

**INVISIBLE DEMONS:  
EPIDEMIC DISEASE AND THE PLAINS CREE, 1670-1880.**

A Thesis Submitted to the College of  
Graduate Studies and Research  
In Partial Fulfillment of the Requirements  
For the Degree of Masters of Arts  
In the Department of History  
University of Saskatchewan  
Saskatoon

By  
Rebecca Lee Barbara Brain  
Fall 2002

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## **ABSTRACT**

It is evident from the past forty years of research, debate and literature that the New World was far more populated in 1492 than was previously thought. However, despite the expanding field of study most works omit the effects that epidemics had on the tribes of the Great Plains, particularly those located in present-day Canada, and the works that have been published deal mainly with demographics and fail to delve into how disease affected intertribal relations. As well, almost all studies of disease and the Great Plains tribes end by 1850 or start in 1880. Therefore, the decades from 1860 through to the 1870s are largely ignored and become even more of a mystery when considering the fact that the eventual subjugation of the Plains Natives soon came when the Numbered Treaties commenced in 1871.

The omission of research on epidemics from 1860 to 1880 has left historians to concentrate on other reasons for the collapse of the Plains lifestyle, primarily the disappearance of the buffalo, which was crucial to Native existence in the parkland/grassland regions. Although this was obviously a very important factor in weakening warrior societies on the Plains, it was by no means the sole factor. In fact, the smallpox epidemic of 1870-71 and its after effects played an important role in debilitating Native nations, especially great tribes like the Plains Cree in present-day Saskatchewan. Food supplies could not be maintained and starvation became prevalent throughout the Great Plains in the winter of 1870-71. Malnutrition certainly would also have led to further secondary complications such as fertility problems and pulmonary

illnesses, such as pneumonia, which would have contributed to the impact of the epidemic through a continued loss of population and disruption of intertribal functioning. Through analysis of the consequences of this epidemic on the Plains Cree it becomes increasingly apparent that disease played a much greater role in leading Natives towards treaty negotiations and settlement than has been formerly thought. This is not to say that epidemics in themselves were the main reason for the collapse of the Plains Cree culture, but rather they deserve to be included along with the traditional causes such as the disappearance of the buffalo.

## **ACKNOWLEDGEMENTS**

First and foremost I would like to acknowledge my supervisor Dr. J.R. Miller, whose, patience, guidance and constant support have been the key to the completion of this thesis. I could not have asked for a better advisor. Secondly, I would like to thank the other members of my graduate committee, Dr. L. Stewart and Dr. W. Waiser for their helpful advice, as well as the support of many other unnamed faculty members from the History Department at the University of Saskatchewan who have offered me guidance. Generous financial support from the Messer Fund allowed me to conduct my research at the Hudson's Bay Company Archives in Manitoba and the Masters of Arts Scholarship in Native-Newcomer History has granted me the monetary support enabling me to focus my undivided attention on my thesis and not be hindered by time consuming teaching-assistant positions. Finally, I would like to thank the staff at the Hudson's Bay Company Archives for their kindness and helpfulness both during my visit to Manitoba and through electronic communications during the past year. To all the people who have aided me in some way or another on this project, thank you.

## **DEDICATIONS**

This work is dedicated to my father, Robert L. Brain and my stepmother, Angela P. Brain for their inspiration and unwavering support. Also, it is dedicated in loving memory to my mother - I hope that I have made you proud.

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*INVISIBLE DEMONS:  
THE IMPACT OF EPIDEMIC DISEASE ON THE  
PLAINS CREE AND HOW THIS AFFECTED TREATY  
NEGOTIATIONS, 1670-1880.*

*INTRODUCTION*

Like all history, the history of Amerindians is an ongoing process. Starting just after contact, Europeans have been fascinated with describing the New World's inhabitants. Yet most of these pre-1960s sources deal with Native populations in much the same way. This is because an orthodoxy about the Aboriginal population was established early in the colonial period. Natives, especially those of North America, were described mainly as small hunter-gatherer societies that lacked any significant signs of civilization. These theories were founded on both legitimate and erroneous assumptions. First, by the time consistent interaction had been established between colonists and many tribes on the East Coast and westward across the Great Plains, their populations may have already been decimated because of epidemics or pandemics<sup>1</sup> traveling up through Native trade networks from Spanish outposts in Mexico and Florida. Thus, European documents stating that much of the land was uninhabited or that Native populations were small may not have been ill conceived.

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<sup>1</sup>Epidemics are widespread occurrences of a particular disease, which usually devastate an entire community or region. Pandemics are larger forms of epidemics, usually encompassing entire continents or sometimes reaching a global scale.

Indeed, it is a good possibility that disease diminished quite a few of the once populous regions of North America. This resulted in small, dislocated tribes and vast stretches of unoccupied land. Secondly, by claiming that the Native populations were small hunter-gatherer units, Europeans could further legitimize colonization. This is perhaps one of the most significant factors, creating numerous problems for those writing new theories on epidemics and population loss. For example, if theories on population estimates are accepted, then tribes such as those that dwelt in Eastern North America may have at one time been rather large tribal groupings. The larger the Native population estimates and the more 'civilized', according to non-Native scholars, the Native peoples are depicted as being, then the more immoral the process of colonization becomes. This creates many holes in colonial histories, the authors of which prided themselves on their countries' colonial endeavors and attempts at civilizing the barbarian inhabitants. Thus, with the introduction of new population estimates for the New World, a new way of writing both colonial and especially Aboriginal history has been ushered in.

Yet what is more than evident from the past forty years of research, debate and literature is that the New World was far more populated in 1492 than was previously thought. However, despite the expanding field of study most works omit the effects that epidemics had on the tribes of the Great Plains, particularly those located in present day Canada, and the studies that have been conducted deal mainly with demographics and fail to delve into how disease affected intertribal relations. As well, almost all studies of disease and the Great Plains tribes end by 1850 or start in 1880. Therefore, the decades from 1860 through to the 1870s are largely ignored and become even more of a mystery when considering the fact that the eventual subjugation of the Plains Natives soon came

when the Numbered Treaties commenced in 1871. Yet despite the obvious void in the literature on the Great Plains the research on epidemic disease in post-contact North America is constantly expanding. One hopes that in future years this growth in study will encompass more than the semi-sedentary tribes of the east and will also come to focus on the highly mobile societies of the Plains.

## CHAPTER ONE

# THE HISTORIOGRAPHY OF EPIDEMIC DISEASE AND THE NATIVE PEOPLES ON THE GREAT PLAINS

Henry F. Dobyns, a professor of anthropology at the University of Kentucky<sup>2</sup>, was the first to start the aboriginal population debate with the publication of “Estimating Aboriginal Population: An Appraisal of Techniques with a New Hemispheric Estimate” in 1966. Following this publication, academics studying archaeology, sociology, epidemiology, demography, and history, to name just a few, have pursued the topic with vigor. The reason that Dobyns was able to stir up such a controversy in the scholarly world was because his theories were so revolutionary and in many cases unacceptable. His population estimates were between five and ten times higher than those proposed by anthropologists James Mooney and Alfred L. Kroeber around the turn of the century. In 1939 Kroeber estimated that there were about 900,000 Natives in North America at the time of contact.<sup>3</sup> In 1966 Dobyns claimed that the Native population at the time of contact was between 9.8 and 12.25 million. This figure for North America was later increased to eighteen million in his book, Their Number Become Thinned, published in

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<sup>2</sup>At the time of his article’s publication in *Current Anthropology*, Dobyns was a Professor at the University of Kentucky in Lexington, Kentucky.

<sup>3</sup> Much of Kroeber’s work was based on that conducted previously by Mooney. Kroeber simply combined his research with Mooney’s in order to come up with his calculations. Nancy Shoemaker, American Indian Population Recovery in the Twentieth Century. (Albuquerque, 1999), p.2.

1983.<sup>4</sup> What was so interesting about Dobyns' theories was not the sheer magnitude of his estimates but rather how he was able to arrive at them. Dobyns used a formula that calculated the Native population at its nadir (lowest number) and then multiplied by twenty in order to come up with a pre-contact population figure.<sup>5</sup> This method was easy for Dobyns to execute because in the early decades of the twentieth century Native tribes across North America were hitting their lowest population figures in recorded history. Nancy Shoemaker, in American Indian Population Recovery in the Twentieth Century, proposed that by 1900 the Native population in the United States had reached a low point of 237,000.<sup>6</sup> Dobyns would use figures such as these in his formula to project a pre-contact population figure.

The twenty to one ratio was not a random figure developed by Dobyns. Instead, it was based on careful study of epidemic trends and current tribes undergoing depopulation because of disease. These tribes included those from Africa who had by the 1960s just recently come into contact with Europeans. But most important, for Dobyns' purposes, were the 'Yanomomi' of the Brazilian and Venezuelan rain forests. This tribe had recently come into contact with outside society by 1960 and consequently they were undergoing massive depopulation because of epidemics. Dobyns calculated that the rate of Yanomomi loss due to disease sat at an average of twenty to one. But this was not the only method that Dobyns employed to come up with this formula, because he also relied heavily on primary sources. He used all resources available to him, but he noted the difficulty in using primary sources to study disease. This was because, as Dobyns noted,

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<sup>4</sup> Henry F. Dobyns, Their Number Become Thinned: Native American Population Dynamics in Eastern North America, (Knoxville, 1983), p.42.

<sup>5</sup> Henry F. Dobyns, "Estimating Aboriginal American Population," **Current Anthropology**, 7(1966), p.414.

the documentation in the New World lagged far behind the spread of Old World contagions.<sup>7</sup> Dobyns claimed that epidemics and pandemics washed over North America in the early sixteenth century. These started in the Spanish settlements in Mexico and on the coast of present day Florida, and they spread throughout North America via the extensive Native trade networks. Thus, when Europeans began their first permanent settlement at Jamestown on the east coast in 1609, epidemics had already started devastating the Aboriginal inhabitants.

These Old World diseases came in many different forms, the most lethal of which was smallpox followed closely by influenza, measles, diphtheria, typhus, cholera, bubonic plague, scarlet fever, and tuberculosis.<sup>8</sup> Most of these diseases have been recognized by other scholars studying the topic except for one: bubonic plague. Dobyns is the only one to claim that this 'terror' of the Old World also struck the western hemisphere. In fact, Dobyns claimed that bubonic plague hit the New World four times between 1545 and 1707.<sup>9</sup> The 1612-1619 and 1707 plagues ostensibly hit the east coast, devastating both the Louisiana and New England tribes. No other scholar has corroborated Dobyns' plague theory. This is not to say, however, that epidemics did not affect these tribes during the years mentioned by Dobyns. In fact, there is significant evidence available suggesting that a massive epidemic hit the New England area around 1618-1619. But there is no documentation stating what the contagion was.

