the demographic void left in the wake of high death rates by occupying both the parklands and grasslands on eastern margins of the SSRB. Remnant populations banded together and created new groups. With this demographic and cultural upheaval came new approaches to both the bounty and the strictures of the plains environment. Access to bison and the ever-increasing demands for food by European traders provided newcomers with greater levels of material prosperity. Within years however, competition over resources and the adoption of imported technologies increased the vulnerability of aboriginal people in the SSRB to the negative effects of climatic stimuli.

By the mid-1700s, another consequence of the biological unification of the world contributed to the transformation of life on the plains. The introduction of horses revolutionized the lives of plains people as they adopted an equestrian lifestyle. The spread of horses was one aspect of what Alfred Crosby called "ecological imperialism" and the recasting of New World ecosystems resulting from the invasion of introduced species (1993:33-35). The horses introduced to the SSRB originated from Spanish colonies in the south west entering the area via pre-existing aboriginal trade networks. The diffusion of the species may have been too successful in the SSRB; horses spread beyond the zone where climatic conditions could adequately sustain them.

The initial spread of horses coincided with a decades long reprieve from the harsh conditions experienced through the Little Ice Age that lasted through much of the 1700s (Beauboin 1999:32). As climatic conditions deteriorated toward the end of the century, many groups that had become equestrian dependent found themselves unable to maintain their herds by natural means. To augment their herds raids were undertaken on other equestrian groups, and became increasingly common by the end of the 18th century. Animosity and open conflict increased in proportion to the frequency of raids, affecting the nature of all inter-tribal relations in the SSRB and neighbouring areas for decades to come. Of course, warfare did nothing to enhance adaptation strategies and planning amongst the inhabitants of the Basin, and it further compromised their ability to survive severe climactic episodes.

The shift of focus on the plains during the 18th century, toward the fur trade economy, the occasional, though severe, spread of diseases through the population, and the advent of equestrian dependency all served to increase the susceptibility of indigenous communities to climatic variability. Extreme weather, particularly drought and severe winter storms became increasingly threatened the sustainability of communities in the SSRB.

Although studies reveal that a protracted drought through the 1790s was the most severe such episode in the past five centuries (Sauchyn and Skinner 2001; Sauchyn et al 2003), aridity was probably not yet the primary climatic vulnerability for the aboriginal population of the SSRB. Equestrian mortality owing to severe winter weather was a

greater threat during this period.. In contrast, Europeans, whose western transportation system was dependent on the Saskatchewan River, were particularly susceptible to fluctuations of water levels and drought events (Sauchyn et al 2003:165). During the 1790s, water levels on the North Saskatchewan River were reduced to their lowest point in the past 1,100 years (Case and MacDonald 2003:710).

The European vulnerability to drought was increased by their dependence on garden produce grown at the posts. Without rain, garden produce, an important supplement to the diet of traders, was lost. The impact of these droughts was certainly felt and amply reported in fur trade records. Indeed, reports of even minor precipitation were dutifully recorded in the daily journals maintained at posts operated by the Hudson's Bay Company (HBC). The indigenous population of the SSRB remained for the most part marginal to the beaver trade but their acquisition of horses created a new vulnerability to severe cold. Cold rather than drought remained the primary threat to aboriginal communities in the SSRB through the 18th century.

Among the inhabitants of the SSRB it did not take long for equestrian dependency to take hold of their cultures. Increasingly at risk of having their herds devastated by winter events they could ill afford to lose the species that had quickly become a military and economic necessity in the region. By seeking to counter equestrian losses through theft, the conflicts this practice ignited, characterized intertribal relations in the SSRB for almost a century after the climatic downturn of the 1780s. But the adoption of the horse had another profound impact; it fundamentally changed the nature of the bison hunt.

New strategies based on the equestrian pursuit of bison led to a sharp increase in the number of stampedes which soon made the bison an unpredictable subsistence base as their movements became increasingly unpredictable. Periodic hunger among aboriginal communities resulting from their inability to find the herds may have actually increased during the equestrian period. In the long-term, horse hunting became a factor in the virtual extermination of the species (Isenberg 2001).

The Bison Hunt and Adaptation to Climatic Variability during the Pedestrian Era

Prior to the social and economic upheavals brought on by the introduction of the fur trade, new diseases and the horse, plains societies had developed efficient and strategies for hunting bison. The ancestors of the Blackfoot[1], or Niitsitapi peoples occupied the plains of western Saskatchewan and Alberta for more than 700 years before contact with Europeans (Vickers 1994:28). Walde's assertion that the Mortlach archaeological phase was the antecedent of the historic Assiniboine, implies that the group was in the SSRB well before 1500 (1994:136). Binnema noted that the Atsina (Gros Ventre) were present at the forks of the Saskatchewan River by the middle of the 16th century (Binnema 2001:76).

During their pre-contact occupation of the grasslands, indigenous groups developed sophisticated strategies to both exploit the bounty of their environment and to buffer themselves against periodic climatic fluctuations. The adaptations made by the

inhabitants of the SSRB and the surrounding northern Great Plains correspond closely with the definition of "autonomous adaptation" provided by Smit and Pilifosova, "these are often expected to have potential to reduce negative climate change impacts or to moderate vulnerabilities, thereby easing concerns over the danger of climate change" (2003:9-10).

Ecological studies indicate that the adaptations of prehistoric people in the region were not merely reactions to climatic stimuli (Morgan 1991). The anticipatory nature of their adaptations, particularly to drought, indicates a high level of ecological knowledge regarding climatic variability (Smit et al 2000: 224). The ability of communities in the SSRB to anticipate drought in an arid environment may have been the principal factor in the survival in the region.

Grace Morgan has shown that successful climatic adaptations were the key features in the survival of groups during the pedestrian period (1979, 1991). They were predicated on the regularity and reliability of bison movement and exploitation. Grass fires were employed as a means of directing the local movement of herds and steering them toward kill sites or as a means to draw bison to areas of new growth following winter and early spring burns, where they could be harvested. One sign of the dependability of herd movements was that the principle kills sites such as pounds and jumps were used repeatedly (Morgan 1979:111-113). Pounds were the primary kill sites in the flat country of the central and eastern SSRB while jumps were used in the undulating topography of Southwestern Alberta.

Because pedestrian hunters were selective in steering their prey towards the kill sites their methods did not create widespread stampedes or significantly disrupt the movements of the larger herd (Morgan 1979:193). As such, herd movements remained relatively predictable from year to year and allowed hunting groups to rely on access to their main source of sustenance. Throughout the pedestrian period bison herds maintained their seasonal cycle, spending the winters in sheltered areas in the parklands or near valleys and the summers on the open plains[2].

[insert Bison movement map here]

The use of non-disruptive hunting practices allowed camps of pedestrian hunters to maintain their communities with relative stability. In the case of the Blackfoot, their adherence to traditional pedestrian hunting techniques allowed them to occupy their winter camps in valleys of the upper SSRB for periods of up to six months at a time (Morgan 1979:193). Some "winter" camps could be continuously occupied for as long as eight to nine months (Morgan 1991:153). Even summer campsites on the open plains could be maintained for as long as three to three and a half months (1979:182).

As pedestrian communities were unable to travel long distances in their quest of food, residential stability within the context of their seasonal movements (from valley complexes to the open plains and back) was the key to reducing their environmental stress levels. The relocation of camps was done on foot with dogs as the only beasts of

burden. As such, they developed complex strategies to maximize the existing assets of the environment within their limited range of mobility.

The most significant limitation to human occupation on the plains was, and remains still, the availability of water. In order to survive, pedestrian groups in the SSRB had to ensure they had an adequate supply of water, especially during periods of prolonged drought. The principle adaptation to meet the challenge was their intentional non-exploitation of beaver populations as a means to manage the amount of available water (Morgan 1991:5). The prehistoric occupants of the plains, according to Morgan, recognized the role of the beaver in maintaining water resources in valley complexes and conserved the species. Beaver ponds that were purposely maintained through non-exploitation served as dependable water sources for groups even during periods of extended drought.

According to Morgan, the bison were "the staff of life" although the beaver were at the core of a profound ideological framework which prized the role of the beaver in the stabilization of water resources" (Morgan 1991:27). David Smyth has detailed how the principal inhabitants of the SSRB, the Blackfoot people and their allies, the Sarcee and Atsina, maintained their aversion to the commercial harvest of beaver until as late as the 1820s, when military and economic necessity forced them to undertake beaver hunting (2001:iii).

The Aboriginal refusal to harvest beaver was not a consequence of the rarity of the species in their territory. During his trip from the North Saskatchewan River to the foothills of southern Alberta in 1792-93, Peter Fidler noted the discontent of his Peigan guides for bringing in nothing of value to Buckingham House, as they travelled passed numerous small lakes seemingly teeming with beaver (Haig 1992: 10-12). When the Blackfoot did begin to hunt beaver for commercial purposes, Edmonton House, their primary trading post, became, for a time, the most profitable in the domain of the Hudson's Bay Company (Smyth 2001:306, 338).

The non-exploitation of beaver stocks and the use of non-disruptive hunting strategies practiced by pre-historic inhabitants of the SSRB served to buffer them from the effects of drought (Morgan 1991:5). During protracted droughts, bison populations probably did not move to their summer range in the open grasslands because of the scarcity of water and tended to remain near water supplies in valley complexes (Morgan 1991:42).

Bison activity during a drought cycle served to re-enforce the relative stability of communities camped along the tributaries of major waterways because herds remained in what would have been their winter range during normal conditions. Water levels in the valley complexes were maintained by beaver whose dens held back even small amounts of water, thereby stabilizing the limited resource. During the most lengthy drought periods, when water could not be maintained in tributaries, human, bison and beaver populations would have all sought refuge along main channels of water ways.

The availability of wood was also a key determinant of winter settlement patterns (Vickers and Peck 2004: 96). In addition to fuel, wood was the key component of bison pounds, fenced enclosures where animals were driven to slaughter. Because pounds could accommodate between 200 and 300 animals, the amount of wood required for their construction would have been enormous, especially given the relative scarcity of trees in the SSRB (Vickers and Peck 2004: 100). Trees cut by beavers, rather than compromising the wood supply of their human neighbours, were often reused and served as sources of firewood and building materials for bison pounds (Morgan 1991:43-45). The absence of beaver remains in archaeological excavations from the Moose Jaw Creek area (just south of the SSRB) suggest that the non-exploitation of what would have been easy prey especially in summer, is evidence that the avoidance of beaver hunting was a traditional ecological practice (Morgan 1979:167-172).

Tribal groups who migrated from the east to the SSRB and adjacent grasslands during the late prehistoric period may well have opted to not kill beavers as part of their adaptation to the constraints of life on the plains. The Assiniboine, who were in the SSRB by the 16th century (Walde 1994), had clearly developed a different approach to the species than their relatives who remained in the woodlands until the historic period. The distinction between the eastern Assiniboine who trapped beaver and their plains compatriots who did not, was recognized by the HBC as early as the 1690s, evidence that the prehistoric division between plains and parklands Assiniboine groups continued into the historic period (Walde 1994:136).

On his journey to the Mandan villages on the Missouri River in 1738, La Vérendrye was told that the plains Assinboine did not know how to hunt beaver and should be instructed in the practice (Flandreau 1925:90; Smith and Wood 1980:44). Beaver were reported to be so numerous along the Saskatchewan River at this time they were considered to be of little economic value to the people who lived there (Isenberg 2000:49). Many early traders witnessed on the relative abundance of beaver while they travelled in the grasslands and were perplexed at the inability, or unwillingness, of the Indians to harvest them (Belyea 2000:112). By the late 18th century, plains groups who refused to commercially harvest beaver began to pay a high price for the maintenance of their tradition.

Recent immigrant groups from the woodlands, particularly the Cree, the eastern Assiniboine, the Saulteaux, and even the Iroquois, filled the demand for beaver pelts, by expanding into the region as commercial trappers. Beaver hunting secured for them a preferred status among the traders, and in turn they were able to procure firearms which provided them with a military advantage over those groups who maintained the taboo on beaver harvesting. As indigenous plains communities were displaced by incoming groups associated with the fur trade, beaver populations were soon reduced.

The depletion of beaver populations in the parklands to the east of the SSRB was noted in HBC journals by the mid 1750s, as indigenous suppliers were forced to hunt on the margins of the plains (Smyth 2001:109). In the 1760s, William Pink, an HBC servant who traveled through the lower portions of the SSRB, observed the species was being

over hunted by the Cree (Thistle 1986:63-64). By the end of the century, beaver were extirpated from other regions, such as the North and Lower Saskatchewan Rivers and the Qu'Appelle Valley (Brightman 1987:133; Morgan 1991:165). In the 1790s, the trader at Fort George on the North Saskatchewan River near Edmonton complained that overhunting had "entirely ruined" the country (Morton 1927:166). As traditional conservation practices were replaced by commercial beaver hunting to meet the European demand for furs, the key strategy for aboriginal drought mitigation in the SSRB was lost.

The Introduction of the Horse: New Opportunities, New Vulnerabilities

The place of the horse in plains societies has achieved almost mythical status within popular perceptions of plains peoples. Even within aboriginal societies, the reverence reserved for the species is probably greater than its historic presence warrants. Colin Calloway observed that the period of equestrian nomadism on the American plains was relatively short-lived, lasting perhaps only a century (1982:25). It may be impossible to pinpoint the exact year when plains peoples first acquired the horse (Rinn 1975; Smyth 2001). However, it is generally agreed that the horse was present in the SSRB by the 1740s (Smyth 2001:120).

The expansion of the Shoshone[3], the dominant power in the SSRB in the mid 18th century, has been directly attributed to their early acquisition of horses (Rinn 1975:25). Although the advantage provided by their early access to horses undoubtedly contributed to their successful control of the SSRB, archaeological studies indicate their initial expansion northward from their ancestral home in Wyoming occurred during the 16th century, a period marked by protracted drought in their home territory (Stahle et al 2000) and as much as 200 years before they acquired the species (Schlesier 1994: 315).

The records of the La Vérendrye expeditions to the Missouri River from posts in eastern Manitoba indicate that the Mandan did not possess horses at the time of their first journey in 1738-39. Three years later, reports verified the presence of species at the villages on the Missouri River. The sons of La Vérendrye, who undertook the explorations to the Missouri and the country west of it in 1742-43, reported that horses were relatively common among groups east of the Rocky Mountains (Smith and Wood 1980:104-114). Accounts of their return to southern Manitoba on horseback represents the first historical record of the species being present on the eastern margins of the Canadian plains.

In an effort to check the growing French trade, the Hudson's Bay Company began to send servants inland in the mid 1750s and it is from the records of these missions that we have the first documented accounts from the SSRB itself. The first of the HBC journeys was undertaken by Anthony Henday (or Hendry), who ventured into the SSRB to the Red Deer River in 1754-55. He noted that his hosts near the forks of the Saskatchewan, the Pegogamow Cree, had acquired a limited number of horses but had not yet to develop the skills required for true equestrianism (Meyer and Russell 2004: 235).

It has been postulated that roughly a decade was required from the initial acquisition of horses for a group to become proficient in their use (Rinn 1975:15). Henday and the

Pegogamow used horses to transport goods but they did not ride them during their journey (Meyer and Russell: 2004:234-235). As he continued west, Henday noted that the "Archithinue,"[4] almost certainly members of the Blackfoot alliance, possessed numerous horses and exhibited much skilled when riding them. It is clear from these accounts that by the 1750's Blackfoot peoples inhabiting the SSRB had already embraced their conversion to true equestrian culture. The Cree, having less access and therefore less experience with the animals, had yet to embark fully on the road to equestrian dependency.

In his study of the northward diffusion of horses from what he called the "equestrian hearth" located around the Spanish settlement of Santa Fe, Dennis Rinn posited two viable routes for the spread of horses onto the Canadian plains (1975:13). The most obvious route for horse diffusion northward to the SSRB was across the plains to the Middle Missouri villages was blocked because of the dominance and control over the central plains exerted by the Apache for most of the 17th century (Rinn 1975:23-24). According to Rinn, Mandan and Hidatsa villages in this area eventually did serve as a conduit for the spread of equestrian culture, with horses becoming a principle item of exchange there by the 1740s (Rinn 1975:24).

Calloway asserted that horses quickly became vital to the lives of all groups that adopted them because the "horse was a means of transport, a medium of trade, a means of production, and if necessary, a source of food. Wealth was measured in horses, and horse-raiding and war were virtually synonymous" (1982:30).

As the diffusion of horses across the Great Plains was strictly controlled by the Apache, the most likely means of horse diffusion to the SSRB was along an intermountain route following the continental divide and the Snake River (Rinn 1975:24). In this region, horses were adopted by the Navajo, the Ute and eventually the Shoshone in quick succession (Rinn 1975:24-26; Calloway 1982:32). The Shoshone almost certainly acquired their horses and their riding skills from their Numic speaking relatives to the south (Binnema 2001:88). For more than a century after the initial diffusion of horses to the Shoshone in the early 1700s, the mountains served as the primary source of equestrian stock for the people of the SSRB.

[insertion of horse diffusion map here-Rinn]

The horse frontier probably reached Blackfoot territory sometime in the early 1730s almost a decade before their arrival among the Mandan (Rinn 1975:60, 65). The source of the Blackfoot horses was probably from mountain people, particularly the Flat Heads (Saleesh), the Nez Perces and the Kutenai who inhabited "the exceptionally favourable environment of the mountain valleys" which contributed to the prolific growth of herds (Rinn 1975:67).

Groups in the south-western part of the SSRB experienced minimal success in breeding and were unable to maintaining their own herds (Rinn 1975:78). The flow of horses, so necessary to preserving the first SSRB herds in Blackfoot country, was initially

facilitated by peaceful trade relations between the mountain people and those of the western plains until, as Rinn stated, "theft replaced trade as the principal means by which the Blackfoot tribes fulfilled their demand for horses" (1975:68).

The maintenance of equestrian stock in the SSRB and elsewhere on the Canadian plains was dependent on an almost constant supply of new horses from the region south and west of the margins of the SSRB (Rinn 1975:94). The proximity of the Peigan (Piikani) to horse rich tribes to their southwest coupled with their eventual move onto the SSRB allowed this group to sustain the largest herds north of the 49th parallel.