Dobyns also argued that epidemics and pandemics traveled from Mexico and Florida to as far north as the tribes of the Great Lakes and Plains regions. Dobyns

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<sup>6</sup> Shoemaker, p.3.

<sup>7</sup> Henry F. Dobyns, "Estimating Aboriginal American Population, *Current Anthropology*, p.404.

<sup>8</sup> Henry F. Dobyns, *Their Number Become Thinned*, pp.11-23.

<sup>9</sup> *Ibid.*, p.20.

examined the Seneca, an Iroquoian tribe located just south of Lake Ontario. He studied the sixteenth-century migration patterns of the Seneca by using archaeological evidence and small remnants of primary sources. He concluded that Seneca migrations correlated with times of massive depopulation due to disease.<sup>10</sup> He came to this conclusion because he found that the years he believed had witnessed epidemics in the area were also the years that witnessed Seneca migration.

Many scholars find Dobyns' theory of pre-contact depopulation amongst the Seneca troublesome. The most notable is Bruce G. Trigger, one of the leading scholars of the Great Lakes Native peoples. Trigger believed that Dobyns based his assumptions on questionable evidence. Indeed, there is no direct evidence in the form of documents or archaeological remains pointing directly to pre-contact epidemics<sup>11</sup> among the Seneca or other Great Lakes tribes. This is not to say that Trigger thinks that Dobyns' theory is an impossibility. In fact, in his book Natives and Newcomers, Trigger supports the idea that diseases 'could have' devastated Aboriginal populations prior to contact. He believes that it was quite feasible for epidemics to have traveled through trading networks, penetrating the Great Lakes region before the first European-documented outbreak of smallpox was recorded amongst the Huron in 1634.<sup>12</sup> But unlike Dobyns, Trigger admits that this is only theory because of a lack of concrete evidence.

Some scholars, such as anthropologist Janet W. McGrath, have appropriated Dobyns' theories of massive demographic decline in order to demonstrate their own theories of how social dysfunction is caused by disease and therefore acts as a

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<sup>10</sup> Ibid., pp.313-314.

<sup>11</sup> This is not referring to pre-1492 periods but rather pre-contact meaning before direct contact with Europeans in the area around the Great Lakes. The epidemics are believed to have traveled through Native trading networks from Spanish holdings in the far south.

perpetuating factor in the continuation of epidemic impact. In her article "Biological Impact of Social Disruption Resulting From Epidemic Disease," McGrath studies how epidemics caused social disruptions within the tribal unit, which often increased the biological impact of the disease. Like Dobyns, McGrath also uses the example of the Yanomomi to demonstrate the plausibility of her theories. She indicates that when the measles hit the Yanomomi in 1968, it was not the disease itself that took so many lives but that the normal functioning of the village halted.<sup>13</sup> Therefore, there was no one to get food or water for the sick. Nor was there anyone to care for the ill, or the very young and old. McGrath broke down her theory into different sub-groups or 'social disruptions,' which were triggered by epidemics. These included flight, extraordinary preventative or therapeutic measures, scapegoating, fatalism, ostracism and quarantine and intragroup conflict. McGrath believes that flights usually resulted from large-scale epidemics, such as those caused by smallpox, influenza or cholera.<sup>14</sup> These diseases often created panic amongst the community, and this resulted in a general dispersal of people from the village. The reason that flight would be seen as a social disruption, increasing the biological impact of disease, was because those who fled would often carry the pathogens to other villages, thereby infecting them too. As well, the greater the number of those fleeing hard hit areas, the fewer the amount of people who were left to care for the ill.

Extraordinary preventative or therapeutic measures also aided in biological impact through prolonged prayers, sacrifices and especially ceremonies.<sup>15</sup> Prolonged prayers would cut into the time and resources needed to care for the ill. But it is unclear

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<sup>12</sup> Bruce G. Trigger, *Natives and Newcomers: Canada's "Heroic Age" Reconsidered*, (Montreal & Kingston, 1985), p.236.

<sup>13</sup> Janet W. McGrath, "Biological Impact of Social Disruption Resulting From Epidemic Disease," *American Journal of Physical Anthropology*, Vol.84., #4(1991), p.407.



why McGrath thinks that sacrifice increased the biological impact of disease, because she does not specify what types of sacrifices were being made. One can only assume that she is either referring to animals or humans. In the case of animals, sacrifice would undercut valuable food supplies, and human sacrifice would in all likelihood be accompanied by extensive ceremonies, which would enable disease to spread in a crowded environment.

Scapegoating and fatalism were also prominent social disruptions caused by disease, especially among the Yanomomi. Scapegoating would usually involve an outside influence, which had come into contact with the tribe. This created a fear amongst the Natives, who would blame Europeans or other outsiders for their contagions, and resulted in the refusal of medicine or other aid from the supposed perpetrators.<sup>16</sup> Fatalism occurred when the people just gave up and waited to die. They would not attempt to help themselves or others. Even those who were not infected would sit and wait for their turn and what they believed to be an inevitable chain of death.

Whereas fatalism involved a voluntary act, ostracism and quarantine were usually forced upon infected individuals. Ostracism involved an infected group or person being forced out of the community. Unlike the quarantined, the ostracized were a direct social outcast.<sup>17</sup> This would result in exiled individuals wandering to other villages in search of refuge, thus spreading the epidemic as they went. Quarantine, on the other hand, did not usually increase the spread of disease to outsiders. Instead, it involved an infected group or individual being confined to a particular area. This led to a more rapid death rate amongst those quarantined because there was no one to care for them.

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<sup>14</sup> Ibid., p.410.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid., p.411.

<sup>17</sup> Ibid., p.412.

The final disruption, described by McGrath, is intragroup conflict. This involved tribal members blaming one another for the epidemic. Political dissension was a by-product of this conflict, and was due to disagreements over policies and procedures in the face of disease.<sup>18</sup> Subsequently, epidemics also caused a general rejection of authority within the community, leading to social disintegration because the fundamental base of the group or tribe was disrupted. Although McGrath develops her theories from specific case studies, she believes that in general the social disruptions caused by epidemics could be found amongst most tribes that were suffering or had succumbed to diseases.

However, McGrath's theories on social disruption are not accepted by all academics. One such person is William A. Starnam, an anthropologist, who like McGrath and Dobyns, studies the impact of disease on the New World inhabitants. Starnam claims that many of McGrath's theories could not be applied to North American tribes because they were very different social/cultural entities than those that were found in South America. He states that, because most tribes in the northeast did not abandon infected peoples or portions of the tribes, McGrath's theories of ostracism and quarantine could not be applied.<sup>19</sup> Starnam unfortunately fails to pursue the subject further in an attempt to study whether McGrath's other theories are applicable. In fact, many of them are, especially amongst the Huron, Petun, Neutral and Iroquois in the Great Lakes region. These tribes all partook in extraordinary preventative or therapeutic measures and scapegoating during the massive smallpox and influenza epidemics extending from 1634-

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<sup>18</sup> *Ibid.*

<sup>19</sup> William A. Starnam, "The Biological Encounter: Disease and the Ideological Domain," *American Indian Quarterly*, 16(1992), p.516.

1639. It is frequently mentioned throughout the Jesuit Relations<sup>20</sup> that members of the tribes would assemble en masse in the vicinity of a sick person. They would perform elaborate ceremonies and create as much noise as possible in an attempt to frighten the 'evil spirit' (disease) out of the infected person.<sup>21</sup> During the peak of epidemics, scapegoating was also very prevalent amidst the Great Lakes tribes and many Aboriginal Nations on the Plains, who blamed the missionaries, traders and other non-Natives for their afflictions.<sup>22</sup> Their accusations were not altogether unfounded, as the missionaries and traders were in all likelihood the unintentional carriers of the Old World contagions. The Natives would become fatally ill, but the Whites seldom would, and if they did they usually recovered. In addition, both the tribes around the Great Lakes and on the Great Plains provide good examples of how disease triggered scapegoating against traditional Native foes. There are many references throughout the documents that mention the heightened state of warfare between the Iroquoian tribes and in later centuries amongst the Blackfoot and the Plains Cree as a result of epidemics. Therefore, many of McGrath's theories can be applied to the numerous tribes across North America, especially those that were located around the Great Lakes and on the Great Plains.

Starnam, unlike many other scholars, examines the existence of diseases in the New World before contact instead of just those introduced by Europeans. This is a

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<sup>20</sup> The Jesuit Relations are compilations of primary documents assembled by the Jesuit missionaries during their sojourn in the New World. These volumes cover roughly two centuries: the seventeenth and eighteenth.

<sup>21</sup> Jesuit Relations, Vol.19., p.89.

<sup>22</sup> Examples of Natives blaming the Jesuits can be found throughout many different volumes of the Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France 1610-1791, Edited by: Reuben Gold Thwaites. New York: Pageant Book Company. 1659. Some of which are: Vol.12., p.237.; Vol.20., pp.47-49.; Vol.21., pp.209-235. Examples of the Plains' Natives blaming Whites can be found in: Extract from letter from W.J. Christie to D.A. Smith, dated Carlton House, September 6, 1870. (H.B.C. Arch. A.11/99, fos, 300-301.) and in William Francis Butler, The Great Lone Land, (Edmonton, 1968), p.369.

unique approach because most people studying this topic fail to recognize or acknowledge the existence of pre-contact diseases, and it is usually taken for granted that the diseases from which Amerindians suffered were mainly those brought from the Old World. Both tuberculosis and a non-venereal form of syphilis were present in the New World. This form of syphilis only became venereal once it was brought to the Old World.<sup>23</sup> Viral influenza and pneumonia were also present in the pre-contact Americas, but Europeans brought virulent forms of both.<sup>24</sup> Starnam did not propose that pre-existing contagions in the New World were equally as destructive as those introduced by Europeans. In fact, he states that the Old World diseases had a far greater impact. However, his point was to show that Native peoples were not disease-free prior to contact, nor were their immune systems up to par. By this, Starnam is referring to the northeastern tribes that became involved in farming before 1492. He suggests that with agriculture came a less balanced diet, seasonal food shortage risks, and low-grade infections.<sup>25</sup> This argument is also taken up by Susan Pfeiffer and I. Fairgrieve in “Evidence From Ossuaries: The Effect of Contact on the Health of Iroquoians,” but they are more specific when discussing agriculture, by pointing specifically to maize.<sup>26</sup>

Of final interest in Starnam’s article are his thoughts on how contact may have affected Europeans. He claims that most people who study the contact period only analyze the effect that contact had on the Amerindians, in the form of diseases, religion and colonization. But academics very rarely attempt to study how contact affected the

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<sup>23</sup> Starnam, p.512.

<sup>24</sup> *Ibid.*, p.513.

<sup>25</sup> *Ibid.*, p.511.

<sup>26</sup> Susan Pfeiffer and I. Fairgrieve, “Evidence From Ossuaries: The Effect of Contact on the Health of Iroquoians,” *In the Wake of Contact*, Clark Spencer Larsen and George R. Milner, eds. (1994), p.58.

White population.<sup>27</sup> Unfortunately, Starnam does not elaborate on this thought beyond a brief paragraph, but his idea has the potential to inspire some very interesting research. This could also be applied to studies conducted about missionaries, which usually focus on how missionaries attempted to transform Native society. Instead, it would be fascinating to discover how the lives of missionaries were altered in the New World.

Although Pfeiffer and Fairgrieve mainly focus on the Huron, Petun and Neutral in “Evidence From Ossuaries,” their theories can nevertheless be applied to most agricultural tribes existing around the time of contact. Their take on the effects of epidemics on the Amerindians is different from many others who study the topic because they are archaeologists and are studying the results of epidemics by examining human remains. Similar to Starnam, Pfeiffer and Fairgrieve contend that ill health amongst agricultural tribes appeared to be on the rise in pre-contact times, possibly because of the fairly recent adoptions of horticulture, especially maize.<sup>28</sup>

They were able to come to this conclusion by studying bone and tooth decay of the Native peoples they uncovered in many ossuaries<sup>29</sup> in Southern Ontario. Therefore, because of centuries of pre-contact ill health amongst the northeastern horticulturalists, disease brought in by Europeans may have been even more fatal because Native immune systems were already weak. Pfeiffer and Fairgrieve also corroborate Starnam’s point on the existence of pre-contact diseases in North America. In particular, they look at tuberculosis, which they found to be very prevalent in pre-contact times. They stated that tuberculosis may have been in existence around the Great Lakes from about 1400

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<sup>27</sup> Starnam, p.517.

<sup>28</sup> Pfeiffer and Fairgrieve, p.58.

<sup>29</sup> Ossuaries are large burial pits where the deceased are finally laid to rest after an extensive ceremony (Feast of the Dead). This ceremony took place about once every twelve years, in between which time those

onwards, and there is no evidence that it increased in impact after contact.<sup>30</sup> Pfeiffer and Fairgrieve also try to examine skeletal remains for signs of massive epidemics such as influenza, smallpox, and measles. But they claim that it is close to impossible to examine archaeological remains in search of these diseases because they never leave marks on the bones.<sup>31</sup> Thus, the only way to determine whether a burial was filled with victims of epidemics was to find some form of primary documentation that discusses such an event. There are examples of this because the Jesuits often recorded the Native death ceremonies and where they took place. But, unfortunately, this type of accompanying primary evidence is very hard to come by, especially with regards to the Plains tribes, and it is therefore very difficult to assess the damage caused by epidemics such as smallpox by using archaeological studies.

Another academic to study the agricultural societies of North America is Leitch J. Wright Jr. He mainly focuses on the southeastern region, examining it from a historian's perspective because he bases much of his argument on careful study of Spanish documents. Wright believes that epidemics, introduced by the Spanish in the early sixteenth century, wiped out vast populations in the American southeast before the English or the French arrived. He enforces the idea that many southeastern tribes were very heavily populated, organized, and fortified. Many lived in great pallisaded towns, which were united with other towns forming confederacies or nations.<sup>32</sup> Wright acquired this information from the Spanish documents left by missionaries, Menendez, De Soto, and others, and he also found that many of these documents revealed that epidemics took

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who died would be temporarily buried or stored, till the Feast of the Dead when they could be buried in the ossuaries. Ossuaries usually house at least 5+ skeletal remains and some can reach well over sixty.

<sup>30</sup> Pfeiffer and Fairgrieve, p.53.

<sup>31</sup> ibid., p.52.

their toll on the southern Native populations. The records included accounts of Spaniards returning to villages that they had previously visited, only to find them empty. Such was the case with the heavily populated Cofitachiqui Confederacy of present-day upper Georgia, the Calusas in Florida or the interior Mississippian cultures.<sup>33</sup> All of these tribes virtually disappeared, and, because of their obvious lack of sustained contact with Europeans, disease was most likely spread by Africans<sup>34</sup> fleeing into the interior, or along trade routes extending out from infected coastal areas.

Wright agrees with Dobyns' depopulation ratio of 20 to 1 because he claims that the population loss in the southern regions was so great. He founded this argument on more than the Spanish documents, also using archaeological evidence, especially from the Mississippi Basin region. This region is home to the most extensive earth works in North America. These gigantic mounds were built by the Mississippian tribes, colloquially deemed the 'Mound Builders.' Recent archaeological finds show that these societies were fairly extensive, heavily populated and remarkably 'civilized,' 'civilized' meaning large tribal groupings in pallisaded villages with some form of social and political hierarchy. Yet, ironically, despite the obvious vastness of this extinct culture, very few people have ever heard of them or the massive earthen works that they created. This may be due to the still prevalent myth that eastern regions were sparsely populated by tribal bands of 'uncivilized' Amerindians. Thus, to admit that this was far from the case, and that these tribes were far more 'civilized', as viewed by recent scholars, than was previously thought, would make the process of colonization appear even more

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<sup>32</sup> Leitch J. Wright Jr., The Only Land They Knew: American Indians In the Old South, (Lincoln, 1999), pp.18-26.

<sup>33</sup> ibid., p.51.

immoral than it already does. Yet despite the obvious depopulation of the Mississippi Basin sometime during the sixteenth century there are no documents or evidence that point directly to epidemics. All that remains are Spanish records, which mention contact with some of the Mississippian cultures. But the mystery lies in the fact that when the Spanish returned to these tribes some years later they had vanished. It is unlikely that these tribes depleted their resource base and had to move on, because archaeological evidence suggests that this was not the case. Therefore, it is not surprising that Wright and other scholars who approach the subject blame the disappearance on epidemics.

Alfred W. Crosby Jr., another historian who studied the impact of disease on the New World, has become quite famous for his theory on 'virgin soil epidemics.' This theory is based on populations that had no previous exposure to diseases that struck them and were therefore, as Crosby stated, almost 'immunologically' defenseless.<sup>35</sup> Thus, because of the lack of previous exposure, the Native population plummeted when hit by Old World epidemics to which they had no immunity. Crosby claims that the massive depopulation of North America went on for four hundred years, as opposed to Europe's Black Death, which lasted no more than two hundred years.<sup>36</sup> The reason that this New World depopulation carried on for so long was because not all of the Old World diseases hit North America at the same time. One disease would hit, devastating the population, and then it would be followed by other diseases. The first epidemic would greatly weaken the Native society, thus making them even more vulnerable to later contagions. He concludes that no particular tribe suffered for more than a hundred to a hundred and

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<sup>34</sup> Many African slaves were brought to the New World by Spanish explorers in order to aid in Spanish exploration. There are numerous reports that many of these slaves escaped to the interior and were simply absorbed by Native tribes.



fifty years from epidemics, but that after this period it was a combination of warfare, murder, dispossession and interbreeding that continued the population decline.<sup>37</sup> Crosby also talks a lot about what McGrath coins 'social disruption', both fatalism and flight. He claims that both of these factors helped contribute to the spread of disease and the neglect of the sick.

Two scholars who chose to downplay the possibility of geographically extensive epidemics in the New World are Dean R. Snow and Kim M. Lanphear. Snow and Lanphear propose some interesting theories on the nature of diseases in the northeastern regions. For instance, they conclude that the first massive outbreaks of smallpox coincided with the first influx of children into the colonies after 1630.<sup>38</sup> They claim there was no account of massive epidemics prior to this. Throughout their article, however, Snow and Lanphear fail to appreciate the extent to which Native trade routes could have channeled diseases into the interior where documentation would be non-existent because of the lack of literate Europeans. In fact, never once do they mention trade routes. This becomes an increasing hindrance when they talk about epidemics, which may have spread from Spanish Mexico or Florida. On the contrary, they claim that these epidemics did not spread at all. This was due either to the large buffer zones between tribes or because Native populations were too small for such diseases to flourish.<sup>39</sup> Both theories are highly problematic because of the fact that most of the tribes with which De Soto came in contact were highly populated and had well-established trade routes connecting

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<sup>35</sup> Alfred W. Crosby Jr., "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America," *William and Mary Quarterly*, 33(1976), p.289.

<sup>36</sup> *Ibid.*, p.292.

<sup>37</sup> *Ibid.*

<sup>38</sup> Dean R. Snow and Kim M. Lanphear, "European Contact and Indian Depopulation in the Northeast: The Timing of the First Epidemics," *Ethnohistory*, 35(1), 1988, p.26.

<sup>39</sup> *Ibid.*, p.19.

most of the tribes between the Gulf of Mexico and the Great Lakes and Plains areas. As well, Spanish explorers, along with their ever-present entourages, may very well have penetrated the continent right up into these regions.

There is not a single book that deals with the effects of European-introduced epidemics on the Northern Plains tribes prior to 1880. In fact, there are very few works dealing with this topic after this time period, except for Maureen Lux's recent Medicine That Walks (2001), which is an extension of her dissertation. The only author who has actually published work that includes disease studies of the Plains Natives is Arthur Ray in his meticulously researched Indians in the Fur Trade (1974), but epidemics are not the principal focus of this book. In addition, there are numerous articles and several authors who deal with this topic at length, such as John S. Milloy and David G. Mandelbaum. This omission in academic literature is strange, considering its great potential. Perhaps it is due to the heavy reliance on conjecture, which historians of disease and Native peoples have to rely upon in order to reconstruct the history of epidemic destruction. Naturally this has resulted in the minimal literature available, being mainly demographic studies rather than much needed cultural studies.