In the early 1790s, Peter Fidler reported that a large encampment of predominantly Peigan people maintained two thousand horses near the headwaters of the Oldman River (Haig 1992:56) Binnema has shown that the climatically-mild region between the Red Deer and Missouri Rivers, encompassing the western SSRB, was the most contested area of the plains during the 18th century (2001:87). Horse herds maintained by other groups declined in size toward the north and northeast (Rinn 1975:94).

Within the Blackfoot alliance, the Peigan had the most horses, followed in order by the Kainai (Bloods) and the Siksika (Blackfoot). The northernmost group in the alliance, the Sarcee, who occupied the northern margins of the Alberta plains, had few. The Cree and the Assiniboine, dwelling on the northern and eastern margins of the Great Plains, had fewer still. Distance from the abundant and viable horse population maintained in the American foothills was not the only factor in the differential size of horse herds of groups in the Canadian plains.

The descending size of horse herds in relation to the distance from south-western Alberta was largely the consequence of worsening climatic conditions, particularly the severity of winters. Although severe winters on the eastern plains served to limit the viability of horses in the country occupied by the Cree and the Assiniboine, conditions were such that all groups inhabiting the Canadian plains required a constant inflow of horses from the southwest, even the Peigan were not immune to periodic shortages. The Cree and Assiniboine did eventually manage to acquire horses via the Missouri villages, and this lasted until the breakdown of the trade relationship in the early 19th century; but the overall the predominant route for the flow of horses onto the Canadian plains originated from the southwest. The flow of horses, either through trade or theft, was not regular or continuous, but a relatively predictable pattern was maintained until the settlement of First Nations on reserves during the late 1870s.

Eastern groups had the most difficulty in sustaining their herds through natural means and had to rely on raids as a means of augmentation. Usually, the Cree and Assiniboine targeted groups who possessed horses in greater numbers and invariably this meant raiding those to the south and west. Such actions merely served to fuel tribal animosities. Raids on the Blackfoot alliance by the Cree and Assiniboine served as an irritant to inter-group relations and sparked military conflict which lasted through most of the 19th century (Binnema 2001). Clearly, the acquisition of an equestrian lifestyle in the SSRB and neighbouring areas of the northern Great Plains diminished the capacities of

indigenous groups to cope with the negative effects of climatic stimuli, particularly with respect to severe cold in winter. The adoption of the species and the need for pasturage also reduced the coping range of tribal groups in the SSRB and elsewhere on the northern Great Plains to drought.

Prior to the equestrian period, (g)rass, at least in terms of pasture for the horses, is irrelevant during the Prehistoric period" (Vickers and Peck 2004:98). The adoption of horses narrowed the margins of climatic sustainability for the inhabitants of the northern plains. When climatic conditions declined at the end of the 18th century, equestrian dependent populations of the SSRB and northern plains experienced new levels of climatically-driven stress resulting from their newly acquired vulnerabilities that came with the imperative to keep their herds viable.

In addition to the climatic vulnerability of horses themselves, communities that adopted equestrianism in the SSRB also exposed themselves to further environmental stresses when they made significant changes in the way they hunted bison. Chase hunting replaced the millennia old strategies of pound and jump. European weapons became increasingly available and were added to the new hunting method. Morgan stressed that the adoption of equestrian hunting strategies was not simply the replacement of an inferior technique with a superior one (1991:157).

As the transformation to horse hunting became more complete, the movements of bison herds became increasingly erratic. The impact of the chase hunt on bison movements was so significant that recent studies have noted that, "questions concerning the nature of bison movements (i.e., migratory vs. non-migratory) remain unresolved" (Vickers and Peck 2004:95). Morgan noted that horses created both the uncertainties leading to the decline of drive hunting and the solution to it, as equestrian hunting scattered herds and provided mounted hunters with a means to find them (1991:156).

Horses certainly made summer hunting easier when the bison were gathered in large numbers for their rut, when even dispersed herds would re-gather to mate (Morgan 1991:156). That short-term benefit was offset by long-term consequences however. The stampeding of the herds resulting from the chase reduced the predictability of their movements diminished the chances of hunting in regular seasonal cycles (Morgan 1991:156).

Equestrian dependency led to diminished capacity for SSRB groups to adapt to negative climatic stimuli on several fronts. Severe cold became an increasingly important risk factor to the well-being of both horses and the communities that depended of them. The need for forage to sustain the species increased the vulnerability of equestrian communities to drought. Equestrianism also had a profound impact on the nature of the bison hunt. Mounted hunting to supply the ever-growing needs of European traders increased pressure on the herds.

The commercial demand for bison far exceeded the requirements of traders on the plains. By the 1770s, the grasslands served as the "pantry of the northwestern fur trade"

providing food for the expanding trade in the boreal forest (Ray 1984:263). As herds movements became increasingly erratic in their response to chase hunting, the predictability of the main food supply of the SSRB was undermined, further augmenting susceptibility to climatic forces.

Climatic Variability and Human Adaptation in the SSRB during the 18th Century

The changes that occurred within human communities in the SSRB through the 18th century were momentous. Because of the nature of the middle man trade, with European chroniclers either remaining on the shores of Hudson Bay or at French Posts in the eastern woodlands, much of the detail regarding the SSRB during the first half of the 1700s remains unclear (Smyth 200:164-65).

Direct European accounts from the region did not start until the mid-1750s, when servants of the HBC began yearly journeys inland in an effort to increase their trade (Russell 1991). Although the French established posts as far west as the forks of the Saskatchewan River by the 1750s, dependable daily record-keeping only began with the establishment of Cumberland House on the Lower Saskatchewan River in 1774. Within five years of the establishment of Cumberland, Hudson House was built on the North Saskatchewan River, just beyond the northern margins of the SSRB. By 1795, a succession of trading posts was built by both English and Canadian trading companies along the North Saskatchewan River as far as the present City of Edmonton.

Only two posts HBC posts were built on the South Saskatchewan River. Because of inter-tribal conflict in the SSRB, both were maintained for only short periods. South Branch House on the lower South Saskatchewan River was operated from 1786 to 1794. Chesterfield House, at the confluence of the Red Deer and South Saskatchewan Rivers was open for an even shorter time, between 1800 and 1802. Direct observations from within the SSRB remained limited well into the historic period but chronicles of the trade between the nomadic hunters of the region and the traders along the North Saskatchewan River provide insight into the nature of developments in the region as the fur trade economy matured.

As the 18th Century began, the SSRB was experiencing a significant cold period. A recent study Luckman and Wilson indicated that the twenty year interval between 1685 and 1704 was the most severe cold period in western Canada of the past 1000 years (2005:137). They attributed the significant decline in temperatures during the period (estimates temperatures were 0.4° C colder than for the next coldest interval) to "volcanic forcing superimposed on a period of low solar activity (at the end of the Maunder minimum, when global temperatures were generally cooler" (Luckman and Wilson 2005:137).

In Europe, the period between 1680 and 1730 was described as "the coldest cycle of the Little Ice Age, temperatures plummeted, the growing season in England was about five weeks shorter that it was during the twentieth century's warmest decades' (Fagan

2000:113). In the Rocky Mountains, the source of the Saskatchewan Rivers, the cold was accompanied by a significant advance of glaciers:

> The reconstructed cold spell in the late 1600s immediately precedes the formation of the outer LIA moraines at about 20% of the glaciers in the Canadian Rockies suggesting that the glaciers responded directly to cool conditions at the end of the seventeenth century (Luckman and Wilson 2005:137).

Tree ring reconstructions from the Cypress Hills indicate that drought accompanied the cold. Five consecutive years of drought have been observed between 1688 and 1692 (Sauchyn and Skinner 2001:266). Cold conditions and drought persisted in the SSRB through the first decades of the 18th Century. The maximum advance of the Athabasca glacier has been dated to 1714 (Luckman 2000: 94). Another drought period was recorded from the Cypress Hills between 1719 and 1723 (Sauchyn and Skinner 2001:266).

Streamflow reconstructions of the South Saskatchewan River show that a drop in water levels corresponded to the cold and drought of the early 1700s, as reduced melting in the mountains was providing less water in the river. The time from 1700 to 1725 is among the lowest flow periods of the last 500 years. The years 1721, 1720, and 1717 are listed as the three lowest years of mean stream flow in the South Saskatchewan River between 1470 and 1992 (Case and MacDonald 2003:711). The period is identified as one of only two periods of hydrological drought (where annual stream flow is less than the median for three or more years in a row) on the South Saskatchewan since 1470 (Case and MacDonald 2003: 710).

During this harsh climatic period, both the fur trade itself and information on the interior were reduced during the French occupation of HBC posts on Hudson Baybetween 1697 and 1713 (Smyth 2001:61-62). The trade declined considerably during this period because of the inability of the French to provide dependable support for their newly occupied establishments. No ships reached Fort Bourbon (York Factory) between 1708 and 1712.

Russell noted that even when supplies did make it through to York Factory there was still an ever-present threat of starvation among middleman traders making the journey from the inland region to Hudson Bay (1991:127). One discussion of conditions in the early 18th Century noted that, ""Starvation" becomes a frequent theme in the writings of the HBC employees and French traders in the Bay" (Hurlich 1983:148). Conditions did not significantly improve when the English regained control of their possessions. In the fall of 1715, York Factory received no supplies from England. The following spring, as many as one third of those who had undertaken the journey to the coast reportedly perished from starvation (Morton 1939:136).

The overland trade from New France was also moribund during this period. The official French fur trade was closed from 1697 to 1715 because of a fur glut in European markets. The overland trade of the French grew slowly, by the 1730s, they had established a post

on Lake of the Woods and on the Lower Assiniboine River near the community of Portage la Prairie Manitoba which undermined the British trade at York Factory (Smyth 2001:76). The plodding expansion of the French into the west and the long period of English inaction during the middleman trade served to delay the effects of the trade on the inhabitants of the SSRB.

In the regions surrounding it however, even the minimal presence of Europeans brought warfare and especially disease to previously unexposed populations. Military conflict broke out in the Boundary waters region, east of Lake of the Woods by the early 1730s over control of the water route to the east and access to traders (Moore 1927:160-161). Warfare spread west along the Missouri Basin as access to European weaponry upset regional balances of power.

Even more destructive was the spread of disease. In the mid-1730s, a smallpox epidemic spread from the eastern seaboard to the Red and Missouri Rivers (Daschuk 2002; 55-64; Taylor 1977:79). The infection may have spread as far west as the foothills of the Rocky Mountains where it may have contributed to the end of the Kutenai occupation of the plains and foothills of southwestern Alberta (Schaeffer 1982:8). On the northern Great Plains of the United States the epidemic of the 1730s and another smaller outbreak in the early 1750s have been identified as a possible cause of widespread depopulation and group dislocation (Johnson 1998: 332).

While a full discussion of the demographic and military fallout out of the epidemic is beyond the scope of this discussion, the reverberations of the epidemic were almost certainly felt in the SSRB. Mortality during "virgin soil epidemics" of smallpox where infected populations have no previous exposed to the disease can suffer mortality rates as high as seventy-five percent (Daschuk 2002). Death rates of this scale would have resulted in swift demographic and territorial realignment, changing the ethnic makeup of infected regions in a very short time.

A possible indication of the disruption in the aftermath of the epidemic was an anomalous occupation along the Bow River dated to approximately 1740 (Forbis 1977:15). The Cluny Site, located on what is now the Siksika (Blackfoot) Reserve near Gleichen Alberta was a fortified earthlodge village, "unique on the Canadian Plains" (Forbis 1977:1). Richard Forbis, who excavated the site remarked that because the village took a considerable effort to build:

> I would infer that the prehistoric residents had every intention of remaining at the site for some considerable period of time. Yet nothing suggests that they did. Certainly the archaeological evidence gives no indication of intensive or prolonged occupation (1977:6).

The identification of the builders of Cluny village and their ceramic affiliation, known as "One Gun" has presented a challenge to archaeologists. Recent interpretations suggest that the site was built by people who migrated north from the Missouri River (Peck and Hudecek-Cuffe 2003: 94-96; Walde 2004). The site produced no evidence of either bison

processing or of agriculture (Forbis 1977:72). Because the site was as far as 600 km. north from similar villages on the Missouri River, horses would have been essential for the migration to the bank of the Bow River (Forbis 1977:74).

The timing of the occupation and the placement of the site, overlooking the strategically important ford known as Blackfoot Crossing, may indicate that the site served as a trading location for horses to the SSRB. Although Cluny and the people who built it remain an enigma, the conversion to equestrian culture in the western SSRB was well underway by the time of the short-lived occupation of the village on the Bow River.

The spread of horses through the SSRB was undoubtedly facilitated by an easing of weather conditions after the fierce cold in the first decades of the 18th century (Beaudoin 1999:32). Reconstructions of northern hemispheric temperature indicate a slight drop in temperatures in the early 1740s resulting from volcanic activity including the eruption at Shikotsu, Japan (VEI 5) in 1739 (Sigurdson et al 2000; Briffa et al 1998:451, 453). A precipitation reconstruction of the Maple Creek area in southwestern Saskatchewan indicates a brief but significant decline in rainfall in 1739 (Sauchyn and Beaudoin 1889:349). The first documentary evidence recorded from within the SSRB indicates that mild conditions continued into the mid 1750s.

Anthony Henday's Journey to the SSRB, 1754-55

Anthony Henday was the first HBC servant sent inland to the plains since Henry Kelsey's journey six decades earlier. Although French traders had already established themselves as far as the Forks of the Saskatchewan River by the time of his expedition, his journal is the first and most detailed account of the changing situation in the SSRB during the mid 18th Century. The surviving versions[5] of Anthony Henday's journals provide the first direct references to the presence of horses within the SSRB and an indication of the relatively warm weather he experienced during his winter inland. He was also the first European to travel to the Red Deer River where he encountered a large encampment of "Archithinue" who according to Smyth were "undoubtedly Blackfoot" (2001:114)

By the 1750s, horses were present at the northeastern margins of the SSRB, near the forks of the Saskatchewan River. (Meyer and Russell 2004: 234-235). Henday's guides during his sojourn on the plains were the Pegogamow Cree[6], who were themselves undergoing major changes resulting from their increasing participation and reliance on the fur trade and their move from the boreal forest to the parklands and adjacent grasslands of central Saskatchewan (Meyer and Russell 2004: 217). In their journeys to both Hudson Bay and the grasslands of Alberta, they exhibit the quintessential adaptation to the middleman trade.

While Henday was with the Pegogamow in the winter of 1754-55 he noted they had two horses and had yet to adopt a full equestrian lifestyle using them to carry goods rather than as mounts (Meyer and Russell 2004:234-235; Belyea 2000:182-183). They acquired only a third horse from a group of Assiniboine on 20 September 1754 (Belyea 2000: 90). As Henday and his Cree guides crossed the SSRB on foot toward the Red Deer River,

they were anxious of an attack by the equestrian Shoshone.[7] Six members of another Cree band had recently been killed by a force of nearly 200 of the enemy, who were still the dominant power in the region (Belyea 2000:88-89).

The relative measure of control asserted by the Shoshone and their equestrian allies, the Crows and the Hidatsa, over the southern Canadian plains may have encouraged a brief period of migration northward of peoples from the Missouri basin. A number of mud houses attributed to the Hidatsa, who were closely tied to the Crow, were built on the Upper Missouri and in the southern SSRB during the mid 18th century (Binnema 2001:93).

Dale Russell asserts that the enigmatic group identified as the "Nayatamee Poets", the people Henry Kelsey had been sent to meet and encourage trade in the early 1690s, were Hidatsa (1991:210). An opposing interpretation by David Reed Miller posits that the people that Kelsey encountered were the Atsina (Pers. Comm. 2005) Both groups where then occupying portions of the SSRB and had extensive trade relations with the villages of the Middle Missouri, exchanging meat for agricultural produce (Bamforth 1990:364). Southern groups, such as the Shoshone, the Hidatsa and the Crow were certainly a formidable presence on the southern plains in the mid 18th century. Yet, in the wake of epidemic disease episodes along the Missouri River, coupled with the spread of European weapons to northern groups affiliated with the fur trade, southern dominance of the SSRB was challenged in the middle of the century.

Oral accounts dating to the 1730s stressed that firearms were critical to the first victory of Peigan and Cree fighters over the Shoshone near the Eagle Hills (Hopwood 1971). Firearms were essential to westward expansion of the Cree and Assiniboine, as well as a southward push of the members of the Blackfoot alliance which drove the Shoshone and allies toward the Missouri and beyond by the end of the 1700s (Calloway 1982:42).

Sixty years after Kelsey's journey inland, Henday's mission was to encourage the members of the Blackfoot alliance to increase their trade and, if possible, to have them travel to Hudson Bay itself. As Henday and his guides approached a large multi-ethnic encampment on the Red Deer River, the group was met by forty mounted warriors (Belyea 2000:102-103). Although the young explorer was well received by the leader of the Blackfoot, the latter made it clear that Henday's invitation for them to undertake trips to the Hudson Bay was in vain:

> [h]e made the answer that it was far off, and that they could not live without Buffalow's flesh, and that they would never leave their Horses, and mentioned many more obstacles, which I thought was very Just, the chief of which was that they never wanted provisions…" (Belyea 2000:105).

On leaving the encampment, Henday noted the inhabitants of the region were not commercially exploiting the local supply of beaver. The few beaver taken were used for clothing and feasts and Henday estimated that twenty times as much could be harvested if they so chose (Belyea 2000:112). What the young Englishman did not understand was

that the conservation of the beaver was a adaptation strategy to mitigate the effect of drought in the arid country of southern Alberta (Morgan 1991).

As Henday's party meandered back toward the forks of the Saskatchewan over the winter, he consistently remarked on the mild weather conditions. He did not have to replace his leather clothing with furs until 10 January 1755 (Belyea 2000:141). A week later, he observed that "this part of the Country is not to be Compared to York Fort for cold, have had nothing on my feet but one pair Buffalow shoes with the hair inwards, and a thin flannel sock…"(Belyea 2000:143).