Perhaps this omission is a result of the small number of primary sources from the time, which may have documented the shifts in internal tribal dynamics as a consequence of epidemic disease. Unlike the Great Lakes tribes who were extensively documented by the Jesuits in the Jesuit Relations, the Plains tribes have no similar comprehensive documentation from which the historian can glimpse the 'devolution' of the tribes resulting from the repeated influxes of epidemics. The only extensive study which attempts this is the 1985 dissertation by anthropologist Michael K. Trimble,

"Epidemiology on the Northern Plains: A Cultural Perspective," that analyzes how the 1837-38 smallpox epidemic affected the semi-sedentary Mandan, Hidatsa and Arikara tribes of the Upper Missouri region. He analyzes the progression of the disease among these tribes and how intertribal relations changed thereafter. Trimble is able to do this because he had access to the records of Francis A. Chardon, a trader stationed at Fort Clark, in present day North Dakota who extensively recorded the reaction of the tribes, mainly the Mandan, to the disease from its beginning to its conclusion. Consequently, Trimble is able to study how the tribes altered culturally, socially, politically and militarily because of the scourge.

Unfortunately, a record similar to Chardon's has not been found which could enable scholars to assess similar changes in the more northerly tribes of the Canadian prairies. As a result, the studies that have been done, although thoroughly researched, again mainly deal with demographics, ignoring the important implications of intertribal collapse or struggle as a consequence of disease and how this possible cultural/social upheaval affected Native relations with other tribes and with non-Natives. Nor can one draw on the conclusions of academics such as Trimble and apply them to the Plains tribes. This is because his study is of semi-sedentary societies that lived in earth-covered dwellings within fortified villages.<sup>40</sup> This was in contrast to the tribes to the north of the Upper Missouri, which were migratory and lived in smaller villages. Thus, Trimble's theories about social/cultural alteration resulting from disease may not be applicable to societies such as the Plains Cree.

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<sup>40</sup> Michael K. Trimble, "Epidemiology on the Northern Plains," (Unpublished Dissertation, University of Missouri-Columbia. 1985), p.141.

Geographer Jody F. Decker in "We Should Never Be Again the Same People" (1989)<sup>41</sup> mentions this void in the literature on epidemic disease, but unfortunately neither she nor any other scholars have attempted to remedy the omission. This may be due to her academic influence - geography. However, a similar correlation can also be drawn to explain Trimble's focus on social/cultural change because of his anthropological background. Nevertheless, Decker's study, the most extensive pre-1850 analysis, has never been followed up with a social/cultural work for the Plains area. Yet, as previously mentioned, Lux's dissertation and recent book do delve into this aspect of epidemic disruption, but she is studying the post-treaty period. Aside from Decker's lack of social/cultural content, her work is the most extensive and detailed history of European introduced epidemics amongst the Northern Plains Natives in the centuries leading up to 1860. The only work of similar magnitude is Paul Hackett's recent dissertation 'A Very Remarkable Sickness' (1999)<sup>42</sup> which mainly focuses on the Petite Nord, the area around the southern and western extent of Hudson Bay, from 1670 to 1846. His work is very valuable for understanding how diseases dispersed in the Northern and Western interior and how these diseases altered the communities they infected. Despite its specific regional focus, Hackett's work is valuable in that it not only discusses the diseases that struck the Petite Nord but also how they got there and spread beyond. This focus consequently includes the neighboring Plains tribes. In fact, his work can be used to study how the Cree adjusted to early epidemics, as prior to 1800 they had not yet migrated to the Plains area and lived in and around the Petite Nord.

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<sup>41</sup> Jody F. Decker, "We Should Never Be Again the Same People: The Diffusion and Cumulative Impact of Acute Infectious Diseases Affecting the Natives on the Northern Plains of the Western Interior of Canada 1774-1839," (Unpublished PhD Dissertation, York University, 1989).

In her dissertation, as well as her numerous articles, Decker, like Hackett, studies the diffusion patterns of epidemic diseases. Her study is somewhat similar to Trimble's in that she makes a point of analyzing, in great detail, the spread of disease by applying an epidemiological model. This method requires that the researcher have a thorough understanding of the nature of a particular disease, incubation periods, duration of infectivity, how the disease spreads and disables its victims, etc. Thus, by understanding how an epidemic functions, the historian can better understand the massive epidemics that swept over the Great Plains from the seventeenth century onwards.

Decker does not delve into great detail on epidemics affecting the Plains tribes after the massive smallpox epidemic of 1837-38, aside from the mere mention of disease outbreak in 1870. Trimble does not venture much beyond 1838, and Hackett ends his study ten years later. Therefore, the three most extensive studies of pre-treaty epidemics on the Plains all generally end before 1850. This consequently leaves a large void in the decades surrounding treaty negotiations and settlements. No one has really ventured to explore the possibility that epidemics might have had an effect on Native-White relations in the treaty era. Not even Maureen Lux, whose study begins from the treaty period onwards, examines how disease affected Natives in the immediate pre-treaty period. She mainly focuses on how treaties and the resultant reserves, poverty and malnutrition became the breeding grounds for epidemics such as tuberculosis. In the introduction and the first chapter of her dissertation she does refer to epidemics among the Plains tribes in the pre-reserve era, but her conclusions in this section are brief and at the very least questionable. She claims that despite the severity of epidemics that struck the Plains

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<sup>42</sup> Paul F.J.Hackett, "'A Very Remarkable Sickness': The Diffusion of Directly Transmitted, Acute Infectious Diseases in the Petite Nord, 1670-1846," (Unpublished PhD Dissertation, University of

tribes in the pre-treaty era, they "...did not undermine the collective societies and cultures."<sup>43</sup> In fact, she does not validate this bold statement with any significant proof. It is inconceivable, especially when comparing the Plains situation with the more eastern nations, that a 50% loss in population due to a particular disease would not have fundamentally altered the core of any given society. However, to assess such a change resulting from an epidemic is close to impossible for tribes such as the Plains Cree because only sketchy documents remain which record, over time, Native society and the subsequent changes they may have experienced.

Thus, it would be extremely difficult either to prove or disprove, beyond mere demographics, how disease altered internal tribal dynamics without of course relying on comparison or conjecture. Therefore, for Lux to make such an argument is rather damaging to her work and hints at her emphasizing the possible lack of significant change resulting from epidemics in the pre-treaty era in order to overemphasize their effects in the post-treaty reservation years. Instead, like so many other historians, Lux states that it was the collapse of the buffalo economy that brought Natives to the treaty table. However, starvation in the early 1870s was not only confined to nations that had depended upon the buffalo as their main source of food. Rather, during this time starvation was prevalent throughout much of the western interior and it hints at more than just the loss of the buffalo, especially in areas where tribes had access to woodland hunting. Perhaps this rampant starvation was a result, as it usually is, of the severe smallpox epidemic of 1870-71, which also led to further secondary illnesses.

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Manitoba, 1999).

<sup>43</sup> Maureen K. Lux, "Beyond Biology," (Unpublished PhD Dissertation, Simon Fraser University, 1996), p.16-17.

John S. Milloy in The Plains Cree (1988)<sup>44</sup>, also seems to imply that the disappearance of the buffalo was the main reason for the collapse of the Plains Cree lifestyle, but he does give more credence to the impact of epidemic disease. His study is mainly an economic, military and political study of the Plains Cree between 1790 and 1870. The Plains Cree is one of the most widely referenced studies of the Cree, and, despite its particular emphasis, it does allow the reader a glimpse into the impact of disease, primarily the 1870-71 smallpox epidemic. Actually, despite the important evidence found in the Hudson's Bay Company records of the epidemic, Milloy estimates that its outbreak among the Plains Cree occurred in 1869. Although rumours of the disease were circulating in the Canadian Plains in 1869, it does not appear to have hit the Plains Cree until the spring/summer of 1870.<sup>45</sup> Many other historians also mention 1869 as the date for the outbreak of smallpox on the Canadian Plains, but they are perhaps simply confusing it with the general year of outbreak in the southern Plains area, mainly in the present-day United States.

Milloy discusses the smallpox epidemic in context with other events around 1870, and this paints a picture of Cree life on the Plains immediately before treaty negotiations. He discusses increased warfare between the Cree and Blackfoot as a result of the search for buffalo and also the effects of smallpox. Although Milloy does not directly say that disease increased warfare, resulting in higher death rates, it is a quite common occurrence amongst other tribes in the New World after contact. Warfare could result from a tribe blaming another for an epidemic, a mission to obtain captives to incorporate into a

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<sup>44</sup> John S. Milloy, The Plains Cree: Trade, Diplomacy and War, 1790-1870, (Winnipeg, 1988).

<sup>45</sup> John McDougall, In the Days of the Red River Rebellion, (Toronto, 1903), pp.117-125. and Extract from letter from W.J. Christie to the Chief Factors and Chief Traders, Northern Department, dated Edmonton House, Saskatchewan District, January 5, 1871. (H.B.C. Arch. B.239/c/20).

dwindling population or an excuse to attack a tribe that may have been weakened by a contagion. This was the case with the Cree attack on the Blackfoot in 1870, which resulted in hundreds of deaths for the Cree instead of the supposedly suffering Blackfoot.<sup>46</sup> Thus, what is important about Milloy's account of the 1870 smallpox epidemic is that he includes information on the side effects of the scourge which contributed to depopulation and general tribal weakening.

Aside from Milloy, the other two scholars who include discussion of epidemics in their studies of the Plains tribes, the Cree in particular, are David Mandelbaum and Arthur Ray. Mandelbaum's The Plains Cree (1979) focuses primarily on the Plains Cree up until 1880. His study is mainly composed of oral history accounts, which give the reader an interesting perspective into the heart of Plains Cree culture. Unfortunately, he does not employ this method in his analysis of the 1870-71 epidemic. Instead he generalizes by claiming that epidemic disease was a major factor in the decline of the Cree, but he fails to go into detail on why this was so beyond mere demographics.<sup>47</sup> Despite his lack of emphasis on the subject, however, he is one of the few historians, or ethnohistorians as in his case, that admitted that the massive epidemics that struck the Plains Cree were pivotal to the eventual collapse of the tribe.

Arthur Ray, in Indians in the Fur Trade and his articles "Smallpox: The Epidemic of 1837-38" and "Diffusion of Disease in the Western Interior of Canada" does go into detail on the epidemics affecting Natives in the Western interior. However, he does not claim that the declining population of the Cree was mainly due to diseases. Instead, he documents the diseases and demographic implications of the outbreaks that hit the west

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<sup>46</sup> John S. Milloy, The Plains Cree, pp.116-117.

<sup>47</sup> David G. Mandelbaum, The Plains Cree, (Regina, 1979), pp.42-44.



up until around 1850. Perhaps Ray fails to emphasize the role disease played in the collapse of the Plains Cree because he does not discuss in great detail many of the epidemics beyond 1850 and because his study is a general examination of most tribes involved in the fur trade and thus does not focus primarily on the Cree. His articles dealing with disease on the Plains also do not extend much beyond 1850, but they are nevertheless extremely important as almost every scholar examining disease on the Plains references them. His analysis of vaccination on the Great Plains prior to and during the smallpox epidemic of 1837-38 not only provides important insight into how Natives reacted to the disease but also how the non-Natives fared in their attempts to halt its spread.

Like Decker, Ray also studies the geographic diffusion of epidemics in the Western interior, which is important in that it provides information on the dissemination routes of epidemics and what seasons were more prevalent for disease outbreaks such as spring and summer when trade with Europeans was at its peak and tribes gathered in large groups for social events.<sup>48</sup> Overall Ray's numerous works comprise the largest and most informative body of literature about the western interior and Native -White relations there. Most importantly for our purposes, his works contribute greatly to the relatively small body of literature on the impact of epidemic disease on the Plains tribes.

Unfortunately, no one has picked up where he left off in his research and thus the 1860s and 1870s have enormous potential for future studies.<sup>49</sup>

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<sup>48</sup> Arthur J. Ray, "Diffusion of Diseases in the Western Interior of Canada," *The Geographical Review*, (1976), pp.139-141.

<sup>49</sup> Some of Ray's works include: Arthur J. Ray, "Diffusion of Diseases in the Western Interior of Canada, 1830-1850." *The Geographical Review*, 66 (2), 1976. pp.139-57.; Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay, 1660-1870, 2nd Ed. (Toronto,1998(1974)),; "Smallpox: The Epidemic of 1837-38," *The Beaver*, 306 (2), 1975. pp.8-13.;

Of the primary documents available, the Hudson's Bay Company records are the most extensive and detailed accounts of epidemics amongst the Natives. They include journal entries and most importantly letters between HBC personnel. Many other letters or correspondence reveal important information about epidemics such as the 1870-71 smallpox outbreak. Yet in these valuable documents one finds an obvious emphasis on economics, which is natural considering the fact that the HBC was a fur trading company. Therefore the information that can be gleaned from the documents is mainly about which tribes had a particular epidemic, how all-encompassing the epidemics may have been, and how the outbreaks affected the trade of furs or other related items in the infected areas. The HBC records are also important sources of information regarding vaccination or inoculation programs set in place by the Company. Although these attempts to prevent or control disease outbreaks benefited many Native tribes, they also benefited the HBC because they prevented an epidemic from greatly undermining trade as it did in the 1837-38 epidemic. The Plains Cree, through the work of HBC employees such as William Todd, were largely spared this epidemic and were able to maintain trading relations while those between other Native nations and the Company floundered.

Yet while the documents are very informative, they can also be a source of great frustration when journals are incomplete and correspondence is apparently non-existent. This is the case with the records regarding the outbreak of smallpox in the spring and summer of 1870. Most posts within the Saskatchewan District, which was the area hardest hit by the epidemic, do not have journals for this time period. In fact, with the exception of Fort à la Corne and Edmonton House, all the other districts hit by the

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Arthur J. Ray, Jim Miller and Frank J. Tough. Bounty and Benevolence: A History of Saskatchewan Treaties, (Montreal & Kingston, 2000).

epidemic, including Cumberland, Saskatchewan and Swan River, have no district journals for the first half of 1870.<sup>50</sup> This is extremely unfortunate considering the fact that this was the last major epidemic prior to treaty negotiations. Thus, historians are left with an incomplete research base from which to draw their conclusions for the 1870-71 epidemic. However, enough information remains in the correspondence and journals of posts and trading posts, such as Fort à la Corne and Edmonton House, to enable the researcher to hypothesize on the impact of the epidemic, and, aside from the individual journals of traders and missionaries, the HBC records are still the most important source of information about epidemic disease in the era before the numbered treaties.

The second most valuable source for studying epidemics in the 1860s and 1870s are the independent journals of fur traders, missionaries and translators such as Peter Erasmus. Erasmus in Buffalo Days and Nights (1976) includes information on the 1870-71 smallpox outbreak and on some of the events leading up to treaty negotiations. What makes his work unique is that he was an educated 'half-breed' fluent in English and many Native languages. He spent a great deal of his time amongst the Plains tribes, especially the Plains Cree. Consequently, he is able to provide a different, although brief, viewpoint into the 1870-71 epidemic.

Other journals and records by traders and missionaries such as William Butler, John McDougall and Egerton Ryerson Young, are primary accounts which grant the reader an internal perspective through their writings. Indeed, they each had the ability to do so as they witnessed the smallpox epidemic of 1870-71 first hand. All three are extremely valuable sources of reference for the study of this epidemic. Butler's work is of particular importance because he includes his letters to Lieutenant Governor

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<sup>50</sup> Remarks On Statements Made by the Reverend E.R. Young. (H.B.C. Arch. B.239/k/3)

Archibald, which describe in detail the state of the Saskatchewan District in 1870-71. These documents, in conjunction with evidence in Young's records, also provide important information on how the White traders and missionaries tried to contain the epidemic to prevent its spread to other districts. McDougall allows the researcher still a different perspective on the disease by discussing how word of the outbreak spread throughout the Plains in 1869 and early in 1870. This allows the reader a glimpse into how word of mouth was used as a warning in an era when electronic communications were unheard of. The discussion of the spread of rumours about the smallpox outbreak is also interesting, as it shows how the very mention of smallpox instilled great fear and reaction such as flight amongst the Natives. All these primary sources are crucial to the study of disease in the immediate pre-numbered treaty period, especially because they contain almost the only information on the topic due to the lack of secondary analysis.

Treaty studies are the final sources of importance when dealing with the history of epidemics amongst the Plains Cree up until 1880. The earliest of these is a primary work by Alexander Morris, The Treaties of Canada with the Indians of Manitoba and the North-West Territories Including the Negotiations on Which They Were Based (1880). Morris was the principal government negotiator in most of the numbered treaties up until Treaty 7 in 1877. The work is a compilation of the negotiations on both sides with paternalistic commentary added by Morris in between entries. He repeatedly discusses the benevolence of the queen/dominion towards the Native peoples and regards the treaties as the only way to rescue Native tribes such as the Plains Cree from inevitable destruction. There are numerous excerpts especially in the Treaty 6 section that deal with disease amongst the Cree in 1870-71. These are in the form of requests made by Cree

chiefs Sweet Grass, Mistawasis and Ahtakakup to help their people in the aftermath of the recent smallpox outbreak. In the remainder of the Treaty 6 chapter there is the odd reference to aid promised by the government in times of famine and pestilence but there is not an extensive account of the smallpox epidemic from which the Cree were still suffering at the time, as is made apparent by the requests by the Cree Chiefs to the White officials.

If Morris said little about disease and the Plains Cree there is almost nothing mentioned in the next major treaty work published in 1936 by George F.G. Stanley, The Birth of Western Canada: A History of the Riel Rebellions. As did Morris, Stanley also assumes the paternalistic stance, so characteristic of writers discussing Native peoples in the period leading up to the 1970s. He defines the treaties as a necessity arising from the contact of 'a superior civilization' with that of the 'savage' Native peoples.<sup>51</sup> But, even more to the point he fails to include any reference to disease aside from the request for aid made by Sweet Grass 1871, which he borrows from Morris.<sup>52</sup>

Interestingly enough, one of the most recent works on the Numbered Treaties, by Harold Cardinal and Walter Hildebrandt, Treaty Elders of Saskatchewan: Our Dream Is That Our Peoples Will One Day Be Clearly Recognized as Nations (2000), fails to mention disease at all. Considering the fact that Treaty Elders is the only treaty work based on the actual oral testimony of the Elders it is very unfortunate that no reference is made to disease, the 1870-71 smallpox epidemic in particular. It is disappointing especially considering that the Natives involved in Treaty 6 fought so hard to have the

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<sup>51</sup> George F. G. Stanley, The Birth of Western Canada: A History of the Riel Rebellions, (Toronto, 1936), p.194.

<sup>52</sup> Ibid., p.205.

pestilence, famine and medicine chest clauses included in their treaty so as to help prevent future epidemics and starvation from devastating them.

Bounty and Benevolence: A History of Saskatchewan Treaties by Arthur J. Ray, Jim Miller and Frank J. Tough is the most comprehensive and informative work regarding the Numbered Treaties and it is the sister book of Treaty Elders of Saskatchewan, both being published in 2000. Though brief in detail on epidemics, Bounty and Benevolence provides the most information on the Plains Cree and the smallpox epidemic of 1870-71. It is the only work which points out that when talks began for Treaty 6 the Cree were still suffering from the smallpox epidemic. This outbreak and the ensuing starvation are tied in with the pleas by the Cree chiefs such as Sweet Grass, Mistawasis and Ahtakakup and are also linked to the inclusion of the pestilence, famine and medicine chest clauses, which do not appear in any of the numbered treaties preceding Treaty 6. Yet aside from this, there are no details given about the epidemic such as mortality rates, and thus it remains to be seen that a work is created that looks at how epidemics in general may have affected treaty negotiations.

The omission of research on epidemics from 1860 to 1880 has left historians to concentrate on other reasons for the collapse of the Plains lifestyle, primarily the disappearance of the buffalo, which was crucial to Native existence in the parkland/grassland regions. Although this was obviously a very important factor in weakening warrior societies on the Plains, it was by no means the sole factor. In fact, the smallpox epidemic of 1870-71 and its after effects played an important role in debilitating Native nations, especially great tribes like the Plains Cree in present-day Saskatchewan. Food supplies could not be maintained and starvation became prevalent

throughout the Great Plains in the winter of 1870-71. Malnutrition certainly would also have led to further secondary complications such as fertility problems and pulmonary illnesses, such as pneumonia, which would have contributed to the impact of the epidemic through a continued loss of population and disruption of intertribal functioning. Through analysis of the consequences of this epidemic it becomes increasingly apparent that disease played a much greater role in leading Natives towards treaty negotiations and settlement than has been formerly thought. This is not to say that epidemics in themselves were the main reason for the collapse of Plains culture, but rather they deserve to be included along with the traditional causes such as the disappearance of the buffalo.