The only reference to the condition of the horses during the winter was made on 18 January, 1755, when Henday noted, "My Horse begins to loose flesh" (Belyea 2000:144). Their horses subsisted on grass that was cut by women for them and on "willow tops" (Belyea 2000:145,148). Snow conditions must have been light. He did not wear snow shoes until 6 February (Belyea 2000:150). The only severe weather noted was a continuous snowstorm for two days and nights between 22 and 23 March, "we now have more snow upon the ground than we have had this winter" (Belyea 2000:164).

Henday's journey was not without hardship. Short of ammunition, his group was forced to eat their dogs in early May 1755. By mid-May, their diet was improved when small groups of bison were killed along the shores of the Saskatchewan as the group moved eastward toward a group of "Archithinues," probably Atsinas (Belyea 2000:175-180). The versions of the journal differ on the number of horses the Atsina possessed (between 20 and 50), but all noted their excellent quality (Belyea 2000:180-182).

Other than the shared sense of dread over the danger posed by the Shoshone, the Henday journal indicates that inter-tribal relations were peaceful. In assessing the period, some authors have advanced the notion of a longstanding military and trade alliance between the Cree, the Assiniboine and Blackfoot during the 18th century (Milloy 1988; Binnema 2001). Others have refuted this claim, most notably David Smyth (2001:127).

Trade relations during the 1750s appear to have been beneficial to all on the northern plains with the exception of the Shoshone and their southern allies. Owing to a mutual fear and hatred of their enemies, the Cree and the Blackfoot generally maintained good relations during the 1750s and 1760s. What disputes that did arise were largely over horses. Binnema noted that these minor early conflicts over horses escalated and became increasingly significant, "[t]hese hostilities were likely related to the earliest Cree and Assiniboine raids against Blackfoot bands, which were destined to become the major irritant in Cree and Assiniboine relations with their neighbours in the years to come" (2001:99).

Although raids "did nothing to encourage friendships between horse-rich and horse poor groups," squabbles over occasional horse thefts did not escalate into full-blown warfare until the beginning of the 1800s. The Blackfoot and their allies were intent on maintaining their supply of European goods from Cree and Assiniboine middleman traders so open conflict with their suppliers would have been against their interests. This

situation prevailed at least until the establishment of trading posts on the North Saskatchewan River and the lower SSRB in the 1780s (Binnema 2001:102). In the final two decades of the century, the severe deterioration of climatic conditions and its impact on horse populations may have been the spark that ignited the tensions caused by the arrival of Europeans into open warfare.

Although the number of European weapons available to groups in the SSRB during the mid 18th century period was limited, access to even a small number of guns was a tangible benefit of even marginal participation in the fur trade. The few guns available to the Blackfoot, the Cree and the Assiniboine contributed to a major shift in their shared conflict with the Shoshone, who had little or no access to guns during this time.

By the 1750s, the advantage gained by even a few firearms allowed the southern members of the Blackfoot alliance to begin raiding toward the south into the horse-rich country occupied by the Flat Heads (Saleesh) (Milloy 1988:10-11). The raids forced the Flat Heads to retreat to the protection of the mountains. By the 1780s, the combination of smallpox and the inability of the Shoshone to acquire guns conspired to make them "nearly irrelevant militarily," and forced their retreat into the high country of the Missouri Basin.

The forced removal of the Shoshone marked the end of their three hundred year dominance of the southern SSRB. As the Shoshone were pushed southward, the Blackfoot and their allies returned to their ancestral home in southern Alberta from the northern margins of the SSRB and consolidated their control over the area (Binnema 2001:102-103).

Through the late 1750s, the Hudson's Bay Company continued to send men inland in an attempt to counter French competition. By the end of the decade, the fall of New France led to the abandonment of the French posts. Without French competition, the HBC briefly regained its monopoly and no longer felt compelled to make a concerted effort to increase the inland trade (Morton 1929:257). However, the HBC monopoly was to prove short-lived when in the late 1760s, traders from Canada, this time under the control of English and American entrepreneurs, arrived in the country east of the SSRB. It was to mark the beginning of the end of the middleman trade. Those groups with a middleman role found themselves economically displaced; with traders establishing themselves in the region the middleman function became obsolete. Western Canada was subjected to an unprecedented level of competition between the HBC and a myriad of smaller ventures originating in Québec.

Ruthless competition led to the unrestrained resource extraction, especially of furs and bison meat, and prevailed for the next half-century. It was at this juncture that the presence of traders on the plains fundamentally changed the economic orientation of First Nations in the west from one of subsistence to one centered on commercial gain. Middleman groups were also quick to adopt their new role as provisioners. In the SSRB, the shift from subsistence to commerce was the result of an increased demand for food supplies to support the ever-growing trade in the woodlands northwest of the SSRB.

Bison herds continued to be the primary resource of the SSRB as it had for millennia, only now they had a commercial value. The exploitation of the species was essential to providing the fur trade brigades with pemmican for their journeys from the bay to the forests of the far northwest, and was largely embraced and undertaken by First Nations hunters.

This new function of feeding the fur trade brought the aboriginal inhabitants of the SSRB unprecedented levels of short term prosperity. It also brought new levels of economic competition and conflict over the herds. As commercial predation of the bison increased, the inhabitants of the SSRB experienced unprecedented levels of climatic variability and vulnerability.

The SSRB's climate in the mid 18th century has been characterized as a experiencing a respite from the otherwise harsh conditions associated with the Little Ice Age (Beaudoin 1999). Tim Ball noted that the 1760s signalled an important shift in the climate of the Hudson Bay region, as the Arctic Summer Front moved northward from York Factory to Churchill, indicating a regional warming trend (1985: 221-222). The second half of the 1750s was marked by a significant rise in volcanic activity, with at least four significant eruptions between 1754 and 1761[8] (Sigurdsson et al 2000).

The cumulative impact of volcanic debris may well have countered the warming trend described by Ball. The sudden rise in volcanic activity and a strong El Nino event in 1761 (Quinn et. al. 1987:14,450) may have contributed to the drought conditions indicated by tree ring data from the Cypress Hills from 1761-1764 (Sauchyn and Skinner 2001:266). Drought conditions were reported on the central plains of the United States to the south and southeast of the SSRB for the period between 1761 and 1773 (Isenberg 2000:27).

The effects of the arid conditions and accompanying fires during the 1760s were documented by First Nations people themselves in their yearly winter counts[9]. The Dakota in the northeastern American Plains, recorded the year of 1762 as "the people where burnt winter" (Mallery 1972a:304-305). Among the Peigan in Alberta, 1768 was recorded as "big fire-camp burned" (Rackza 1979:22). The journals of the few traders inland from Hudson Bay also point to the effects of low precipitation and fires (Russell 1991:97).

During his inland journey west over the winter of 1763-64, Joseph Smith and a group of woodland Cree were forced to skirt the burned woods on the edge of the of the plains after shallow water forced them to abandon their canoes in early September west of the forks (Russell 1991:97). In late September 1768, as William Pink along with his Cree companions traveled west from the forks of the Saskatchewan and were caught in a major prairie fire. Although they made a backfire to protect themselves, Pink reported, "the Tents were Severill Bournt and Four Wemen ware Bournt to Death and Severill others hands and Feate Deaspartey Bournde" (Russell 1991:101). Although fire had been used as a method to control the movement of bison for millennia, the negative impact of fires

among plains groups indicates that dry conditions resulted in unintended damage from burning.

The HBC continued to send a limited number of servants inland to the plains during the 1760s. Their journals indicate that groups inhabiting the SSRB were changing their behaviour as the fur trade took hold. Although Russell noted that the journal kept by the barely literate Joseph Smith in 1763-64 was problematic, he noted, "it is clear that his Cree companions were wintering as long as possible, on the grasslands [along the South Saskatchewan River near the Eagle Hills] and only entering the edge of the forest, while remaining within the wintering range of bison…" (Russell 1991:98).

If Russell's interpretation is correct, it signals that the Cree who travelled with Smith maximized their time on the open grasslands during winter, and it represents a major shift in the seasonal occupancy of the region. Vicker's and Peck recently challenged Russell's view, noting that "winter occupations by the Plains Indians were dependent on a critical resource: wood" (2004:114). If Smith's guides did stay on the open (and largely treeless) plains through most of the winter to trap, it indicates that they were either newcomers to the region or that they abandoned the longstanding practice of over-wintering in the shelter of valleys in order to hunt for profit.

William Pink, who made four consecutive winter journeys west in the second half of the 1760s also reported on the changing situation in the grasslands. On his first trip in the fall of 1766, Pink and his Cree guides travelled west on foot after leaving their canoes near the Birch Hills (Russell 1991:99). They probably made their way to Eagle Creek, just west of the SSRB, to investigate reports that beaver were plentiful. By mid-November, they traveled southwest through open country to hunt bison. Early in January 1767, they encountered a large group of "Southern Assiniboine" who had many horses. According to Pink, they did not use canoes and had not directly traded with Europeans (Russell 1991:99-100).

The following year, Pink walked west along the north side of the North Saskatchewan River as far as Moose Lake, 80 km. inside the present boundary of Alberta. At Moose Lake, Pink's guides left him to raid the country to the northwest, probably to Lesser Slave Lake (Russell 1991:100). The Cree incursions into the woodlands of Alberta were similar to those which drove the Sarcee to the plains (Dempsey 2001:629). The impetus for the Cree expansion into the country was the availability of beaver. By the late 1760s, Pink indicated that beaver were becoming increasingly scarce along the North Saskatchewan River and that Cree and Assiniboine suppliers were compelled to hunt in Northern Alberta (Russell 1991:100).

By the late 1760s, winters on the northern plains became increasingly severe. Binnema noted that the winter of 1767-68 was unusually cold and snowy on the plains. The few bison present were in poor condition (Binnema 2001:206 fn.56). In 1768-69, Pink again wintered in eastern Alberta. By the end of October, Pink and his companions moved south of the North Saskatchewan hunting wolves while keeping a constant guard against Shoshone attack (Russell 1991:101). By December, with snow was too deep to continue

the hunt, they moved north to a birch covered hill where they made snowshoes and sleds. From there, they went eastward between the branches of the Saskatchewan to their canoe building area (Russell 1991:101). Large numbers of Cree and Assiniboine were assembled there to build canoes to proceed east in the spring (Russell 1991:101). A week after his departure from the site, Pink encountered his first bison pound:

> …I found Staying a pounding of Bouflou 31 Tents of Sinnapoits So heare the Indaines are Gowing up for provisions this is the First pound I have seen in this in Land Contrey it is Made in a Dale it is Railled Round with large Woon it is consisting of to Hundred and Nointey Feat Round and 7 feet High the down way or the way that the Beast Come in at is 40 Feet Broade and at the Side of the Hill that slopes Down in to the Pound the Lardge Stikes are lef Slooping down Hill and other ones Laide on top of them for the Boffow to Ron down upon and Jump of in to the pound (Russell 1991:102)

Russell noted his own surprise at this being the first pound seen by Pink, who by that time had spent three winters inland, though the former acknowledged it is one of the first accounts of pounding in the historic record (Russell 1991:102). Russell also remarked that during this journey, there are no indications of trade with any other groups (1991:102).

It should be noted that Pink was traveling with a woodland Cree group who were searching for beaver on the northern margins of the plains and if they were trappers, rather than middlemen, they would have had little occasion to meet long-time residents of the region used the pound technique in hunting. The latter would have been using strategies developed during the pedestrian period such as: the use of non-disrupting hunting practices (such as the pound described), an aversion to beaver hunting, and they would have been unfamiliar with the use of canoes.

On his final journey inland in 1769-70, Pink travelled through the SSRB with a group of Cree middlemen (Russell1991:102). The encouragement of trade appears to have been their primary objective. Early on, he sent tobacco to a camp of 150 Assiniboine "that Never see the Forte the[y] Cannot paddle" (Russell 1991:102). Pink and his companions were mounted for their journey to the grasslands. On 10 September, 1769, they crossed the South Saskatchewan River on rafts, letting their horses swim (Russell 1991:102).

Although bison were plentiful west of the river, Pink's companions worried about their journey to the grasslands where both beavers and wolves were reported to be in large numbers, "…the Reason that the Indaines Dos Not Gow after them the Contrey Quite Open and those Indaines southwarde [the Shoshone] having all horses is the Reason the Indaines that I am With are in Feir of them" (Russell 1991102-103). Clearly, the Shoshone with their abundance of horses still retained their tactical advantage over the horse-poor Cree.

Pink and his guides then travelled to the Eagle Hills, just west of the SSRB. In December, tobacco was sent to encourage trade with a group of Assiniboine a separate party of Kainai (Bloods) and Siksika (Blackfoot)[10], who were on their way to pound bison (Russell 1991:103). Pinks gave tobacco to a group of Kainai (Bloods) "for Encouradgement for to Snare Woulves for the[y] trap none" (Russell 1991:103). Clearly, the importance of the trade was not yet evident to all the inhabitants of the SSRB by this time.

Pink and his Cree guides later assisted the Blackfoot with the building of a pound and then departed to trap wolves. While the Cree trapped wolves, the Siksika snared them in pounds, a more efficient technique (Russell 1991:103). According to Russell, the Blackfoot use of the snaring technique described by Pink underscored the differences between the former and the Cree and Assiniboine:

> It is not clear why the Blackfoot should have developed this technique when they were only occasionally trading with the Cree and Assiniboin, and why the snaring had not been adopted early by the latter groups. It suggests that the Blackfoot groups had a long tradition of trading wolf skins to neighbouring groups whereas the Cree and Assiniboin, in their trade with the bay, had concentrated on beaver and other prime furs (1991:103).

Although the Russell's observation does not make a direct connection to Morgan's assertion that the avoidance of beaver hunting was a foundational adaptation to plains life (1991), it does support the notion that while the Blackfoot did not trap beaver, the Cree and Assiniboine who were moving west in were intent on doing so.

On his return to the spring canoe building rendezvous site, Pink reported that a large number of people had gathered there. Russell estimated the population of the temporary encampment to be between 900 and 1100 people (1991:104). Pink indicated that only a portion of the gathered mass were intent on traveling to Hudson Bay, "… the Old people and children are Gone in land with the Horses and Dogs and are a Going to the plase whare the are to Stay till those Canues up from the Forte" (Russell 1991:104). The long separation of the able adult population from the old and the young, in addition to the difficulty posed by a journey to the Bay, would prove to be an important reason for the abandonment of such journeys when traders came to the plains in the following decade.

In the spring of 1770, Pink noted reports that indicated the Shoshone were in possession of a few firearms[11] (Russell 1991:104) Luckily for those who reported this to Pink, the Shoshone were yet not adept in firing their newly acquired weapons (Russell 1991:104). Anxiety regarding attacks by the Shoshone were most profound during the autumn when groups were in the vicinity of the Eagle Hills and on the lower South Saskatchewan River (Russell1991: 05). Although the Shoshone had gained some access to weapons, probably through the Mandan trade fair on the Missouri River, the expansion of the fur trade into the SSRB and the northern Great Plains, provided those involved in the northern trade

with ever-growing firepower. By the end of the 1770s, the balance of power in the SSRB shifted in favour of the northern tribes.

Matthew Cocking's Report, 1772-1773

By the early 1770s, HBC returns plummeted as Montreal based traders increased their western presence. In an effort to improve their share of the inland trade and hone their information gathering which had hitherto been described as "incoherent and unintelligible", the HBC sent Mathew Cocking from York Factory to collect data from the western inland regions in 1772-73 (Russell 1991:105-106).

Cocking's report is significant for the unprecedented quality of information on the state of affairs inland and its discussion of the declining climatic conditions on the plains. Cocking's accounts revealed, much like those of Henday and others two decades previous, that inhabitants of the SSRB were still preoccupied with their ongoing hostilities with the Shoshone. In August, having just crossed the South Saskatchewan River, several unaccompanied horses were spotted by Cocking's group and were assumed to belong to the Shoshone (Burpee 1908:103). Three weeks later another horse was spotted and also presumed to belong to the Shoshone, heightening the fear among Cocking's companions (Burpee 1908:106).

The Pegogamow had increased their horse herd from the few reported eighteen years earlier by Henday. Cocking wrote, "We have several pack-horses with us at present, lively clean made animals, generally about 14 hands high & of different colours" (Burpee 1908:106). Although Cocking made no reference in his journal to his party actually riding horses, their conversion to equestrian hunting practices appears to have already begun. The animals provided plains people with an alternative to hunting on foot. Cocking wrote, "an Indian need only mount his Horse, taking his Gun or Bow, & in a short time return with his Horse loaded with meat, supplying his neighbours also" (Burpee 1908:107). The dangers of the horse were made clear to Cocking two weeks later, when one of his campmates broke his leg after falling from his mount (Burpee 1908:108).

As Cockings' party made their way through Atsina (Gros Ventre) country southwest of the Eagle Hills (just south of the elbow of the North Saskatchewan River), signs of pedestrian hunting were still evident. In early October, Cocking noticed several stone heaps on the crest of high hills that had been used as blinds in pounding bison by the "Archithinue" (Burpee 1908:108; Morgan 1991:130-131). A day latter, as Cocking passed through an abandoned camp, he saw "part of an earthen vessel" used to prepare food (Burpee 1908:108). As they continued, Cocking recorded further evidence of the complexity of adaptation to the plains, "[t]he natives shew me a tobacco plantation belonging to the Archithinue Indians about 100 yards long & 5 wide, sheltered from the northern blasts by a Ledge of poplars; & to the Southward by a ridge of high ground" (Burpee 1908:109).

The groups responsible for the artefacts described by Cocking were probably only seasonal inhabitants of the area. During the end of the pedestrian era, groups would have continued to retire to the shelter of valley complexes in the fall. In travelling through the open country in the fall, Cocking and his guides may have been exposed to environmental constraints rarely experienced by those whose seasonal movements took them to the valleys each fall where wood, shelter, and water resources were reliable. In early October, Cocking's group was forced to dig for water (Burpee 1908:108). On 23 October, they arrived at an Archithinue pound that had been used to great success the previous spring (Burpee 1908:109). After a few days of failure, Cocking conceded that his Cree companions were "not so expert at pounding as the Archithinuee Natives" (Burpee 1908:109). Other sources indicate that the Cree were not considered to be as proficient at bison pounding as the Assiniboin (Meyer and Russell 2004:239). The inability of the Cree to successfully pound bison indicates their unfamiliarity with the tradition and points to their recent arrival to the region.

In early November, it became apparent to Cocking that he might not encounter the Archithinue; the Atsina people, who were held in high esteem. He noted this as: "a great disappointment to my Companions, who used to Trade Horses & Buffalo skin garments, for winter apparel; also Wolf-skins and other furs" (Burpee 1908:110). He expressed his personal disappointment at the possibility of not meeting those who supplied horses to his guides, "I shall be sorry if I do not see the Equestrian natives who are certainly a brave people, & far superior to any tribes that visit our Forts: they have no dealings with Europeans, but live in a state of nature to the S.W.Westerly" (Burpee 1908:110). Cocking's hopes were raised by the arrival of a small deputation of Archithinues on 21 November, though severe weather postponed the arrival of the larger camp until 1 December 1772 (Burpee 1908:110).

On the arrival of the group, Cocking entered what Smyth called "one of the most important surviving records relating to the "Archithinue" (Smyth 2001:150). Cocking reported:

> The tribe is named the Powestic-Athinuewuck (i.e) Water-fall Indians [Atsina].There are 4 Tribes, or Nations, more, which are all Equestrian Indians, Viz., Mitho-Athinuwuck or Bloody Indians, Koskitow-Wasthesitock or Blackfooted Indians, Pegonow or Muddy-water Indians & Sessawuck or Woody Country Indians (Burpee 1908:110-111)

This was the first specific description to what Smyth called the Niitsitapi alliance, know more widely as the Blackfoot Confederacy (Smyth 2001:150). Their enemies, also called Archithinue to this time, were the Snake (Shoshone), the wah-te or Vault[12] Indians (the Hidatsa) the Kutenai and the Flat Head (Smyth 2001:150). All of the enemy groups described by Cocking eventually were later raided by the Blackfoot alliance for their horses.

Relations between the equestrian Atsina and the Cree from Cocking's party were good[13] and although the arrivals refused the Englishman's request to come to the Bay to

trade. They more than ably assisted the Cree in their reestablishment of the pound (Burpee 1908:111). A few days later, the Atsina told the Cree that the time for pounding had passed, "hungry prospect", Cocking lamented (Burpee 1908:111). Although their time with the Atsina was brief, Cocking viewed the group with enthusiasm, even envy:

> In all their actions they far excel the other Natives. They are well mounted on light Sprightly Animals…They likewise use pack horses, which give their women a great advantage over the other Women a great advantage over the other Women who are either carrying or hauling Sledges every day of the year. They appear to me more like Europeans than Americans (Burpee 1908:111).

In mid-December, the Atsina departed to the west on a war party against the Shoshone. The cause of the hostilities was attributed scarcity of food, "they inform us that many of their Countrymen are sickly and Buffelo(sic) very scarce that way so that they are greatly distressed for want of food. On this account they say the war pipe has been smooked(sic)…" (Smyth 2001:152). The struggle involving the Blackfoot and Atsina against the Shoshone over access to bison indicates that the herd movements were abnormal, possible the result of a weather anomaly such as a severe winter. Under normal conditions, the herds would have gathered in large numbers in the foothills of southern Alberta to winter.

As Cocking and his guides headed east from the open plains between the branches of the Saskatchewan, conditions became increasingly harsh. By 9 January 1773, the snow was 18 inches deep. Several Indians suffered from frostbite. They crossed the North Saskatchewan River ten days later where Cocking reported that the ice was 26 inches thick[14] (Burpee 1908:113).

Their plan to pound bison was foiled by the shift of the bison even further to the east, to the shelter of the parklands. By the last week of January, the first horse died "for want"[15] (Burpee 1908:113). During the first two weeks of February, two people perished. On the 16th, several horses expired "for want of food; which they say is the case at this season of the year." The following day, [t]wo more horses died with hunger & cold, provisions scarce" (Burpee 1908:114). To cope with the increasingly difficult conditions, some of the Assiniboine who had been with Cocking's party left for the east to build a bison pound. The Cree along with Cocking, agree to meet them but chose to hunt the occasional bison they might find along the way[16] (Burpee 1908:116).

By the end of March, Cocking's party arrived at a pound occupied by four tents of Crees and 20 of plains Assiniboine, "[t]he last are most part unacquainted with canoes" (Burpee 1908:116). Even those experienced in pounding could not always count on complete success. According to Cocking, "they bring droves to the pound, but only few enter into it. (Burpee 1908:116). By 24 April, enough ice was off the North Saskatchewan River to cross in temporary skin boats. Almost three weeks later, Cocking embarked with those he could persuade to travel to the Bay (Burpee 1908:117).

In their discussion of Cocking's journey, Meyer and Russell noted that in addition to the deaths of the horses, the movement of the bison to the northern edge of the parklands north of the North Saskatchewan River were clear indications of a severe winter (2004: 222). Although it cannot be corroborated from other sources, the Piikani (Peigan) Winter Count listed 1773 as when "when many horses were drowned" (Rackza 1979:23). This may have been the result of deep snow during the winter in south-central Alberta which forced the bison southward and prompted the military action of the Archithinue against their southern adversaries.

Table 1 provides a rough comparison of conditions experienced by Cocking during the winter of 1772-73 and Hendy in 1754-55, both men were near the northern margins of the SSRB. It indicates that the colder temperatures of the 1770s brought hardship in both the food quest on the northern plains, as bison headed toward the shelter of the forest, and in the maintenance of horse stocks, as cold and hunger took their toll. Clearly, the communities of the later period were at a heightened risk to severe weather.

Table 1: Comparison of Climatic Conditions Encountered during the Winters of 1755 and 1773

Anthony Henday 1754-55	Matthew Cocking 1772-73
Jan. 11, 1755 - "The winter is set in in good earnest so that we change from leather to Fur cloathng"	Jan. 9, 1773- "snow about 18 inches deep" Jan.10-18 "several Indians have had their toes frozen… winter now set in obliged to cloath accordingly"
Jan. 17-"This part of the country is not to be Compared to York Fort for cold, have had nothing on my feet yet but one pair Buffalow shoes with the hair inwards, and a thin flannel sock, the snow about 6 inches deep, and the ice about the same thickness, the falls on the Creeks not yet frozen over on creeks not frozen over."	Jan. 19- "Ice in the River 26 inches thick" (*N. Saskatchewan)
Jan. 18-"Indians employed killing moose and buffalo… I have nothing on my feet as yet but a thin flannel sock, and a Buffalo skins shoe with the hair inwards: My Horse begins to loose flesh."	Jan. 22 "the Buffalo are so scarce that the Indians are distressed for want"
Jan. 23-"Indians doing little more than feasting on fat buffalo flesh" "Men feasting, and women getting Grass for the Horses."	Jan. 26-30 "A horse died for want, & ourselves hard pinched for food"
Feb. 1-"my horse feeds on willow tops"	
Feb. 6 "hunting and trapping, good luck, wolves and foxes plenty, killed 4 moose and 2 buffalo…Walked in snowshoes for the first time this winter."	Feb. 3-"Buffalo are very scarce; plenty of Waskesew but no ammunition;… A woman died."
Feb. 15-27 "traveling and sometime laying	Feb. 16 "An elderly man died; also several

by killing Buffalo, Moose &c in a pleasant & plentiful country"	horses [died] for want of food; which they say is the case at this season of the year. Feb. 17 "Two more Horses died with hunger & cold, provisions scarce."

Source: Belyea, *A Year Inland: The Journal of a Hudson's Bay Company Winterer* (Waterloo: Wilfred Laurier University Press, 2000, 141-151. Burpee, "Matthew Cocking's Journal." *Proceedings of the Royal Society of Canada, Series 2* (1908), 113-114.

The deepening cold was not the only increased hardship reported in the Cocking journal. The vulnerability of aboriginal groups to climatic stimuli increased with the ever-growing influence of market forces. Even before 1770, the adoption of equestrianism and the growing demand for provisions to supply the burgeoning number of Montreal-based traders, "encouraged some western Cree bands to turn increasingly toward the resources of the plains" (Binnema 2001:109).

The inland journals of the HBC in the 1760s and early 1770s illustrate the nature of the increasing orientation of Cree groups westward towards the grasslands. The increasing access to firearms and adoption of horses among groups integrated into the fur trade brought momentous changes to the inter-group relations across the plains. According to Binnema:

> By 1770 equestrianism had spread to Indian bands throughout the northwestern plains and beyond. Gun ownership had not; the growing disparity between the gun-rich northern bands and gun-poor southern groups is one of the major themes of the period between 1770 and 1805. Existing patterns of warfare, trade and diplomacy intensified. The coalition of horse-rich and gun-poor bands that dominated the northwestern plains between 1700 and 1750 was thrown on the defensive against the bands with secure access to European weaponry. The large horse herds of the southern groups gave their owners little military advantage; they seemed only to invite enemy raiders. The supply of guns and ammunition that the northern groups enjoyed was militarily decisive. (2001:108).

The need for horses became the primary motivation for attacks on the southern groups from the SSRB and the northern plains. As they acquired horses, they assumed a new level of risk in relations to climatic variability. The cyclical depletion of horse herds, principally due to severe weather, triggered military incursions by the Blackfoot alliance as well as the horse-poor Cree and Assiniboine against the Shoshone and other horse-rich groups in the late 18th century. This pattern of conflict was to last for decades.

The Assiniboine who were early participants in the middleman trade were also transforming their economic strategies during this period. Before the last quarter of the 18th century, they withdrew from their longstanding role in the middleman trade and they shifted toward provisioning the growing population of Europeans in the west.[17] Dale Russell noted that the increasing westward orientation of the Assiniboine was the cause

of their abandonment of the group's annual trading journeys to Hudson Bay in the 1770s (1991:125).

By the end of the decade, the Assiniboine "were staking a monopoly in the buffalo trade" on both branches of the Saskatchewan River (Colpitts 1997:17). The Assiniboine were highly protective of their new role as provisioners of the trade. Part of their strategy to control the ever-expanding market for provisions was intentional burning near the posts to drive game away from traders. In doing so, they assured a constant demand and a high price for their meat.

By the time Cocking returned to York Factory in the spring of 1773, the HBC had already decided to counter the Montreal trade on the plains and parklands, what A.S. Motron called "a great invasion of pedlars" by establishing a series of new inland posts (1973:287). An advance party was sent from York in late August 1773, to inform the people around Basquia (near The Pas, on the lower Saskatchewan River) of the HBC's intension to build there. The plan was scuttled when low water levels in Northern Manitoba forced them to return to Hudson Bay less than two weeks after their departure (Smyth 2001:155).

Although Canadian traders were operating on the margins of the plains by this time, but the focus of both the Canadian and English expansion in the early 1770s was in the boreal forest and the parklands. The establishment of Cumberland House, on the lower Saskatchewan River (only a few days paddle downstream from the SSRB), the first inland post of the HBC in the west, was initially, a miniscule operation. Because of the Company's inability to acquire canoes, Samuel Hearne and his two men were forced according to Smyth, to "hitchhike" inland with a group who had come to York to trade (Smyth 2001:155).

Hearne's assistant, Matthew Cocking could not even reach the site of the intended post, as his guides refused to take him to the Saskatchewan fearing an epidemic reported to be spreading in the west.[18] Cocking was forced to winter in the region of the Upper Assiniboine River (Smyth 2001:157). When a small company of HBC servants built Cumberland House, the dearth of both fur bearers and food highlighted the motivation for eastern aboriginal groups to gravitate toward the plains and the relative security of the bison. The men at Cumberland underwent severe hardship and were on reduced rations until supplies of moose meat were brought in February 1775 [19].

The Canadian traders just to the north at Portage du Traite underwent such hardship that several of them abandoned the post to try their luck on the plains[20]. The master of Cumberland, Samuel Hearne, hardened by his journey to the across the barrens only a few years earlier, was unimpressed by reports of the local people that the winter had been harsh:

> .. reckon'd by the Indians to be a backward spring, yt there is a full monthly difference between here and Churchill, and the Winter which has been reckon'd very sevear ware not so cold by far as it is at Churchill or York Fort in the mildest winter.[21]

Because of the scarcity of provisions in the forest, Cumberland House was supplied the following season with bison meat brought from the plains and men were sent to winter on the grasslands to lessen the demand for food at the post.[22] Within a few years, dry bison meat, imported from the plains made up the majority of the food consumed at the post (Colpitts 1997:3) The Canadians at the posts further inland were reported to have undergone severe privation through the fall and early winter of 1775 and 1776.

Alexander Henry the Elder told Matthew Cocking, the new Master at Cumberland, that even though many of almost one hundred Canadians were sent to the plains to hunt, large parts of the plains had been set ablaze by the Indians to drive up the price of provisions[23]. Although fish were scarce at Cumberland and the Indians reported "that this winter has been much colder than they have ever known for a continuance" fur returns and provisions were nevertheless considered by Cocking to be a "surprising success".[24]

In his memoir of the fur trade, Montreal-based trader Henry the Elder described the Assiniboine approach to maintaining their horses in the country just below the forks of the Saskatchewan in 1776, "[t]he masters of these herds provide them with no fodder; but leave them to find food for themselves, by removing the snow with their feet, till they reach the grass, which is every where on the ground in plenty" (Henry 1969:296). He noted that the laissez-faire approach to their stock was common among the Assiniboine:

> [T]hat it was their uniform custom to leave their horses, in the beginning of winter, at the first wood where they were when the snow fell, at which the horses always remain through the season, and where their masters are sure to find them in the spring. The Horses never go out of sight of the island assigned them, winter or summer, for fear of wanting shelter in a storm (Henry 1969:316).[25]

Yet, as the climate worsened near the end of the 18th century, Assiniboine herd strategies developed in earlier years when the climatic conditions were less harsh failed and their stocks suffered from significant depletion. The Cree and particularly the Assiniboine were forced to supplement their losses through theft.

By the turn of the 19th century, the Assiniboine were considered to be primarily horse thieves by European chroniclers. James Bird, the trader at Edmonton, said of them:

> These Stone Indians are the most useless and the most troublesome Tribe that inhabit these parts; they kill no furrs, and horse stealing is their trade, their depredations never cease but are extended to all Tribes of natives as well as all the Traders from the Red River to this place…[26]

As Canadian traders flooded into the region along the North Saskatchewan River, the HBC, still dependent on aboriginal canoes to transport their produce to the Bay became increasingly frustrated by the refusal of their suppliers to travel east of Cumberland. On the arrival of a mixed group of Pegogamow and Beaver Indians to Cumberland in the

spring of 1776, Cocking was told "that no Indians from above intend to go to the Fort having traded what furrs they had with the Pedlers and are again gone to war.[27] Clearly, the presence of more traders on the plains and parklands shifted the orientation of groups that had been important HBC allies and middlemen away from the Bay towards the plains.

In addition to the new opportunity provided by the burgeoning provision trade, many groups were shifting to the west because of habitat degradation in the parklands and boreal forest. In 1776, most of the Basquia Indians who originally were suppliers to Cumberland, along with those from Swan River and the Lower Saskatchewan had spent most of the winter at war on the plains. The move according to some of the Basquia, was not simply a reorientation to greater opportunity on the plains, the paucity of the woodlands may have driven them west, "there had been a dearth of Moose & that was the reason of their having left their Countries…".[28] By January, 1777, it was clear to Cocking, who had been forced to again reduce the rations of the men at Cumberland, that the country surrounding the post could not support even a small number of Europeans:

> Indeed as the dependences for food are so very precarious it would be imprudent for more to be kept to Winter here. This enforces the necessity of the Companys making an early Settlement up above towards the Buffalo Country, where men may most likely be well provided for, as the Assinee Poet Indians can come there, Thee being the best for bringing in food, and indeed it may be said they are the only ones who ever have any large stocks of preserved Provisions; Besides if any scarcity of provisions should happen at an Upper Settlement, the Complement of men can always be lessened for a time by sending part with the Natives into the more interior parts of the Country, where they may be sure to live well if they use discretion in the expenditure of the goods… War is their delight and the Archithinue Indians are the objects of their inveterate enmity.[29]

Binnema stated the plight of those at Cumberland succinctly, "the boreal forest simply did not have the resource base to feed the traders" (2001:119). The contrast between the availability of food in the low country around Cumberland and the plains was underscored by the return of the servants Ross and Longmore to the post in February. They had been sent west at the beginning of October in search of Indians to trade because none were expected to travel to the post.[30] Cocking wrote:

> [T]hey came from Mekisew Wachy /ie/Eagle Hills/ mentioned in my first inland Journal/ Where the Indians they left/chiefly Assinee Poetuck/ are pounding Buffalo. That they set off from there forty days ago, but having to wait to provide Sledges & Snow Shoes on the Road detained them much. They say that there is so little snow on the ground where they came from that the Indians had not yet then occasion for Snow Shoes or sledges.[31]

Even among the well-provisioned Canadian posts upriver, men were sent to over-winter with aboriginal groups to reduced pressure on supplies.[32] In the fall of 1777, the failure of Canadian traders to arrive at the upriver posts forced several Indian groups to travel to Cumberland with provisions in exchange for supplies. Joseph Hansom noted they never would have traveled to the post if their adversaries had been there.[33] Along with the supply canoes from York Factory, came orders for "a temporary Settlement [to be] erected at or near the Moose or Buffalo hunting grounds for the Convenience of procuring food and preventing the Indians from trading with the upland traders…"[34]

By this time, the HBC was in serous trouble resulting from the expanding Canadian competition. With the report that Canadians intended to winter at Basquia, Joseph Hansom noted that Cumberland was completely surrounded by adversaries "Viz. Four Canoes at the Northward, 2 at U'Basquia, and up the Saskachiwan thirty-Six".[35] The establishment of the Canadians at Basquia not only undermined the HBC trade at Cumberland, it threatened their tenuous supply of canoes. Because the Basquia were trading with the Canadians, only their leader, Catobobinow, was building canoes for the HBC.[36] A shortage of canoes, desperately needed by the HBC to transport their furs to the coast, resulted in almost a third of the total furs remained at the post during the summer because they could not be moved.[37]

By mid July, the failure of Indians bringing in provisions to Cumberland was becoming critical, the six men summering at the post were without food, high water led to the failure of the fishery and "Our whole dependence must be now intirely(sic) on a few Buffalo Indians who used to come down in the fall, but they are uncertain, as the Canadian Masters have left Men up the river this Summer to Collect provisions &c. against their arrival." [38]

By the beginning of 1779, the reorientation of the Basquia people toward the west was creating a serious labour shortage for the traders at Cumberland. Unable to secure help with their trip back to Cumberland, Joseph Hansom was forced to trade for a horse to carry his cargo back to the post.[39] Six weeks later, the animal died. Hansom reported "he has of late fallen very poor, and has denied drinking these two days past, which I suppose is owing to some disorder, that we are not aware of." [40]

Hansom's failure to secure assistance with getting goods to his post which predicated his brief ownership of the unfortunate horse was a sign of the declining importance of Cumberland as a trading establishment. By 1779, the HBC surveyor Philip Turnor reported that Cumberland was obsolete at a trading centre, it "can be called nothing but a warehouse or be looked upon a halfway house for the other settlements as no Indians reside nigh unto it but are much higher in the Country as all the Indians that came to Cumberland House might have gone in half the time to the Canadians."[41] This was largely a function of the westward movement of woodland groups to the SSRB. As the trade at Cumberland withered, the HBC finally managed to establish itself where the trade was taking place in earnest, up the North Saskatchewan River, in the fall of 1778.