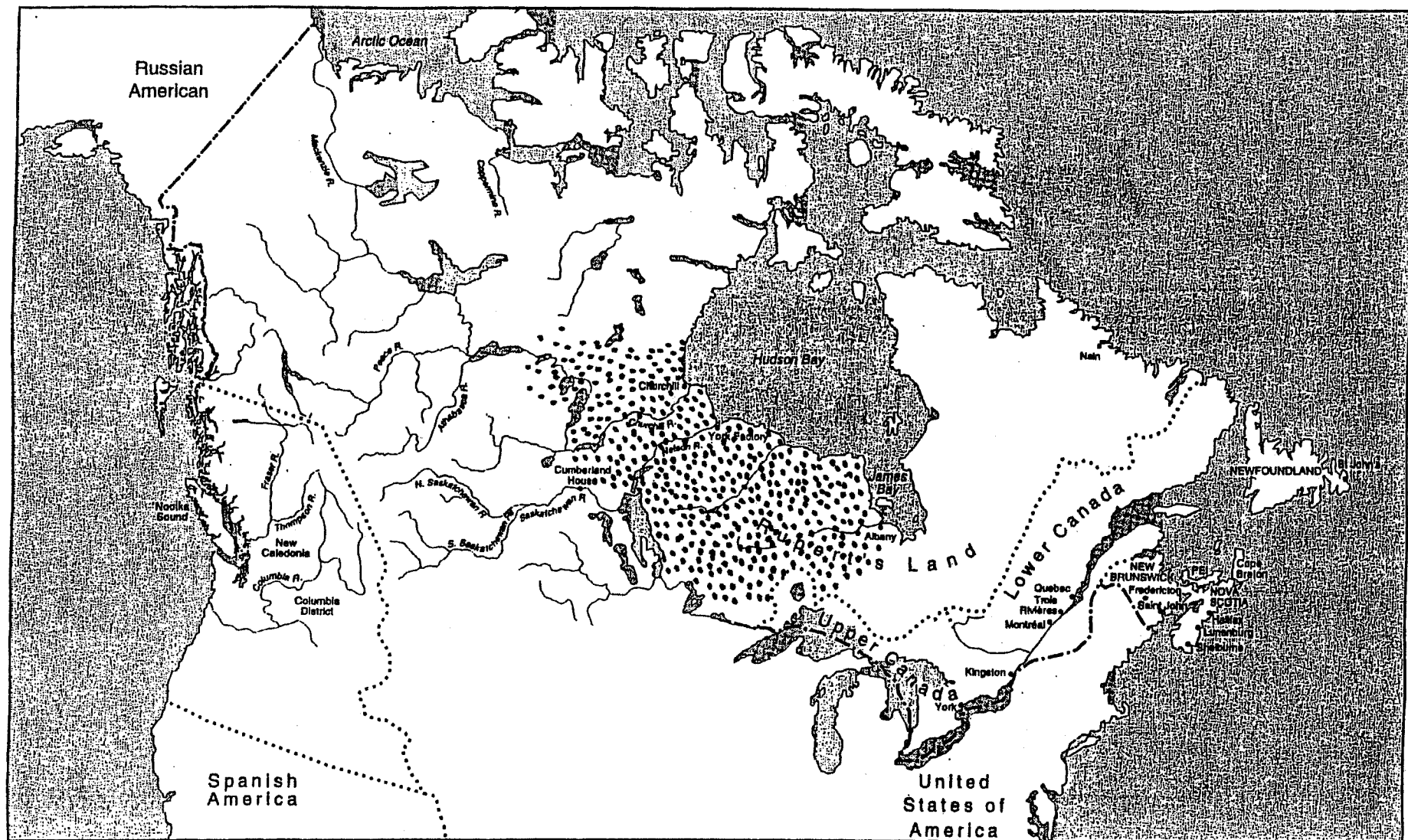
## *METHODOLOGY*

I tried to make use of every source at my disposal, both primary and secondary. However, particular attention was given to any first hand accounts, most importantly the Hudson's Bay Company records. The HBC employees were in very close contact with the Natives, especially during epidemics, because the Natives often went to the posts in search of medical assistance which the HBC had a tradition of giving out to their trade partners. In addition, the HBC personnel quite often made estimates of surrounding Native populations as they needed these figures to project the possible consumption of trade goods and the intake of pelts. Therefore, these population figures can be used as fairly reliable information regarding demographic changes such as those resulting from disease.

The second most relied on sources are the independent writings of trappers and traders such as William Francis Butler, Peter Erasmus and missionaries such as John McDougall and Egerton Ryerson Young. These personal accounts enabled me to examine the more intimate interactions between Whites and Natives, such as religious and familial dysfunctions caused by diseases, whereas the HBC documents are briefer and deal more with statistics.

In conclusion, I chose not to tap into oral history for this work because it would have made this project too large. I do, however, intend to use this valuable historical source for my future PhD. work.





**MAP #1** Dots indicate approximate extent of Cree Territory prior to 1670. From: Margaret Conrad, Alvin Finkel and Cornelius Jaenen, History of the Canadian Peoples: Beginnings to 1867, Vol 1. Second Ed. (Toronto: Copp Clark Ltd. 1998), p.180. Additions made by R. Brain.

## *CHAPTER TWO*

### *THE HISTORY OF EPIDEMIC DISEASE AMONGST THE PLAINS CREE, 1670-1860.*

The main epidemic affecting the Plains Cree and the subsequent treaty negotiations was the smallpox epidemic of 1870-71. However, by this time the Plains Cree had a long history of epidemic disruption. Initially, the tribe that would become the Plains Cree was a woodlands tribe, living in the forested areas of northern Ontario and Eastern and Northeastern Manitoba. Over about a hundred and fifty year period a portion of this woodland tribe evolved into the Plains Cree. Understanding this movement and transition is important when studying what epidemics affected them and how they may have responded to them. In fact, they were heavily involved in the fur trade even prior to the founding of the Hudson's Bay Company in 1670. This early trade witnessed a network between the Cree, the Ojibwa, and the French in eastern Canada. Thus, although there is no concrete evidence that epidemics hit the Cree prior to 1670, there is nevertheless a possibility that these trading connections opened the west to eastern epidemics. Because of a lack of documentation, theories on this have remained hypothetical.

After 1670 the situation changed drastically, not only because of the more direct contact with the English at Hudson Bay but also because of the adoption of the horse by the Cree. The introduction of the horse facilitated a more rapid spread of the deadly acute diseases such as smallpox, measles and whooping cough. In addition, the steadily

growing contact between the more southerly tribes in the present-day United States and the encroaching White settlers also helped the spread of epidemics, especially to the northern tribes, such as the Cree and Assiniboine, who had sustained contact with the nations south of the border. Therefore, in order to properly understand the situation that the Plains Cree faced in the mid nineteenth century it is important first to understand how they came to be a Plains tribe and their history of contact with epidemic disease that spread from the HBC, from the eastern disease pools via the Great Lakes, and from the Spanish in Mexico.

As was mentioned above, the Cree lived in the vicinity of northern Ontario and eastern and northeastern Manitoba at the time of the HBC founding in 1670. They were a woodlands tribe traveling mainly by canoe and on foot, and living and hunting in the forested regions around Hudson Bay. Following 1670 trade between the Cree and the new HBC settlement shifted northward and the Cree began a steady push northwestward around 1720, into northern Manitoba and Saskatchewan.<sup>1</sup> (Refer to Map#2 on pg.36.) Knowledge of epidemics amongst the Cree in this early period is difficult to come by because the HBC documents at this time are vague and often incomplete.

In the closing decades of the seventeenth century and the early part of the eighteenth century the HBC journals only mention 'sickness' among the Cree with whom they were trading. Unfortunately, however, they fail to elaborate much on this. In 1716 and 1717 influenza is mentioned among the Cree around York Factory, and in 1720 the first mention of smallpox occurs, but apparently the outbreak remained in the vicinity of

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<sup>1</sup> Arthur J. Ray, Indians in the Fur Trade, 2nd Ed. (Toronto, 1998(1974)), pp.13-20.

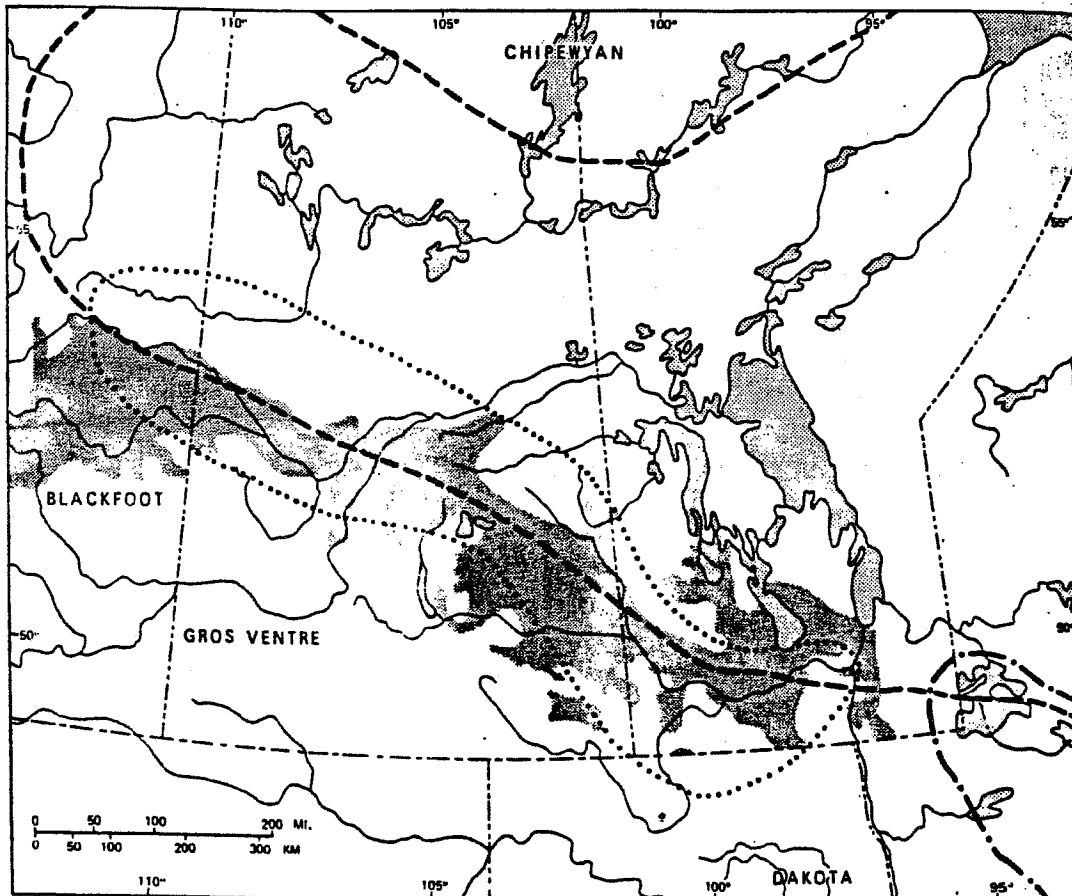


FIGURE 9

TRIBAL DISTRIBUTIONS, CA. 1765

- |           |             |              |               |
|-----------|-------------|--------------|---------------|
| .....     | Assiniboine | - - - -      | Cree          |
| - . - . - | Ojibwa      | [Shaded Box] | Parkland Belt |

**MAP #2** From: Arthur J. Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson Bay, 1660-1870, 2nd Ed. (Toronto: University of Toronto Press, 1998(1974)), p.22.