Although the new post, Hudson House was constructed closer to the secure food supplies in the grasslands, its establishment was not without difficulty. On 22 October 1778, thick ice on the North Saskatchewan River forced the men to abandon the site that had been selected and accept the offer of a Canadian trader of a previously abandoned post nearby.[42] In the last quarter of the 18th century, declining temperatures and the early onset of winter conditions made autumn travel increasingly difficult on the waterway dependent Europeans who needed to ensure the movement of their cargo.

The offer of the site near the Canadian post was hardly altruistic. With the English almost within their sight, the Canadians could monitor and interfere with the trade of their new neighbours. The addition of a dozen HBC men to the small cluster of posts contributed to the security of all the traders in the vicinity as relations between traders and their aboriginal providers were quickly deteriorating. The decline in the value of goods, coupled with the increasingly negative impact of the lynchpin of the Canadian trade; alcohol, resulted in increasing conflict, even to a number of killings on both sides.[43]

Within months of the establishment of Hudson House, Robert Longmore reported that large groups of Canadians, "armed with guns and hanger" were using force to ensure their trade, "they made the Men drink with them, and Seized on all their Horses and goods, and guarded them in and Locked them up within their Stockades."[44] Although Longmore reported, "we have more friends than enemies amongst the Indians," the rapid departure of the Canadians after the killings upstream lead to his decision to abandon the post for the summer of 1779.[45] The following autumn, a new location for Hudson house was chosen and was located 14 miles downstream from the site of the original post, a sign that the HBC wished to place some distance between the new post and the site of the hostilities from the previous year in the lower North Saskatchewan Basin (Smyth 2001:158-159).

The increasing conflict in the lower North Saskatchewan Basin was, by 1778, not just a function of the hostile posturing of the more than 300 Canadian traders in the area, it was also related to the scarcity of food coupled with the growing demand among Europeans (Binnema 2001:118). The growing need for food by the Canadian traders served to encourage the migration of Cree and Assiniboine groups to the buffalo country from the 1760s onwards (Binnema 2001:118).

To protect their dominant position in provisioning the trade, fires were deliberately set by these groups to keep bison herds away from the traders to ensure high prices for food (Ray 1984:265). Fires had been used to control the movement of bison since prehistoric times, but rise of intentionally set fires in the late 18th century marked the beginning of what has been called the "Grass Fire Era" on the Canadian plains (Rannie 2001:17). The employment of fire as a bison control mechanism was fraught with difficulties. At the beginning of 1781, Longmore wrote to his superior, William Tomison on the situation at Hudson House:

> … we are likely to be in a very bad Situation for provisions…I had always hopes of some coming in until the last Saturday, that the Indians I

> trusted to arrive quite Starving, and have eat[sic] part of their dogs coming in, and there is no Indians that has been here that will stay about here to hunt the Ground is all burnt up & no buffalo, the Natives Burnt it, a they was nigh hand in the Fall, and far from the Beaver Country on purpose that they might get a great price for provisions but great part of them has payed for it since by hunger and obliged to go far off.[46]

The tense situation on the plains was made considerably worse later in 1781 as smallpox spread through western North America. (Decker 1988; Daschuk 2002). Although a full discussion of the pathology of the epidemic is beyond the scope of this paper, the outbreak was nothing less than catastrophic. Among the Blackfoot people, the death toll was estimated to be between 30 and 50 percent (Calloway 1991:88; Decker 1991: 388). The epidemic essentially ended the Shoshone occupation of the SSRB. As Saukamappee told David Thompson, "they had suffered dreadfully as well as us, and had left all this fine country of the Bow River to us" (Hopwood 1971:199). The disease was transmitted to the Peigan during an assault on the Shoshone in which horses and other plunder was taken (Doige 1989:136).

In the wake of the outbreak, William Walker at Hudson House reported, "as for the Stone [Assiniboine] Indians they are few, if any left alive" (Rich 1952:270). Russell noted that the Assiniboine, "the most numerous group on the northeastern plains and parklands in the Eighteenth century" are largely absent from the journals after the 1780s (Russell 1991:172). To the east, the Cree groups that had been so important to the early period of the inland trade, the Pegogamow, Basquia, and Cowanitow ceased to exist as distinct entities in the wake of the epidemic (Russell 1991:144; Meyer and Thistle 1995:421; Meyer and Russell 2004:246). David Thomspon reported that in the "Muskrat Country" of the Saskatchewan Delta, "more than half" of the inhabitants died.[47] At Cumberland, the epidemic was accompanied by severe cold. On 11 January, 1782, "the spirits of wine" were frozen inside the house, "which is more than I ever see before. Indeed several of the men has been froze pretty much..."[48] The severe cold contributed to starvation of those who survived the infection.

The level of mortality in the SSRB was such that a wholesale change in the demographic of the plains and woodlands occurred within years of the epidemic. The influx of new groups, primarily from the east and northeast, moved into the country where so many had perished as participants in the ever-growing commercial trade. By the end of the 18th century, the Cree who moved from the forest to the grasslands and merged with survivors were sufficiently rooted in their adopted territory to be designated a new cultural entity, the Plains Cree (Milloy 1988; Meyer and Russell 2004:217).

Laura Peers documented an analogous shift to the west of the Anishnabee from western Ontario and Manitoba to the eastern margins of the SSRB (1994).The lower Saskatchewan River was largely repopulated by the Ojibwa, known to the HBC as the Bungee (Thistle 1986:69-71). By the end of the 1700s, hundreds of Iroquois trappers, originally from Québec, were reported to be hunting west above Cumberland House (Nicks 1980). Disease had irrevocably changed the cultural make-up of the SSRB and

those groups who immigrated into the region to fill the void brought with them a new material focus with adaptation strategies designed to maximize resource extraction. Climactic considerations were now, by and large, secondary to economic concerns.

The new residents of the SSRB came west largely as a consequence of the fur trade. David Thompson, the most important contemporary chronicler of the period, asserted that there had been a significant migration westward with the expansion of the fur trade:

> By the Southern [Cree] Indians retiring South They have for the last fifty years possessed the Country to about parallel of fifty degrees. There can be not dispute that their migrations have been from east to west since the western and southern part (?) had taken place within the memory of the Fur Traders.[49]

The new arrivals had no aversion to the exploitation of beaver exploitation in the parklands and plains. In fact, many groups, such as the Ojibwa and the Iroquois, came west as commercial trappers. Within decades, beaver were extirpated from many regions from the double pressures of limited natural habitat in the grasslands and short sighted competition.

Unlike newer groups, long-term residents such as the Niitsitapi (Blackfoot) and their allies, the Atsina, continued to conserve the species, aware of the critical role the beaver played in the arid environment of the SSRB in maintaining water supplies. As the competition in the fur trade grew, the avoidance of beaver hunting became increasingly difficult. Groups that provided furs to the traders, especially the Cree, expanded their territory as the acquired the military advantage provided by firearms in the increasingly hostile plains environment.

The Atsina were the primary victims of Cree expansionism (Binnema 2001:145-149). By the 1780s, what had been largely horse raiding by the Cree on Atsina herds developed into an outright invasion. By 1793, a group of Cree from "red Deers Lake" west of Lake Winnipegossis, killed a large group of Atsina near South Branch House.[50] Unable to exact revenge directly upon their attackers because of Cree's military superiority, the Atsina and their allies attacked a number of trading posts during 1793 and 1794 "in a desperate effort to defend themselves" (Binnema 2001:149). By the end of the 1790s, they had largely withdrawn from the eastern SSRB. On his journey to the Middle Missouri villages in the winter of 1797-1798, David Thompson noted that large numbers of Fall (Atsina) Indians had recently moved to the Missouri villages from the north.[51]

In the decades following the epidemic, the convergence of market forces, in-migration and equestrian dependency heightened inter-tribal conflict in the SSRB to new levels. John Ewers identified the near universal adoption of the horse as the critical element to the new pattern of conflict that emerged:

> [I]t was a continuing economic need for horses, periodically heightened by serious losses of horses from enemy raids, destruction by plagues or

> severe winter storms, that made horse raiding the most common form of Blackfoot warfare and tended to perpetuate this type of warfare (1955:312).

By the 1780s, the diffusion of horses on the plains was "relatively complete," according to Binnema:

> After 1780 the distribution of horses had less to do with diffusion from the source than with environmental factors that limited the horse population… Groups on the western plains were generally richer in horses than those on the eastern plains. The severity and length of winters and the depth of snow appear to have been the most important factors in determining the density of horses across the plains and west of the Rocky Mountains (2001:141).

Ecologically based explanatory models have been developed for the American Great Plains to account for differential horse wealth with inconclusive results (Osborn 1983; Levy 1984; Osborn 1985). In his theoretical discussion, Osborn postulated, "groups inhabiting regions of high winter severity and short growing seasons (the horse-poor groups) should be initiating more frequent raids against other groups living in regions of low winter severity and longer growing seasons (the horse-rich groups)" (1983:584). An empirical connection between conflict over horses and severe weather events can be established in the SSRB from the historic record. Climatic variability, particularly during the harsh conditions of the last two decades of the18th century, was the primary element driving the new pattern of conflict over horses.

Beaudoin has shown that the warm conditions that prevailed in the SSRB were over by 1770(1999:32). In the Cypress Hills, the cold was accompanied by increased aridity. According to Sauchyn, the "two intervals of sustained drought in the late 18th century are embedded within 35 years 1768-1802, during which 24 years had below median June-July precipitation and there were no more than two consecutive years of above-median precipitation" (2004:n.p.).

Briffa et al noted a significant cooling anomaly dated to 1783 followed by succession of cold years (1998:451). The cold may have been a consequence of two significant volcanic eruptions, at Asama, Japan, and an prolonged eruption in Iceland, that took place in 1783 (Catchpole and Hanuta 1989:74). A Dakota Winter Count described the winter of 1783-1784 as "Soldier Froze to Death" an indication of cold conditions on the American plains (Finster 1968:8). Bad weather also was responsible for the death of William Wishart, an HBC servant at Hudson House, when he was lost in a blizzard on 27 March, 1784.[52] At Cumberland House, deep snow made travel with dogs impossible by January 1784.[53] For the HBC traders, the difficulty from harsh weather was exacerbated by the destruction of York Factory by the French and the failure of the Company supply ship to arrive in the fall of 1783.[54]

In the aftermath of the epidemic, inter-tribal tensions eased for a brief period as survivors focussed on the immediate needs of what remained of their communities. By 1785, the

pattern of violence had returned. At Hudson House, William Tomison reported that a group of Assiniboine had returned from a failed raid on the Snake who had recently acquired firearms (Doige 1989:138). In southern Alberta, the quiet was broken "about the third falling of the leaves of the trees" (after the epidemic), when a small Peigan camp near the Bow River was killed by a Snake (Shoshone) attack (Hopwood 1971:199). A Peigan war party sent to avenge the killings returned to their territory with "about thirty-five horses in tolerable condition, and fifteen mules, which they had brought away from a large camp of Snake Indians" (Hopwood 1971:203).

The taking of horses, a valued and necessary commodity, was considered a tangible form of retribution for the killings. Saukamapee recounted the words of the war Chief, Kootana appe, "My intension is to have something to show our people, and when we retreat [to] take as many horses as we can with us… our solace was of an evening to look at the horses and mules" (Hopwood 1971: 203). According to the HBC, the horses provided, "the reason of their going to war" (Doige 1989:150; Smyth 2001:188).

As climatic conditions worsened through the 1780s, European posts were established further into the plains. In 1786, the HBC build Manchester House on the North Saskatchewan River (about 50 miles upstream from the City of Battleford, Sk.) and South Branch House on the South Saskatchewan River (about 40 miles upstream from the forks of the Saskatchewan). Because of increasing tensions, rival companies built posts in close proximity for their mutual defence. Manchester was built on Pine Island where at least four competing posts were operated (Nicks 1975).

The placement of Manchester and the other posts on Pine Island were strategic, providing direct access to the Blackfoot alliance, but not practical in day to day operation. Low water on the North Saskatchewan was a constant problem for the traders at Manchester. When it was first established, in the fall of 1786, canoes could only be loaded with half their normal cargo and horses were used to bring up the remaining supplies (Nicks 1975:101-102). The following spring, boats were abandoned because of low water levels made their use impractical (Nicks 1975: 103-104). Firewood was soon depleted and traders were soon forced to scrounge for driftwood for fuel. In June 1787, the island was flooded; the floor HBC house was covered with nine inches of water.[55]

Pine Island was the first cluster of posts to be located within territory controlled by the Blackfoot and their allies. As such, the Cree and Assiniboine who had previous been middlemen to them were displaced from their position in the trade increasing the level of hostility. The liquor trade, the principal trade item of the Canadians did nothing to alleviate the increasing tensions between aboriginal groups and traders (Nicks 1975:122-123). Climate, particularly the severe winters of the late 1780s only served to exacerbate the situation (Binnema 2001:153).

By the spring of 1788, the situation at Manchester became increasingly chaotic where the trader noted "there is nothing but quarrelling amongst the different tribes of Indians."[56] At the end of March, a small group of Peigan arrived from the south with little except news of their ongoing conflict with the Snake in which thirteen of the latter had been

killed.[57] Horses belonging to the traders were under constant threat from Assiniboine horse thieves; thirteen were stolen on 9 April 1788.[58] Conflict ignited among the Sarcee and resulted in four deaths and several injuries.[59] At the end of April, a small party of Atsina were robbed, killed and mutilated by a larger party of Cree near the Battle River.[60] John Nicks stated that the killings were part of a Cree expansion campaign whose goal was "to consolidate their hold on the prairies west of the South Saskatchewan River and to extend their role as suppliers of provisions to the traders" (1975:152). After the attack, so many of the Cree temporarily retreated to the woodlands that a Canadian post was briefly established to trade with them on the Lower Saskatchewan River.[61] Chaotic conditions at Manchester House led to the temporary closure of the post in the summer of 1788.

At South Branch House, whose primary trade clients were the Cree and Assiniboine, the situation was less tense, though not entirely peaceful. In August 1787, William Walker reported the arrival of a group of Cree who had recently fled the North Saskatchewan after killing a number of Bloods.[62] In the spring of 1788, the arrival of Cree with a large supply of beaver taken in the parklands indicates a westward shift of the Cree groups, as the post journal noted this was, "The first that ever any was at these hous's in the River Trading, commonly used to Trade with the Canadians at Swan River."[63] This may have been the same group implicated along with "Branch Cree" and an Assiniboine Band in the killing and mutilation of a group of Atsina near South Branch which precipitated the destruction of the post in 1794 (Doige 1989:141).[64]

Climatic conditions during the winter of 1788-89 were more severe than those of the preceding year (Binnema 2001:153). The first snow fall was reported at Manchester and South Branch on 23 and 24 October 1788. By the first week of November, William Walker at South Branch noted "the snow is very deep for this time of year."[65] On 29 November, four Sarcee arrived at the post, carrying their skins on their backs, "they complain much of the depth of snow."[66] By the end of January 1789, Tomison reported on the effect of the severe winter:

> Several Indians have been from several Quarters but could not bring in any furrs; as the snow is very Deep which has starved the greatest part of their Horses to Death, and what is alive cannot travel so that little Trade can be expected hear before most of the Snow is gone…[67]

By February 1789, the snow at Manchester was too deep for horses to be sent for meat.[68] On 16 February, a small group of Blood and Blackfoot arrived with only a few wolves to trade after a long and difficult trip. Tomison added, "they have been 15 days on their journey, and like all the others Indians complain of their horses dying."[69] Cold compounded the problem of deep snow. The ice on the North Saskatchewan River at Manchester was, according to trader Tomison, "much thicker than last year" measuring three feet thick on 9 March 1789.[70]

By the end of April, Tomison noted that the few Blood and Peigan who undertook the trip to Manchester had little or nothing to trade, "owing to their Indolence and the great

quantity of Snow all over the Country by which the trade at this place will suffer much this year."[71] In mid May, Manchester had still not had a single night without a "strong frost." Tomison explained, "it has been one of the coldest Springs I ever knew."[72] At South Branch, conditions were not as severe, though at the end of April 1789, two young men arrived at the post to borrow a horse, "their own dying through the badness of the winter."[73] As he travelled down the Saskatchewan River in June 1789, Tomison saw several species of bears feeding on the carcasses of large numbers of drowned bison (Binnema 2001:153).

At South Branch, William Walker noted a similar grim spectacle, "The Buffalo that's been driving down the River this past 4 days I am sure amount to some Thousand, owing to the Sevearity of the Winter."[74] Rinn noted that horses loses were so severe among the Blackfoot, Bloods and Sarcees during the winter of 1788-89 that there "was a complete absence of trade in horses at Manchester House that year" (Rinn 1975:87)

Bad weather diminished horse trading and led to an increased frequency of horse raiding as a means to recoup lost stock. In 1788, the horses at Manchester House were under constant threat of being stolen.[75] In July, the Stone [Assiniboine] stole a large number of horses from the post.[76] As conditions deteriorated, herds maintained by the traders became frequent targets for groups whose own herds had been killed by bad weather. According to Binnema:

> Because they lived in settled establishments, committed considerable effort in gathering hay and sheltering horses, and had greater opportunity to rest weakened horses, the traders kept horse herds in environments where Indians could not. The trading posts became targets of repeated raids. Cree and Assiniboine bands, particularly those of the Swan Hills region of the northeastern plains (where horse mortality was the highest), travelled long distances to raid horses from the Indians and Euroamericans of the northwestern plains (2001142)

By the fall of 1789, the shortage of horses threatened the food supply at South Branch as, "the Stoney [Assiniboine] Indians does not make any provisions as Usual for want of horse."[77]

For the equestrian hunters of the SSRB, persistent deep snow during the winter of 1789-90 spelled disaster. By the spring of 1790, Mitchell Oman, at South Branch, wrote with exasperation, "In the whole of this Winter there has been the most Snow that has been seen Inland this 15 years past "(emphasis Oman's).[78] After his comment, another thirteen inches of snow fell before the end of April 1790.[79]

Compounding the problem of heavy snow, a "great rain" was reported at both Manchester and South Branch on 28 January 1790.[80] Rain during this time of year would have particularly dangerous, as a hard coating of ice over deep snow would have may travel difficult, if not impossible as the broken crust would quickly slice the legs of anything attempting to move through it. Rain during winter also undermined the ability of

animals to forage. Rinn noted that a similar storm at Edmonton in February 1855 killed many horses as they were unable to graze through the thick ice (1975:86).

Winter conditions persisted well into 1790. On 4 May 1790, with the Saskatchewan River "fast as in winter," Malcolm Ross, at Cumberland House, noted "I never knew the spring to be so backward before nor the ice to stay so long."[81] At Manchester House, on the North Saskatchewan, the departure of the canoes for Hudson Bay was delayed until 25 May 1790. William Walker reported, "we are later this Spring than ever was known since I have been in the country owing to the backwardness of the season."[82] During the long winter, conditions led to hunger on the northeastern plains. In December 1789, widespread hunger was reported on the plains from the failure of the bison hunt.[83] At South Branch House, William Walker reported:

> All the Indians that came to our house and the French House is nigh starving for want of provisions-I have not received 1 Oz. of dried meat of any kind and only 4 bladders of Fatt, sine your Departure & there is no Sign of better time I think at present unless the Scene quite changes from worse to better.[84]

Winter conditions may have been better in southwestern Alberta as large numbers of furs, "mostly Wolves" were brought into Manchester by the Peigan, Blood, and Blackfoot in March 1790.[85] The good trade from the south was partially the result of the presence of eight HBC servants with the Peigan over the winter (Smyth 2001: 195). By this time, the Blackfoot alliance was firmly in control of the southern Alberta, "by right of conquest have their west boundary to the foot of the Rocky Mountain southward to the North Branches of the Missouri, eastward about three hundred miles from the mountains and northward to the upper part of the (north) Saskatchewan" (Glover 1962 in Rinn 1975:39). David Thompson described the general pattern of horse acquisition at this time:

> The Peigan Indians and their [allied] tribes of Blood and Blackfeet, being next to the mountains, often send out parties under a young chief to steal horses from their enemies to the south and west side of the mountains, known as the Snake, the Salish, and the Kootenay Indians. This is allowed to be… honourable, especially as it is attended with danger and requires great caution and activity. But the country of the Stone Indians [Assiniboine] and Sussees [Sarcees] are full from four to six hundred miles in the plains eastward of the mountains, and too far [away] to look for horses. The Susses content themselves with raising horses, but the Stone Indians are always in want of horses, which appears by their hard usage. They are most noted horse stealers and wherever they appear in small parties, the horses are immediately guarded… (Hopwood 1971:213).

Edward Umfreville, a Canadian trader on the North Saskatchewan River, wrote that Cree and Assiniboine raids on Blackfoot herds ignited "many broils and animosities" as theft led to retaliation and eventually "war becomes absolutely necessary" (Binnema 2001:142). While the deep snow of the 1780s posed a threat to the equestrian dependent

peoples of the SSRB, they were to experience another form of climactic vulnerability before the century ended.

Sauchyn and his colleagues have stated that the drought experienced through 1792 to 1802 was the most protracted and severe event of its kind of the past five hundred years (2001; 2003). As had been the case during the prehistoric period, cold was associated with drought in the SSRB. During the first half of the decade, at least five volcanic eruptions of at least VEI 4 occurred (Sigurdson 2000). A decline in solar irradiation during the Dalton Minimum, lasting from 1790 to 1830, also contributed to declining temperatures (Van Schrier and Barkmeijer 2005:355).

Streamflow in the North Saskatchewan River declined to unprecedented levels. The record for 1793 indicates the lowest single year stream flow reading for the past 1,100 years (Case and MacDonald 2003:710). Because as much as 75 percent of streamflow in the Saskatchewan River Basin originates as snowmelt in the Rocky Mountains, the precipitous drop in water levels in the North Saskatchewan River may be the consequence of diminished temperatures rather than simply from a reduction of precipitation on the plains. Unlike its northern cousin, The South Saskatchewan did not undergo the same decline in streamflow during the period. Of the ten lowest seasonal mean flow years on the South Saskatchewan since A.D.1500, none were in the period between 1720 and 1815 (Case and MacDonald 2003: 711)

As drought took hold of the SSRB, fires became a significant threat to the provisioning trade. In October 1790, William Walker noted that a large fire had burnt the land near Manchester House and "I am afraid we shall have a very scarce winter for provisions" (emphasis Walker's).[86] In mid-December, Tomison stated that the Assiniboine coming from the west, "were all starving for want of provisions owing to the ground being all burnt last Summer, which has carried a great scarcity of buffalo all over the country."[87]

Raids on horse herds belonging to the HBC continued. Isaac Batt, a servant at Manchester House was killed during a horse raid in 1791(Nicks 1975:191-192). The trade in furs from the southern plains however, was brisk. Tomison noted that his supplies were short and in order to secure the trade in furs brought to the post, he was forced to borrow blankets, cloth guns and "several horses" from his men.[88]

Dry conditions prevailed through the summer of 1791. On his arrival at South Branch House, William Walker observed, "By all appearances it has been a very dry Season for the garden is in a very low state"[89] The garden produced only about fifty cabbages, "which used to be our Chief standy."[90] By November, unusually warm weather was raising anxiety that the bison might soon be out of the reach of the post.[91] In addition, the dearth of snow was wearing out the sledges bringing in provisions.[92] At Manchester, William Tomison reported a drop in the trade "as the Indians are all Pounding Buffalo at the Beaver Hills" (near the Eagle Hills).[93]

Because of the distance of the herds to the post, Tomison was pessimistic of his ability to procure enough fresh meat until spring.[94] He also noted that his plan to establish a new

post upriver had been foiled, "the Hors's being Stolen last Summer, and the Shoalness of the water prevented that Scheme from being put into exacution."[95] The unusually warm winter of 1791-92 may have been the result of a very strong ENSO event recorded in 1791 (Quinn et al. 1987:14,450). In his discussion of the first three winters of the 1790s, Binnema noted that mild conditions resulting from "one of the strongest El Nino events ever known" may have temporarily lessened inter-tribal conflict (2001:154).

In 1792, twenty four horses loaded with furs and provisions were sent overland from Manchester to South Branch because the "Backward Spring and the late arrival of the Indians" prevented Tomison from completing the necessary repairs to his canoes.[96] A week before his departure from South Branch, William Walker observed, "a great fire a Cross that we neither will be able to get Canoewood or roots &c."[97] Fires continued to threaten South Branch House through the summer and fall of 1792. On 9 August, the men were forces to put out a blaze, "which had kindled near the house and burnt part of our wood."[98] A month later, the trader reported "The ground on fire all around us, which will effectively prevent our getting any Buffalo meat this winter."[99] Cold accompanied the drought. By 20 October 1792, ice conditions on the North Saskatchewan forced the abandonment of canoe travel as goods were conveyed to Manchester House by horse.[100]

On 8 November 1792, with the North Saskatchewan River "full of driving ice" Peter Fidler and John Ward departed from the newly established Buckingham House to spend the winter with a group of Peigan in southern Alberta (Haig 1991:8). The journal Fidler kept of his journey provides the first daily account (and instrumental weather reporting) for the region encompassing the headwaters of the SSRB. As such, it provides numerous insights into aboriginal adaptation to climate.

Within days of their departure, Fidler noted the effect of fire on equestrian groups. Near the Vermillion River, they crossed burned ground for two days, Fidler noted, "we can scarcely find a small spot for the horses to eat when we put up, being all burnt except around edges of small lakes" (Haig 1991;12). Fidler's party was soon joined by a group of Cree hunters on their way to trap beaver near the Rocky Mountains[101] (Haig 1991:13). Travelling south through more burnt ground, Fidler noted that bison cows had been driven away because of fire (Haig 1991: 15). On reaching a large camp on the Red Deer River, Fidler remarked on the large number of both horses and dogs they possessed, "[t]he men in general ride as it would be debasing themselves to walk. The women seldom or ever ride when they pitch along" (Haig 1991: 18).

The trader noted the milder climate as he travelled south, comparing the 3/10 of an inch of snow on the Red Deer River to the 6 inches on the ground when he departed the North Saskatchewan (Haig 1991:18). Although his relationship with the Peigan was amiable, Fidler criticized their refusal to hunt beaver:

> These Indians are very little acquainted with killing beaver in their houses. What few they have to trade are generally shott by them when the rivers are open in the spring, fall and Summer. Several of them are so superstitious as

> even not to touch one, and a great many of them will neither eat of them or suffer to be brought into their tents (Haig 1991:21-22)

The Peigan aversion to beaver hunting, and its implication for water conservation was undoubtedly a wise strategy particularly in the treeless country of southern Alberta. On 30 November, as fire wood was being collected, Fidler wrote that the nearest source of wood, at the Bad (Bow) River was 100 miles away (Haig 1991: 22). A week later, Fidler described the Peigan method of travel through the grasslands:

> Water being such a very necessary article we are obliged to encamp at particular places, some days journey are long & some short, entirely owing to the places where water is to be had, both for ourselves & the Horses (Haig 1991:25).

Even with this mode of travel, water was scarce and Fidler's party had to occasionally melt snow for water in the country where large numbers of bison had migrated for the winter (Haig 1991: 26-27).

By the time Fidler's party reached an encampment of 150 Peigan tents on the Spitcheye (Highwood) River on 14 December 1792, they had had little occasion to witness open conflict between the Peigan and their horse competitors, the Snakes, as the former seemed to be making efforts to acquire horses through trades rather than raids (Haig 1991:32-33). At this time, the Peigan always gathered in large numbers when they were near the territory of their enemies. The trader noted that fires burned almost "constantly" in the area and that those that burned in winter were almost always deliberately set (Haig 1991:36).

Although the Peigan were at peace with their adversaries, the Snakes, Fidler reported that a group of Blood (Kainai) had just returned from a raid against the latter with forty horses (Haig 1992: 41). At the Peigan camp, a constant watch was kept for fear of a raid by the Snakes or "Flatt heads" (Saleesh) (Haig 1991:42). Early in the new year 1793, Fidler travelled south to the Oldman River with the Peigan to trade horses with a group of Kutenai from beyond the mountains, "[t]he Indians began to barter for horses as soon as we arrived & soon all the Cottonahews had to show, for a mere trifle, some only giving an old hatchet, some an old kettle, &c, &c." Haig 1991: 45).

In the 1790s, the Kutenai had no direct access to European traders, they could therefore only procure goods of European origin through the middlemen trade. The first round of trading was so successful that a second was arranged before the Kutenai returned to their country on foot with their goods on their backs (Haig 1991:53, 60).

The Kutenai had been particularly hard hit by the smallpox epidemic a decade earlier. Fidler noted that the entire nations had been reduced to only seventeen tents, with only forty-five or fifty men who could take up arms (Haig 1991:51). Large numbers of feral horses had roamed their country since the outbreak (Haig 1991:50).

The expansion of wild horse herds west of the mountains is an indication of favourable climatic conditions in the area in the latter 1780s. Conditions on the eastern foothills of the Rockies were certainly mild during the winter of 1792-93. In mid January, Fidler remarked that the temperature had been between forty and fifty-five degrees Fahrenheit since his arrival two weeks earlier (Haig 1991: 59). He may have been the first writer to document the prevailing weather patterns of the regions. He noted that westerlies prevailed for at least two thirds of the year "& that fine weather continues either Winter or Summer when the Wind is from that Quarter" (Haig 1991:61). Easterly winds posed a threat to the exposed camps in the open grasslands, "[t]he cold weather that sometimes happens to continue a few days when the Wind is Easterly is very bad for these Indians, generally residing in the open plains & are very much exposed to it" (Haig 1991:61)

On his return journey, Fidler was astounded by the size of the bison herd that had gathered at the Red Deer River:

> The Buffalo are very numerous on the NE side of the Red Deers river & near it they are also very near it, from the N to S the ground is entirely covered by them & appears quite black. I never saw such amazing numbers together before. I am sure there was some millions in sight as no ground could be seen for them in that compleat semicircle & extending at least 10 miles (Haig 1991:76).

The gathering of such a vast population of bison during winter along the Red Deer River may be an indication of drought and possibly fires pushing them to a dependable water supply. Later Fidler noted that although grass supplies near the river were exhausted, that bison continued to arrived from the east, "and appears as if all the Buffalo in the Country was collected in this place as a focus" (Haig 1991:80). The concentration of such large numbers of bison on the western plains resulted in hardship further east.

On 27 February, Fidler recounted, "have lately heard from a band of Stine Indians (Assiniboines), to the Eastwards & say that no buffalo is near them & that they have been under the necessity to eat several of their horses to keep themselves from dying of hunger" (Haig 1991:82). The country between the Red Deer and Battle Rivers was described as arid and largely burnt. Fidler noted that the horses were undergoing privation as "there is only here & there a turf or two of Grass which has escaped the fire" (Haig 1991:90).

Fidler's journal illustrates that horses were the main preoccupation for the Peigan and their allies. At the large encampment (comprised of 220 tents) where the group spend most of the winter, a close watch was maintained on a herd of two thousand head (Haig 1991:56). Fidler noted the differential care devoted to the herds among tribal groups, "[t]he Indians particularly the Slave (the Blackfoot alliance) Indians are very careful of them. The Southern Indians (Cree) pay little attention to them & frequently have none" (Haig 1991:56).

On the eastern plains, Assiniboine horse raids on the Sioux prompted a large assault on the former from a combined force of Sioux and Mandan in 1793 (Doige 1989:143). The HBC trader at Fort Ellice remarked, "these Indians[Assiniboine] are noted for stealing horses and therefore I am not surprised at the Soos and Mandan destroying so many of them as [they are] a set of inferior beings" (Doige 1989:143). Violence was widespread on the eastern plains during the summer of 1793. It was during that season that 17 tents of Atsina were killed and mutilated by a combined party of "Branch and Swan River Cree: and Assiniboine not far from South Branch House (Doige 1989:141).

Smyth stated that the Atsina, the most eastern of the five tribes of the Blackfoot alliance, were the primary victims of the Cree-Assiniboine who moved "westward onto the plains, drawn there by the lure of horses and buffalo" (2001:220). In addition to the threat to their herds posed by the Cree and Assiniboine invaders, the location of the Atsina on the eastern SSRB, beyond the Chinook belt, lead to greater environmental pressure on their equestrian stock during winter (Binnema 2001: 149). In a desperate effort to cut the supply of goods to their enemies, the Atsina and some Siksika (Blackfoot) attacked Manchester House in the fall of 1793 (Smyth 2001:221). James Bird, the trader at South Branch House, expressed his surprise at the attack on Manchester House:

> You may judge my astonishment on having of a House being plundered by a People, I thought, the most rational and inoffensive in this part of the country, and who tho' inraged by the South [Cree] Indians were not capable of such daring villany; but I hope they will go to no greater lengths, should they come here we are prepared to receive them, and hope we have it in our powers to give them a repulse.[102]

The following summer, one hundred and fifty Atsina and Sisika (Blackfoot) attacked South Branch House, three HBC servants were killed (Smyth 2001:225). The Canadian traders, reinforced by a group of Cree, repelled an assault on their post (Smyth 2001:225). Cree attacks on the Atsina continued further west for another year, until 1795, when the Atsina began their withdrawal from the SSRB (Binnema 2001:159).

With their expulsion, the centuries long occupation of the lower SSRB by the Atsina ended. Some took refuge among the villages of the Missouri River and others temporarily moved west into the country of their Blackfoot allies. A critical factor in their forced removal from the region was their refusal to commercially harvest beaver. Their enemies had no such reservations and their participation in the activity allowed them to secure the firepower that eventually forced the Atsina from the region.

During their tenuous connection with European traders, the Atsina provided only wolves, a commodity whose value had plummeted by the 1790s. Their tradition of conserving beaver, a critical adaptation to climatic variability during the prehistoric period, proved to be their undoing as market forces took precedence in the region. Their adoption of an equestrian lifestyle also undermined their security during the difficult climatic regime of the late 1700s.