York Factory.<sup>2</sup> Smallpox appears again in 1737, but this outbreak was part of a much larger pandemic. This epidemic spread from Europe a few years prior to 1737 and passed through the East Coast and westward through the Great Lakes to the western interior.<sup>3</sup> Paul Hackett in “A Very Remarkable Sickness” believes that this outbreak was mainly confined to the western and southwestern margins of the Petite Nord.<sup>4</sup> It is very strange, however, that a disease such as smallpox would remain in such a small area, especially considering the fact that this particular outbreak was so virulent, having spread from Europe all the way to the western interior. Smallpox is a particularly lethal disease, especially to the Native peoples of the New World. The reason for this is that the Amerindians had no previous exposure to it and therefore lacked any immunity. In contrast, smallpox had existed in the Old World for thousands of years and had become endemic throughout much of Europe by the medieval period. This is not to say that smallpox did not cause a great loss of life in the Old World, as indeed it did. So much so that different societies created various deities in order to pray for their delivery from smallpox.<sup>5</sup> Yet, in the New World the situation was very different. With the exception of the more populated regions of South America, the New World lacked populations large enough for smallpox to have become endemic. Therefore, it would hit usually

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<sup>2</sup> Paul F.J. Hackett, “A Very Remarkable Sickness,” (Unpublished PhD. Dissertation, University of Manitoba, 1999), p.119. Hackett is the best source for studying what epidemics may have hit the Cree in the late seventeenth and early eighteenth centuries. This is due to the fact that Hackett focuses on the Petite Nord in his dissertation, and during this time (late 1600s early 1700s) the Cree were largely located in this area.

<sup>3</sup> Hackett, pp.129-37.

<sup>4</sup> *Ibid.*, p.145.

<sup>5</sup> Donald R. Hopkins refers to such acts in his *Princes and Peasants: Smallpox in History*, (Chicago, 1983). The work is one of the most comprehensive studies of the history of smallpox and he mentions the different deities, monuments etc. which humans created to halt the spread or outbreak of smallpox. Some of these creations extend from the time of the ancient Egyptians up until the modern era.

every twenty to eighty years, within which time an entirely new generation of susceptibles, lacking any immunity, would have been born.

Most outbreaks of smallpox in the New World were of the more severe type, Variola major, which has an expected mortality rate of between ten and 100 percent.<sup>6</sup> This percentage is usually near the greater end of the scale when it comes to the Amerindians. Variola major is transmitted either through inhalation or by contact with contaminated material, body fluid, clothing, weapons, etc. This type of smallpox also has a very long period of communicability, lasting between nine and fourteen days, but it can also persist in a dried state for many years.<sup>7</sup> Variola minor, the weaker strain of smallpox, is usually only spread through inhalation, and its period of communicability is shorter, running from three to seven days. But the most obvious differences in the two strains of smallpox are that Variola minor has about a one percent mortality rate.<sup>8</sup>

Both Variola major and minor grant victims, if they survive, life-long immunity, and they both share the same symptoms (though the symptoms experienced by Variola minor victims are far less severe than those who experience Variola major). The disease is highly contagious, characterized by a very high fever, chills and general bodily pain.<sup>9</sup> Following the fever stage the victim is confronted with the eruption of pustules usually centered on the hands and facial areas, however, the entire body is usually covered if the strain is Variola major. In the advanced stages of the disease the victim is usually hideous, covered with pustules that quite often burst and emit a repugnant stench. If

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<sup>6</sup> A.F. Ramenofsky, *Vectors of Death*, (Albuquerque, 1987), p.147.

<sup>7</sup> *Ibid.*, p.147.

<sup>8</sup> *Ibid.*

<sup>9</sup> C.D. Dollar, "The High Plains Smallpox Epidemic of 1837-38," *Western Historical Quarterly*, 8(1), (1977), p.17.

death does not ensue, the victim may experience delirium or fall into a coma.<sup>10</sup> Survivors of smallpox generally suffer from permanent scarring, and in some cases blindness and infertility may follow.<sup>11</sup> Each phase runs its course over a few days, but its duration depends on the severity of the strain.

There is no known cure for smallpox, but rather it can only be controlled through preventative measures such as quarantine, inoculation and vaccination. Inoculation was the most frequently used preventative method up until the smallpox vaccination discovery in 1796. Inoculation involved infecting a patient with contaminated matter, usually puss from a smallpox blister. This would invoke an outbreak in the patient, though its intensity would usually be far milder than if the person had contracted the disease normally. Once the patient recovered, he/she usually enjoyed life-long immunity, but in some cases immunity only lasted a few years. In a few cases, the patient died from inoculation if he/she could not weather the outbreak, but the biggest disadvantage was that in many cases the inoculated person became a carrier and could spread smallpox, causing a general outbreak because it involves the normal smallpox symptoms. Not until the discovery of vaccine in Europe by Edward Jenner would the most effective smallpox preventative come into use. Jenner discovered that by infecting a human patient with cowpox (taken from infected cows) he could grant the patient immunity. This method not only avoided the painful symptoms of smallpox, but it also did not have the added risk of infecting others. This method of smallpox prevention reached the New World in the early decades of the nineteenth century. Unfortunately, though, this early form of vaccine only gave people a few years of immunity, after which they would become

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<sup>10</sup> *Ibid.*, p.17.

<sup>11</sup> Jody. F. Decker, "Tracing Historical Diffusion Patterns," *Native Studies Review*, 4(1), (1988), p.7.

susceptible again. It was not until the late nineteenth century that a new and longer lasting vaccine was created.<sup>12</sup>

Therefore, it is strange to say the least, that the reported smallpox outbreaks in the western interior in 1720 and 1737 apparently remained small, localized outbreaks. The most obvious explanation for the mystery is that the records of the epidemics at the time were so poor that the real extent of the epidemics could not be determined. Hackett's mention of the 1737 outbreak being confined to the western and southwestern margins of the Petite Nord may simply be the result of the limited extent of documentation at the time. When considering the fact that this particular epidemic was actually part of a much larger pandemic, the theory of limited recordings appears much more plausible. For an outbreak to become a pandemic the particular strain of smallpox must have been quite virulent, most definitely *Variola major*. Thus, for the pandemic to have spread from Europe all the way to the western borderlands of the Petite Nord and then suddenly stop seems illogical.

Jody Decker also refers to the 1737 outbreak, but her perspective on the topic does not provide much more information than does Hackett. Decker states that smallpox reached the Sioux in western Wisconsin and Minnesota via the French missionaries about 1735.<sup>13</sup> From there it made its way northward and westward infecting the tribes trading around the Upper Missouri. By late 1737 and into 1738 the epidemic moved northward

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<sup>12</sup> For more information on the history of inoculation and vaccination refer to Donald R. Hopkins' Princes and Peasants (Chicago, 1983). It provides an excellent history of smallpox and the numerous methods employed by people in the past to attempt to halt the disease.



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**Classification of Some Acute Infectious Diseases**

<b>Mode of Transmission</b>	<b>Viral</b>	<b>Bacterial</b>	<b>Protozoal</b>
<u>Direct Transmission</u>	<u>Class :I</u> Chickenpox Influenza Measles Mumps Rubella Smallpox	<u>Class: II</u> Pneumonia Scarlet Fever Pertussis	
<u>Indirect Transmission</u> (Spread by fleas, mosquitoes, and lice.)	<u>Class: III</u> Yellow Fever	<u>Class: IV</u> Anthrax	<u>Class: V</u> Malaria Bubonic Plague Epidemic Typhus

From: A.F. Ramenofsky, Vectors of Death: The Archaeology of European Contact, (Albuquerque; University of New Mexico Press, 1987), p.140.

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**Directly Transmitted Acute Viral Infections**

<b>Disease</b>	<b>Means of Transmission</b>	<b>Period of Communicability</b>	<b>Expected Morbidity</b>	<b>Expected Mortality</b>	<b>Immunity</b>
Chickenpox	Inhalation	1 or 2 days before rash; 5 days after rash	100%	0	Permanent
Cold	Inhalation	Brief; 24 hours	Variable with Viral type	0	Varies
Influenza	Inhalation	1-3 days up to 50%	Variable; but Type specific	0	Long term
Measles	Inhalation	7-14 days	100%	10-25%	Permanent
Mumps	Inhalation	More than 7 days	Variable	0	Permanent
German Measles	Inhalation	More than 7 days	Variable	Less than 5%	Permanent

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<sup>13</sup> Jody F. Decker, "We Should Never Be Again the Same People," (Unpublished PhD Dissertation, York University, 1989), p.58.

Smallpox (Variola Major)	Inhalation; Contamination	9-14 days; several years in a dried state	100%	10-100%	Permanent
Smallpox (Variola Minor)	Inhalation	3-7 days	Variable	1%	Permanent

From: A.F. Ramenofsky, Vectors of Death, p.147.