Bloodshed in the region throughout the 1790s led to the complete abandonment by Europeans of their posts in the SSRB until the end of the decade. On the North Saskatchewan River, the Pine Island Posts, including Manchester House, were also abandoned. Cold conditions did nothing to lessen inter-tribal tensions in the region (Binnema 2001:155) and undermined the trade from the plains. The journal kept by the Northwest Company trader Duncan M'Gillivary at Fort George illustrates the severe cold along the North Saskatchewan River during the winter of 1794-95. By 6 November, thick ice precluded water travel on the river and deep snow allowed M'Gillivary to travel by "Carriole" (Morton 1929:40). At the end of January, M'Gillivary wrote:

> This winter is unusually severe; there is now a great quantity of snow on the Ground from which our *connoisseurs* prognosticate an overflow of the River in the Spring. This day the weather is so extremely cold that a man has been [frost]bit going for water. We are almost suffocated with Smoke, which condenses the moment it issues out of the Chimnies & rolls down the Houses into the Fort, a convincing proof of the cold state of the atmosphere (Morton 1929:52).

In February, three NWC men were forced to spend three days under their robes on the plains sheltering themselves from a blizzard (Morton 1929:54). By 22 February the trader no longer expected any trade until spring because, "[t]he extraordinary quantity of Snow upon the Ground prevents the natives from pouring in upon us at this time according to custom, they being at too great a distance to travel *en famille* 'till the snow is dissolved" (Morton 1929:55). A group of Blackfeet and Blood arrived at the post on 9 April with only dogs as their horses were unable to undertake the journey (Landals 2004:247).

The trade was delayed by the weather until mid April, when Mc'Gillivary reported, "during 3 days past Indians are pouring in from all quarters. There are no less than 7 different nations at the Fort. The Blackfeet have made no hunt this Winter having amused themselves with hunting Buffalos in the hunting season" (Morton 1929:72). The Cree were described as being "quite pitiful" having spent the winter far to the south with the Peigan rather than producing furs (Morton 1929:75).

Harsh conditions continued though the spring, which according to M'Gillivary, "all the oldest voyageurs agree that this is the latest season in their memory" (Morton 1929:67). On 20 April 1795, horses loaded with meat were able to cross over the ice hours before break-up which according to M'Gillivary "happens much sooner than were expected from the lateness of the season when the Snow finally dissolved" (Morton 1929: 74). The harsh winter may have contributed to the renewal of violence against the Snakes, twenty five men were killed in conflict over the winter (Morton 1929:69).

By the summer of 1795, both the NWC and the HBC built new posts further upstream on the North Saskatchewan River in an effort to augment their trade. Game depletion downstream, the difficulty of the journey to the posts from southern Alberta and increasing inter-tribal animosities all contributed to the move west (Smyth 2001:230-

234). The records of Edmonton House indicate that cold temperatures persisted through the fall of 1795.

By mid-November, horses were able to cross over the river and had been doing so "for some time past" (Johnson 1967:19). Although conditions were cold, the dependence of the traders on waterways made them acutely aware of the condition of the North Saskatchewan River. It was the misfortune of the traders to have established themselves so high up the river during the decade when streamflow levels were at their lowest in at least 800 years (Case and MacDonald 1993:710). The difficulties encountered by the traders resulting from diminished water levels are well-documented in the Edmonton House Post Journals.

In April 1796, William Tomison wrote to his colleague James Swain apologizing for his late departure for York factory, "there was not water in the river…we cannot embark until there is more water (Johnson 1967:57-58). The drought was also undermining the ability of the HBC to transport goods overland. On 2 May 1796, Tomison again wrote to Swain complaining that "without a rise of water it will not be possible for us to get down full loaded" adding "I could have sent some by land but the ground is burnt and there is not food for the horses" (Johnson 1967:58). Fire also threatened the post itself. On 15 May 1796, Tomison reported that a fire set by "the Frenchmen" [Canadians] had spread to the HBC's timber supply which could not be rafted across the river because of the low water and spread to the side of the river where the House was located (Johnson 1967:38).

Conditions were extremely variable through the winter of 1796-97. During a trade visit by four hundred of the Atsina who had attacked South Branch House two years earlier, it rained for two days, "very singular for this season of the year, the rain having exhauster all the snow" (Johnson 1967:75). Peter Fidler wrote from Buckingham House, approximately 100 miles downstream from Edmonton, on the effect of the severe cold:

> The awls, steels, worms &c. shall be made as soon as the cold weather is over, which of late has been so intense (sixty below the cipher) that the smith could not get anything made of small articles…we are middlingly off for provisions, having three weeks stock before hand, but hope the Buffalo will be soon nearer us than before by reason of the severe weather that has since prevailed (Johnson 1967:79)

The severe weather described by Fidler may have spread to the southern margins of the SSRB. Traders from Brandon House lost their horses in the severe weather they encountered on their way to the Mandan Villages in December 1796 (Wood and Thiessen 1980:65). Many groups on the eastern margins of the Basin abandoned commercial hunting to focus on their own food requirements (Johnson 1967:80). On February 26 1797, Fidler reported the arrival of an exhausted group from Edmonton:

> they have had a very bad Journey: the horses was so very much tired that they scarcely were able to reach the House [Buckingham]-two they was obliged to leave not halfway to this house all the birch rind and Carryall

> [cariole], the snow is the deepest ever known in this part of the Country for these several years past which renders it unfit for Horses to travel any distance. They slept 9 nights on their journey [approximately 100 miles](Johnson 1967: 84 fn.1).

In March, Fidler reported that only the Bungee [Ojibwa] had travelled to Buckingham to trade (Johnson 1967:87). They were probably recent arrivals from the woodlands to the east and still accustomed to deep snow. As commercial trappers, they could not simply abandon the trade as did the Cree during difficult conditions. In mid-March, with the snow 16 ½ inches deep in the woods, the Edmonton men returned to their post without their horses "a s their legs had been badly cut by ice during the journey to Buckingham house" (Johnson 1967:88 fn.1). The injuries to the horses were undoubtedly related to the rain at Edmonton the previous December.

Spring again came late to the North Saskatchewan in 1797. At Edmonton, the river was not clear of ice until the last day of April, the canoes were dispatched soon after because, as George Sutherland noted, "[t]he water fall off very fast and the season is far advanced" (Johnson 1967:91). Downstream at Buckingham House, the ice did not break up until 4 May 1797 and the cold was impeding canoe building (Johnson 1967:93). Ice continued to plague the brigade as they made their way to Hudson Bay. On their arrival at Cumberland House, they found the lake "still frozen over apparently as solid as it was in the middle of winter. Never was so backward a season known before by the oldest Indians here…" (Johnson 1967:95).

The severity of the winter near Cumberland contributed to the "near starvation" of Canadians near the post during 1796-97 (Johnson 1967: 122 fn.3). After leaving Cumberland and occasionally chopping their way through the ice, the brigade entered Lake Winnipeg on 19 June, "to our mortification we beheld the lake frozen over apparently as solid as it was at anytime in the winter-a circumstance never known before" (Johnson 1967:95). A shift in the wind opened a channel for the beleaguered canoes along the shore allowing them to proceed to Jack River and eventually Hudson Bay (Johnson 1967:95). Clearly, the severity and impact of severe cold in 1796-97 was felt from the foothills of the Rockies, through the SSRB, and east into Manitoba leaving no group untouched.

By the spring of 1797, another threat to the fur trade came as a consequence of the severe climatic conditions and the accompanying low water levels. At Edmonton House, George Sutherland was informed by a group of Cree, "that there has been a great distemper among the beaver of which great numbers have died as they are daily seen floating on the water since the breaking up of the ice." (Johnson 1967:92). The disease has been identified as tularaemia, a bacterial infection spread through low or stagnant water and infectious to humans (Martin 1878:138-139; Yerbury 1986:135). The disease persisted in the region until after 1800 (Daschuk 2002).

Environmental turmoil, necessitated inter-tribal warfare and it spread across the plains in the late 1790's and early 1800's. Undoubtedly, the harsh conditions forced equestrian

dependent groups to embrace a tried and true adaptation strategy, namely; horse raiding. This led to the 1796 state of war between the Assiniboine-Cree alliance and their Blackfoot enemies which was to last until 1803 (Doige 1989:143). South of the SSRB, a combined force of Mandan, Cree, and Assiniboine attacked the Arikara, to the south of the Mandan on the Missouri River during the summer of 1797 (Doige 1989:145).

Winter weather continued to be severe during 1797-98. In December 1797, no bison were reported within seventy miles of Edmonton (Johnson 1967:lxi) In March 1798, George Sutherland at Buckingham House reported the arrival of four young Blackfoot men, the first at the post since the winter set in, "they say the snow is too deep for horses and dogs to travel" (Johnson 1967:130). At Cumberland, the cold may have been unprecedented. In March, Fidler met a group of Cree:

> They have been amongst the Buffalo which have been within 40 miles of this place-the nearest ever known at this house…They say that all the Buffalo are gone higher into the Country [toward the west] as the warm weather came on" (Meyer and Russell 2004:222)

By the summer of 1798, the effects of the cold and drought were being felt along the North Saskatchewan River. Eight people were burned to death in a prairie fire near Edmonton (Johnson 1967:120). Fires were becoming so ubiquitous across the plains that David Thompson concluded that they were causing the plains to encroach on woodlands "and Deer give place to the Bison" (Rannie 2001:37). Fires in close proximity to the trading posts ensured that the buffalo remained out of reach. Edmonton and Buckingham House were both short on provisions and their horses were constantly being stolen in the fall of 1798 (Johnson 1967:142).

In November 1798, Tomison wrote that hunger had prevailed at Edmonton since his arrival there in the early fall, "not being able to serve half allowance and there is no likelihood of its mending and had it not been for the garden stuff it would have been much worse" (Johnson 1967:183). As was becoming the norm, only Ojibwa trappers were maintaining their regular trade with the posts, as "all without exception are tenting in the plains, killing buffalo for themselves to eat and killing a few wolves" (Johnson 1967:186).

In contrast to the previous winters where the trade was impeded by heavy snow, Tomison reported that the "want of snow" was the cause of the limited trade brought to Edmonton by the Cree in February 1799 (Johnson 1967:186 fn.4). A Free Canadian near the post was reported to "almost starved for want of food" (Johnson 1967: 153). In May 1799 tensions continued at Setting River, near the Forks of the Saskatchewan, Canadian traders caught three Assiniboine horse thieves. One escaped but the other two were killed and their bodies thrown into the river (Johnson 1967:168).

The lack of snow continued during the winter of 1799-1800. In January 1800, James Bird wrote that the dearth of snow in southern Alberta was making it impossible for the Atsina and Bloods to find enough bison to sustain them (Johnson 1967:226,229). A

month later, a group of Blackfoot came to Edmonton who complained "of not being able to procure sufficient provisions for their own families, there being a scarcity of buffalo everywhere owing principally to the amazing warmness of the winter" (Johnson 1967: 235). It may have been this period of dry winters that triggered the activation of the Great Sand Hills in the late 1700s (Wolfe et al. 2001). In his spring report for 1800, Bird noted that the entire trade had diminished because of the warm winter; the Slave [Blackfoot] had not been able to kill furs and the Cree had produced little from the scarcity of beaver (Johnson 1967: 241). Because of the mild conditions, the herds had not migrated to their wintering grounds on the margins of the plains and probably remained in their summer range in the grasslands of the SSRB.

The declining trade of the late 1790s prompted the rival companies to further expand their trade networks in search of furs. By the fall of 1799, both HBC and NWC traders had established posts at the headwaters of the North Saskatchewan River (Johnson 1967:209). The purpose of the Rocky Mountain and Acton Houses, located high in the foothills, was to provide a means for direct trade with the Mountain tribes whose territory was reported to be abounding with beaver.

The following year, a post was established at the confluence of the South Saskatchewan and Red Deer Rivers, "just in the center of the Slave [Blackfoot Alliance] country" (Johnston 1967:270). As the Blackfoot and their allies had not been taking their furs to the North Saskatchewan River in recent years, the Europeans made the decision to take the trade to them. Soon after their arrival at the site of Chesterfield House, Fidler was informed that the Blackfoot were on their way to war against the Shoshone (Johnson 1967:274).

Binnema noted that the departure of war party in winter was "remarkable" and signified a break from previous patterns of warfare in southern Alberta (2001:179). Fidler wrote that the Snakes formerly occupied the Eagle Hills near the North Saskatchewan River, "but since the Europeans have penetrated into these parts & supplied the surrounding nations with firearms, those Indians gradually receded back to the SW wards, & at this time there is not a tent of that nation to be found within 500 miles" (Johnson 1967: 274 fn.1). Because equestrian dependency begat inter-tribal warfare on the plains predicated on the acquisition of horses, the Blackfoot were undoubtedly driven to military action by equestrian losses during the late 1790s.

On 27 December 1800, a group of Snake [Shoshone] Indians came to Chesterfield with 120 horses they had stolen from the Peigan (Johnson 1967:281). The latter, of course, immediately organized a war party to recover their stock (Johnson 1967:281). Early in the new year, Fidler received a message from Edmonton that underscored the importance of Chesterfield, "There is little appearance of any trade at this place [Edmonton] this year, the Indians having all deserted it upon account of there being nothing near the place to kill" (Johnson 1967:282).

By mid February, a group of Atsina was reported to be heading to war against the Shoshone (Johnson 1967:285). On 17 February, Fidler reported that because two Atsina

had been killed and robbed by the Blackfoot, there would almost certainly be trouble in the spring (Johnson 1967:286). In an attempt to quell the potential bloodshed between the groups which had once been close allies, the Blackfoot Chief, Old Swan, whose son killed the Atsina, paid two horses as restitution for the murders (Smyth 2001:242). The season ended rather quietly according to Smyth when the posts were abandoned for the summer as had been planned prior to their construction (2001:242). As the traders proceeded up the South Saskatchewan River in mid May 1801, they were struck with:

> [S]trong gales of wind from the North East with snow without intermission for 2 days and nights & the snow on the levels was knee deep, much more than we saw the whole Winter, and the drifts in some places was more than 6 feet deep, we remained here 5 days on that account. The weather was not very cold at the time (Johnson 1967:289).

The blizzard killed nearly 100 Atsina horses and severely undermined their already precarious position on the plains of southern Alberta (Johnson 1967:315 fn.1). On his return to Chesterfield at the end of September 1801, Fidler encountered a large group of Blackfoot, Blood and Atsina, comprising "no less than seventy-two chiefs belonging to the three tribes" with a population of not less than 1400 people (Johnson 1967:294). The Atsina were in a particularly desperate situation. In addition to the hundred horses lost to the weather in the spring, they had been infected with smallpox during the summer from their kin, the Arapaho (Johnson 1967:294).

According to Fidler, they "appears[sic] desperate, and is nearly ready to fall on anyone they can" (Johnson 1967:294). Tension was heightened at Chesterfield on the arrival of the Arapaho, allies of the Atsina who had travelled forty-four days from "the eastern borders of the Mountain far to the south" (Johnson 1967: 298). Although the combined force of Atsina and Arapaho were "very near falling upon the Blackfeet" in revenge for the killings of the previous year, violence was averted when the Blackfoot provided valuable presents to the new arrivals (Smyth 2001:244).

By the year 1802, the combination of bad weather and renewed violence endangered the traders at Chesterfield. In early January, Fidler was informed of a Blackfoot attack on a group allied to the Shoshone, the Crow Mountain Indians. Four of the latter were killed and while another escaped "they supposed the cold will kill him as severe weather followed directly after" (Johnson 1967:306). In Mid January, news came that several Atsina had been killed in an attack by a group of Assiniboine (Johnson 1967:307). Deep snow forced the return of a Blackfoot group heading to the North Saskatchewan to trade, as well as a Blackfoot party on their way to war (Johnson 1967:307). The war party had managed to kill about ten Snake Indians "about forty miles above our hose at the edge of the Bad (Bow) River" (Johnson 1967: 307-308).

Within days of their return, on 27 January 1802, a blizzard struck the post with high winds, heavy snow and severe cold, prompting Fidler to write, "I never saw such a bad day in the country before these thirteen years past in no place, an old Indian here says that he never saw such a bad day before" (Johnson 1967:308). The severe weather continued

for four days. Two Atsina were killed during the storm in addition to "upwards of eighty of their horses" (Johnson 1967:309). Fidler added that the Atsina have earlier lost over a hundred horses in raids by the Assiniboine (Johnson 1967:309). In the wake of the blizzard, three Blackfoot arrived at the post with their furs on their backs, Fidler reported:

> They say the snow is so very deep that the horses cannot get through it, and that a great many of them die on account of the great depth of snow, not being able to scrap the snow away to maintain themselves. They also say that for the above cause the Indians cannot trap, what few there are to do it, the snow being so deep, with almost continuous gales of wind, that the traps are no sooner set, than they are drifted up… our hunter came to the house to tell us that two of our horses is killed by the cold and the deep snow and that several Blackfeet have shared the same fate (Johnson 1967:310).

The immediate crisis was ended by the arrival of a Chinook wind which warmed temperature to 40 degrees Fahrenheit and quickly melted the snow (Johnson 1967: 310). The losses suffered by the Atsina from the combinations of disease, war and the weather proved too much to bare. On 21 February 1802, they attacked and killed more than fifteen Iroquois trappers and four Canadians that had been hunting in the Cypress Hills. Later they killed another group of ten Iroquois and 2 Canadians a few miles from Chesterfield (Binnema 2001: 190-191). The bodies of the Iroquois were mutilated in a similar manner to the Astina who were killed almost a decade earlier near South Branch House. The post beside Chesterfield, occupied that winter by the XY Company, was burned down, its occupants taking shelter within the palisades of Chesterfield. Binnema concluded, "[e]vidently they saw these trappers as interlopers who wanted to exploit the same source of furs that they had relied upon" (2001:190).

The Atsina certainly saw the Iroquois as interlopers but they may not have been in direct competition in the trade as the former never commercially exploited the prime furs that the later sought to exploit in the west. Rather, the killings may have been a last act of defiance toward those whose economic system had despoiled their land and driven them from their ancestral territory. Whatever their motivation, the Atsina retreated to the banks of the Missouri River, permanently ending their occupation of the SSRB. As soon as the weather permitted, the traders abandoned Chesterfield under the protection of the Siksika(Blackfoot). I would be another twenty years before the HBC ventured to the upper South Saskatchewan. Canadian traders returned to the region during the winter of 1804-05. When a group of NWC men were killed between Chesterfield and the Fork in the spring of 1805, they too abandoned the region (Binnema 2001:185).

In many ways, the European decision to abandon their western posts in the SSRB was directly attributable to the impact of climatic events to shape the material culture of equestrian dependent societies in the region and their unequal market relationship with external forces that predominated in the 18th century. Severe weather not only affected the ability of producers to procure fur, it killed their horses, limited predictable access to the bison staple, and diminished the amount of potable water available; this, in turn, led to warfare which further compromised the region's productivity.

Loss of productivity equalled loss of profit for the trading posts. Without profit, the traders went elsewhere in search of furs. Thus, they temporarily abandoned the ill-equipped and poorly adapted residents of the SSRB leaving them alone to contend with the new realities of equestrian dependency, guns, disease, and inter-tribal chaos all under the countenance of an unpredictable climatic regime with rapidly changing ecological realities.

Conclusion

During the 18th Century, human inhabitants of the SSRB experienced a profound and irreversible transformation in their relationship to climatic stimuli. For millennia, climatic forces were the dominant factor in the adaptations of human communities in the region. During the 1700s however, the primacy of climatic variability was replaced by new and powerful determinants that were to govern the adaptive strategies adopted by the varied populations within the Basin. The ascendancy of these new forces, all originating in Europe -the horse, the fur trade, and disease, changed the fundamental relationship between the inhabitants of the SSRB to their environment. The result was increased climatic vulnerability, hardship and occasionally all out war.

While climatic variability declined as a force in the decision making of the inhabitants of the region, it continued to play a defining role in the success or failure of the new adaptive strategies of SSRB societies in the 18th century. The mild climatic interval which spanned the middle of the 1700s undoubtedly facilitated the diffusion of equestrianism through the region.

Although initially introduced to the south-western part of the continent by the Spanish, the spread of horses to the northern plains was essentially an Aboriginal phenomenon, and distinct from other forces taking hold of the SSRB. The near universal adoption of the species was evidence of the immediate advantage it conferred on those who adopted equestrianism. When the climate deteriorated in the final decades of the century, groups that had come to depend on horses found themselves vulnerable to severe weather. The need to recoup horse supplies among those whose herds were undermined ignited an increased level of inter-tribal conflict and war.

The expansion of the fur trade into the SSRB forced peoples in the region to further consider their priorities and the viability of their new commercially driven adaptation strategies. As the trade was founded on the commercial value of the beaver, the species became a prized commodity to be harvested and its traditional non-exploitation was recklessly abandoned. As such, its ecological role as a means to preserve water levels in an arid environment was compromised.

Long-time inhabitants of the SSRB who had developed a strategy of non-exploitation witnessed new immigrant groups harvest the species without regard for the environmental considerations. Owing to their access to European goods, and in particular firearms, these immigrants were able to expand their territory by force. Residential and

mobility patterns also changed with the coming of the trade. During the middleman period, inhabitants of the upper SSRB undertook long journeys from their home territory to trading establishments at Hudson Bay. The lengthy trips increased the susceptibility of these groups to climactically severe episodes as they travelled through the game-poor regions of the boreal forest. Once Europeans were established on the margins of the SSRB, mobility patterns were changed to meet the needs of Europeans. Inter-tribal competition for fur resources also increased animosities during the unfettered trade of the late 1700s.

The arrival of new groups associated with the fur trade greatly increased in the aftermath of epidemic diseases. The great mortality endured by infected populations led to the disappearance of some groups and the reconfiguration of others. Unprecedented levels of immigration to the grasslands from woodland areas occurred in the wake of the smallpox outbreak of the early 1780s. The new immigrants, already integrated into the fur trade, brought a new commercial ethos to the plains. As they took up equestrian hunting in the SSRB, they disrupted longstanding balances of both the natural environment and human occupation patterns based on old power dynamics.

The one constant through the period was the almost universal dependence of all groups in the SSRB on bison as their staple food. The bison had served as the bedrock of life in the plains since the arrival of humans in the region thousands of years ago. What changed in the 18th century was that with the commodification of the species the herds now literally had a price on their heads. The commercial value of the species to the European traders, as a means to support their more valued trade in the boreal forest, increased predation of the species, eventually to unsustainable levels. Because the bison had material worth beyond their long time value as a means for subsistence, competition and conflict came with their commercial extraction.

By the end of the 18th century, the SSRB was marked by hardship and conflict resulting from the convergence of external forces originating with Europeans and negative climatic stimuli. Inter-tribal competition within the context of the fur trade brought the inhabitants of the plains to the brink of all out war. During the 19th century, an ongoing conflict would erupt between the two major aboriginal powers in the region, the Cree and the Blackfoot alliance. That conflict was largely fuelled by a European economy that had an insatiable demand for fur, food and, finally, land.

Ultimately, with the fur bearing animal populations depleted and the bison hunted to extinction, indigenous groups found themselves without a viable food staple and without a valued economic function in the eyes of the nascent Canadian state. Subjugated, diseased, and faced with the prospect of adopting a new agrarian economy they were again at the mercy of the negative and variable climatic stimuli of the region.

[1] The Blackfoot people are more correctly referred to as the members of the Niitsitapi Alliance. Members of the Niitsitapi alliance are the Piikani, also know as the Peigan; the Kainai, known also as the Blood, and the Siksika, the Blackfoot proper. The were closely allied with the Tsuu T'ina, also known as the Sarce and

the A'aninin, better know as the Atsina, or Gros Ventre. To avoid confusion, the historical term, Blackfoot is retained here. See David Smyth, "The Niitsitapi Trade: Euroamericans and the Blackfoot Spoeaking Peoples to the Mid-1830s." Ottawa: Carlton University Ph. D. Dissertation, 2002.

[2] Although there is no consensus in the literature about the true nature of bison migration, there is general agreement that the herds grew less predictable during the historic period. "Chase" hunting, the pursuit of the species from hunters mounted on horses is commonly acknowledged as the cause of the increasingly erratic behaviour of the herds. R. Grace Morgan, "Beaver Ecology/Beaver Mythology" Edmonton: Ph. D. thesis, University of Alberta., 1991, 155-157.

[3] In contemporary accounts, the Shoshone are almost universally referred to by the derogatory term, "Snakes." Though the term Shoshone is used here and in other current writing on the group, there is a possibility that "Snakes" may refer generically to groups that were enemies of the inhabitants of the Canadian plains. Colin Calloway, "The Inter-tribal balance of Power on the Great Plains." *American Studies* 16(1982), 28.

[4] Archithinue was a generic term in use during the mid 18th century. It referred to groups that were not Cree or Assiniboine, though many scholars have incorrectly considered the designation to have been limited to members of the Blackfoot alliance and their allies, the Atsina.

[5] In her recent edition of the Henday manuscripts, Barbara Belyea included text from the four remaining versions of the document. For a full discussion of the possible editing of the manuscripts and additions to the documents, see "From Manuscript to Print" In Belyea, *A Year Inland: The Journal of a Hudson's Bay Winterer*. (Montreal: McGill-Queen's University Press, 2000), 15-37.

[6] The Pegogamow Cree were important participants in the development of the fur trade until the late 18th century when population losses resulting from the devastating smallpox epidemic of 1780-82 led to their demise as a discrete cultural entity. David Meyer and Dale Russell, ""'So Fine and Pleasant, Beyond Description': The Land and Lives of the Pegogamaw Cree." *Plains Anthropologist* 49 (2004):217-252.

[7] While the Shoshone and the Crow dominated the southern Canadian plains during this period, a consequence of their early acquisition of horses, their small population made it impossible to occupy or even control the territory they militarily dominated. Binnema, *Common and Contested Ground: A Human and Environmental History of the Northwestern Plains* (Norman: University of Oklahoma Press (2001), 92.

[8] These eruptions include Taal in 1754, whose Volcanic Explosivity Index, a measure of the severity of the eruption (hereafter VEI) was 4; Katla in 1755 and 1756, VEI 5; Mexico, between 1759 and 1774, VEI 4 and Halmahera in 1761, VEI 4. Later in the decade another three significant eruptions occurred; at Heckla in 1766, VEI 4; at Cotopaxi in 1768, VEI 4, and at Hokkaido in 1769, VEI 4. There were as many significant eruptions during this fifteen year period than during the century prior to 1750. Haraldur Sigurdsson, ed. *Encyclopedia of Volcanoes* (San Diego: Academic Press, 2000), Appendix 2

[9] Winter Counts are pictographic records of the most significant event in the year of the group that recorded the count. They are usually, though not exclusively, drawn on bison hides. See Garrick Mallery, *Picture Writing of the American Indians* (New York: Dover Publications, Inc., 1972), 266-273.

[10] This is the first specific reference to the term Blackfoot. Smyth " The Niitsitapi Trade: Euroamericans and the Blackfoot Speaking peoples to the mid-1830s." 144.

[11] Smyth suggested that the Shoshone may have acquired their weapons at the Mandan-Hidatsa trading centre on the Missouri or perhaps that they exchanged horses for weapons. " The Niitsitapi Trade: Euroamericans and the Blackfoot Speaking peoples to the mid-1830s." 146.

[12] The term refers to the wooden "vaulted" roofs of their semi-subterranean dwellings such as those found at the Cluny site and the abandoned dwellings described by Peter Fidler on his journey up the South Saskatchewan at the turn of the 19th century. Alice M. Johnson, ed. *Saskatchewan Journals and Correspondence. Edmonton House 1795-1800. Chesterfield House 1800-1802* London: Hudson's Bay Record Society, Volume 26, 1967., 265.

[13] In his analysis on the Cree-Atsina encounter, Smyth stressed that this episode alone was enough to refuse the claim made by John Milloy that the two were inveterate enemies through the 18th century. Smyth, "The Niitsitapi Trade" 150-151.

[14] Although Cocking and his predecessor Henday were not in the same areas, the contrasting conditions are striking. On 17 January, 1754, Hendy reported "the snow about 6 inches deep, and the ice about the same thickness, the falls on the Creeks not yet frozen over." Barbara Belyea, *A Year Inland*, 143.

[15] Again, though not a direct comparison, Henday noted on 18 January 1755, that his horse "begins to lose flesh." No other references to the conditions of their horses were made in the earlier journal. Belyea, *A Year Inland*, 144.

[16] During winter, males tended to be either solitary of in small groups, females wintered in larger aggregates. In this case the Assiniboine appeared to be willing to take their chances at finding larger numbers of females which they could pound, while the Cree settlers with hunting occasional and probably solitary bulls.

[17] The demand for food was not simply for those who occupied the posts on the margins of the plains. The Canadian-based trade expanded greatly into the far northwest after the mid-1770s. Bison meat was the primary means of subsistence for these ever-increasing lines of supply.

[18] As ever increasing numbers of Montreal based traders established themselves in the west, contagious diseases were spread with greater frequency.

[19] (HBCA B.49/a/1 8 February 1775)

[20] (HBCA B.49/a/1 16 December 1774)

[21] (HBCA B.49/a/1 4 May 1775)

[22] (HBCA B.49/a/3 8 October 1775)

[23] (HBCA B.49/a/3 10 March 1776)

[24] (HBCA B.49/a/3 29 March 1776)

[25] James Bain, Henry's editor, noted that "The Assiniboians seem, in 1776, to have acquired some droves [of horses] but still moved camp without employing other beasts of burden than dogs, and still hunted the buffalo on foot. By the commencement of the nineteenth century all this was changed and horses were generally employed. Alexander Henry, *Travels and Adventures in Canada and in the Indian Territories*, Rutland Vt.: Charles Tuttle Co., 1969, 295 fn. 4.

[26] HBCA B.60/a/7 20 December 1807

[27] HBCA B.49/a/3 15 May 1776

[28] HBCA B.49/a/3 19 June 1776

[29] HBCA B.49/a/4 24 January 1777

[30] HBCA B.49/a/4 5 October 1776

[31] HBCA B.49/a/4 7 February 1777

[32] HBCA B.49/a/4 24 May 1777

[33] HBCA B.49/a/6 5 September 1777

[34] HBCA B.49/a/6 21 July 1777

[35] HBCA B.49/a/6 6 October 1777

[36] HBCA B.49/a/6 13-21 May 1777

[37] HBCA B.49/a/7 2 July 1778

[38] HBCA B.49/a/7 17 July 1778

[39] HBCA B.49/a/7 7 January 1779

[40] HBCA B.49/a/7 22 February 1779

[41] HBCA B.49/a/8 July 15 1779

[42] HBCA B.87/a/1 23 October 1778

[43] HBCA B.49/a/8 26 April 1779. In his report of the increasing conflict between the traders and the Indians, he noted that the shooting of John Cole was precipitated by the theft of his horse. Canadian traders McCormick and Gelock had earlier poisoned an Indians they considered troublesome at the Eagle Hills.

[44] HBCA B.87/a/1 18 December 1778

[45] HBCA B.87/a/1 27 April 1779

[46] HBCA B.49/a/10 17 January 1781

[47] University of Toronto, Thomas Fisher Rare Book Room, MS 21, Box 6, David Thompson Manuscript, 63.

[48] HBCA B.49/a/11 11 January 1782

[49] University of Toronto, Thomas Fisher Rare Book Room, MS 21., Box 6, David Thompson "The Natives of North America." 4.

[50] HBCA B.205/a/8 14 March 1794

[51] University of Toronto, Thomas Fisher Rare Book Room, MS 21., Box 6, David Thompson Manuscript, 167.

[52] HBCA B.49/a/14 8 May 1784 Letter from Robert Longmore, Hudson House to William Tomison

[53] HBCA B.49/a/14 8January 1784
[54] HBCA B.49/a/14 6October 1783
[55] HBCA B.121/a/2 16 June 1787
[56] HBCA B.121/a/2 2 May 1788
[57] HBCA B.121/a/2 25 March 1788
[58] HBCA B.121.a/2 10 April 1788
[59] HBCA B.121/a/2 13 April 1788
[60] HBCA B.121/a/2 1 May 1788
[61] HBCA B.205/a/3 12 September 1788, Letter from Wm. Walker, South Branch House, to Wm. Tomison
[62] HBCA B.205/a/2 19 August 1787
[63] HBCA B.205/a/2 1 March 1788
[64] HBCA B.205/a/8 14 March 1794
[65] HBCA B.205/a/3 7 November 1788
[66] HBCA B.121/a/3 29 November 1788
[67] HBCA B..205/a/3 25January 1789 Letter from Wm. Tomison, Manchester House, to Wm. Walker
[68] HBCA B.121/a/3 9 February 1789
[69] HBCA B.121/a/3 16 February 1789
[70] HBCA B.121/a/3 9 March 1789
[71] HBCA B.121/a/3 25 April 1789
[72] HBCA B.121/a/3 16 May 1789
[73] HBCA B.205/a/3 25 April 1789
[74] HBCA B.121/a/4 6 June 1789
[75] HBCA B.121/a/2 10 April 1788; HBCA B.121/a/3 11 September 1788
[76] HBCA B.121/a/3 23 July 1788. Fifteen horses "besides several of 1 year old and Foals" were stolen.
[77] HBCA B.49/a/21 Correspondence, 20 September 1789, Letter from Wm. Walker, South Branch to Malcolm Ross
[78] HBCA B.205/a/4 8 April 1790
[79] HBCA B.205/a/4 12 April 1790, 30 April 1790
[80] HBCA B.121/a/4 28 January 1790; HBCA B.205/a/4 28 January 1790
[81] HBCA B.49/a/21 4 May 1790
[82] HBCA B.121/a/4 24 May 1790
[83] HBCA B.205/a/4 9 December 1789
[84] HBCA B.121/a/4 28 December 1789, Letter from Mitchell Oman, South Branch, to Wm. Walker
[85] HBCA B.121/a/4 12 March 1790.
[86] HBCA B.205/a/5 20 October 1790
[87] HBCA B.121/a/6 17 December 1790
[88] HBCA B.121/a/6 1 May 1791
[89] HBCA B.205/a/6 17 September 1791
[90] HBCA B.205/a/6 20 September 1791
[91] HBCA B.205/a/6 24 November 1791
[92] HBCA B.205/a/6 29 September 1791
[93] HBCA B.205/a/6 21 February 1792, Letter from Wm. Tomison, Manchester House, to Wm. Walker
[94] Ibid.
[95] Ibid.
[96] B.205/a/6 8 May 1792, Letter from Wm. Tomison, Manchester House, to Wm. Walker
[97] B.205/a/6 20 May 1792
[98] B.205/a/7 9 August 1792
[99] B.205/a/7 14 September 1792
[100] B.205/a/7 20 October 1792, Letter from James Sanderson, South branch House, to Wm. Tomison
[101] In the Journal, the Peigan passed by numerous beaver ponds without trapping them even though Fidler remarked that the wolf skins they traded had recently been devalued by the HBC. This indicates that they continued their practice of conserving beaver.
[102] HBCA B.205/a/8 8 November 1793, Letter from James Bird, South Branch House

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HBCA B.49/a/8 Cumberland House Post Journal 1778-1779
HBCA B.49/a/11 Cumberland House Post Journal 1781-1782
HBCA B.49/a/14 Cumberland House Post Journal 1783-1784
HBCA B.49/a/21 Cumberland House Post Journal 1789-1790

HBCA B.60/a/7 Edmonton House Post Journal 1807-1808

HBCA B.87/a/1 Hudson House [Upper]-post Journal 1778-1779

HBCA B.121/a/2 Manchester House Post Journal 1787-1788
HBCA B.121/a/3 Manchester House Post Journal 1788-1789
HBCA B.121/a/6 Manchester House Post Journal 1790-1791

HBCA B.205/a/4 South Branch House Post Journal 1789-1790
HBCA B.205/a/5 South branch House Post Journal 1790-1791
HBCA B.205/a/6 South branch House Post Journal 1791-1792
HBCA B.205/a/7 South Branch House Post Journal 1792-1793
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