**Directly Transmitted Acute Bacterial Infections**

Disease	Means of Transmission	Period of Communicability	Expected Morbidity	Expected Mortality	Immunity
Whooping Cough (Pertussis)	Inhalation	4 weeks	100%	Variable; Extremely high for infants	Permanent
Pneumonia	Inhalation	Variable	Variable; Dramatic increase during influenza epidemics	20-25%	Not Permanent
Scarlet Fever	Inhalation	Possibly weeks	Variable	0	Permanent to Strain

From: A.F. Ramenofsky, Vectors of Death, p.151.

hitting Hudson Bay.<sup>14</sup> But beyond this there is no further information on the extent and impact of this outbreak.

Epidemic activity in the period between 1738 and 1750 seems limited, but this impression may also be the result of poor documentation. It was not until 1751 that the next recorded epidemic hit the western interior, but this time the disease was measles. Like smallpox, measles is a highly contagious acute viral infection that is spread through direct transmission.<sup>15</sup> It is spread via inhalation of droplet emissions, or from direct contact with nasal or throat secretions. However, it has also been known to spread by contact with contaminated objects.<sup>16</sup> The period of communication varies from between seven to fourteen days with a mortality rate of between ten and twenty-five percent.<sup>17</sup> Yet, the death rate for measles is usually greatly increased because it is generally accompanied by secondary infections such as pneumonia, diarrhea and encephalitis as well as blindness and deafness.<sup>18</sup> Measles symptoms include a cough or cold-like symptoms, high fever and an extensive rash, and if the victims survive the outbreak they enjoy permanent immunity.

Similar to the smallpox epidemic of 1737-38, the 1751 measles outbreak was a virgin soil epidemic. This means that it hit a population that had no previous exposure to the disease and thus no immunity. Therefore, the death rate would in all likelihood have been significant, but due to the lack of documentation, once again, it is hard to assess how many succumbed to the disease. Possibly due to the lack of primary documentation

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<sup>14</sup> *Ibid.*, p.59.

<sup>15</sup> Ramenofsky, p.140.

<sup>16</sup> Hackett, p.153.

<sup>17</sup> Ramenofsky, p.147.

<sup>18</sup> Hackett, p.154. Hackett does not mention that deafness frequently accompanies measles, but Decker does. In fact, Decker claims that deafness is more characteristic of measles, whereas blindness is usually associated with smallpox. Decker, "Tracing Historical Diffusion Patterns," p.7.

Hackett is the only one to comment on the spread of the disease, claiming that it did not do much damage around Hudson Bay, but probably did greater harm to those in outlying areas.<sup>19</sup> Although little is known about the extent and damage of the 1751 measles outbreak in the western interior, what is known is that it was a product of the expanding horse-trading network which stretched from Mexico up into the Plains area.

Sometime between 1732 and 1754 the Cree began to receive horses.<sup>20</sup> By 1751 the horse-trading network was fairly extensive, stretching from the southwest up into the Canadian Plains.<sup>21</sup> Due to the extent of this network it is hard to know whether the measles outbreak diffused from the southwest or from the eastern disease pools. Yet what is known is that the horse enabled the rapid spread of this epidemic and many that preceded it. This fact is important because the horse acted as a fairly quick conduit for epidemic spread to a greater extent of territory. Thus the acute viral and bacterial infections such as measles, smallpox, influenza, scarlet fever and whooping cough could all be more readily transported. Smallpox was especially lethal over extensive distances because it could persist in a dried state, a fact that in combination with the horse could spread an outbreak from Mexico all the way up into the Canadian North. An example of just such a phenomenon is apparent in the massive smallpox epidemic of 1779-1783, which had its origins in Mexico City in 1779 and drew to a close in the northwest around 1783.

Aside from the frequent reference to colds, there is no other mention of disease activity amongst the Cree in between the 1751 measles epidemic and the 1779-83 smallpox outbreak. However, it must be kept in mind that the common cold, and even

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<sup>19</sup> Hackett, p.157.

<sup>20</sup> John S. Milloy, The Plains Cree: Trade, Diplomacy and War, 1790-1870, (Winnipeg, 1988), p.25.

the more severe influenza, were far more severe in a time lacking proper medical care. This problem was heightened even further when dealing with Native populations, rather than White, who lacked any experience with European strains of colds and influenza. Their methods of dealing with such sicknesses via sweat lodges or family and community healing sessions could often act to further spread an outbreak or even worsen the condition of someone who was already sick.

The smallpox epidemic of 1779-83 was one of the worst in recorded history to have hit the western tribes. This, however, may simply be the result of better documentation and more direct contact between the HBC traders and tribal groupings such as the Cree. This epidemic had its origins in Mexico City in 1779. From there it spread throughout the Plains via the horse. Yet, unlike previous or later epidemics this particular scourge was not spread through trade but rather it diffused through warfare.<sup>22</sup> Since warfare was a common occurrence amongst most of the Plains tribes the disease was able to spread over an extensive area, and thanks to the horse this process was greatly hastened. As far as research can tell, the epidemic devastated every tribe it hit in between Mexico and the western interior, with a particularly bad effect on the northern Plains.

Estimated losses for the region vary from an absolute minimum of twenty-five percent to around seventy-five percent. Such a loss in numbers not only had a profound effect on the internal dynamics of certain tribes, but also greatly affected tribal territories as power shifted and lands were vacated. There are two main examples of this, both having to do with the Cree. Following the epidemic the Ojibwa and Ottawa began

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<sup>21</sup> Hackett, p.157.

<sup>22</sup> *Ibid.*, p.189-90.

moving into the Plains region in Manitoba, which previously had been occupied by the Cree and Assiniboine.<sup>23</sup> In addition, a similar move also occurred in the northern regions of Saskatchewan and northwestern Manitoba. The Cree in these areas were hit by the smallpox epidemic in 1780, three years before it hit their hostile northern neighbours, the Chippewa. The epidemic seriously weakened the Cree because of the drastic loss in population and hence the extensive weakening of Cree military force. Therefore, they began to withdraw from the northern areas that they had taken from the Chippewa in previous decades, and thereafter they began to push south into the grassland/parkland regions south of the North Saskatchewan.<sup>24</sup> (Refer to Map #3 on pg.47.)

Before considering tribal relocations following the 1779-83 epidemic, it would be beneficial to understand the effect that the outbreak had on the demographics of the Cree and those tribal populations in the surrounding territories. Jody Decker in "Tracing Historical Diffusion Patterns" believes that this particular epidemic was most likely hemorrhagic smallpox (a virulent type of the Variola major strain).<sup>25</sup> This is the most severe type of smallpox, usually associated with severe pain and vomiting, and it causes the greatest loss in life. In most cases of hemorrhagic smallpox, the symptom phases are very rapid and death can occur from anywhere between twenty-four hours to five days. Once this type of smallpox was intercepted by the Cree and other tribes residing in the western interior through warfare in 1780 and 1781 the results were horrific. Perhaps the best example of this can be found in some of the entries in the Cumberland House

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<sup>23</sup> *Ibid.*, p.241.

<sup>24</sup> Ray, *Indians in the Fur Trade*, p.98.

<sup>25</sup> Decker, "Tracing Historical Diffusion Patterns," p.18.

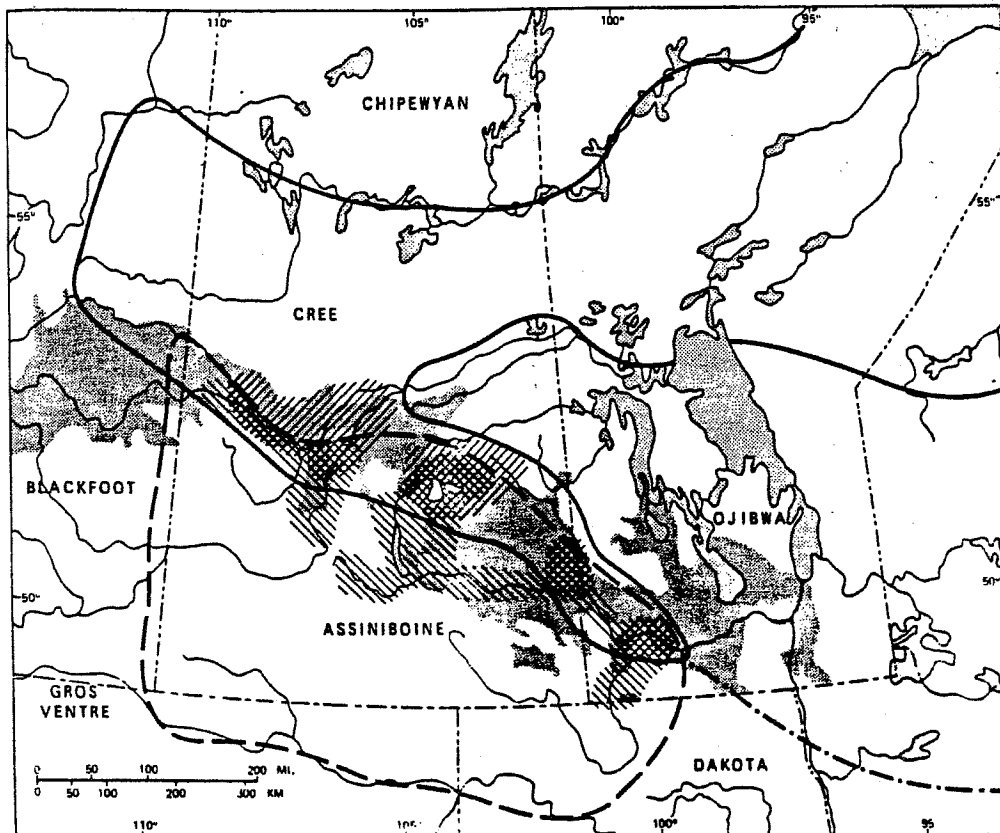


FIGURE 33

TRIBAL DISTRIBUTIONS IN 1821

- |         |   |      |   |
|---------|---|------|---|
| ———     | Approximate limits of Cree Territory        | ▨▨▨▨ | Principal wintering grounds of the Plains Cree* |
| - - - - | Approximate limits of Assiniboine Territory | ▩▩▩▩ | Principal wintering grounds of the Assiniboine* |
| .....   | Approximate limits of Ojibwa Territory      | ■    | Parkland Belt                                   |

\*Brandon District Report 1822-23, PAC HBC B 27/e/2 and Carlton District Report 1815, PAC HBC B 22, w/1.

**MAP #3** From: Arthur J. Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson Bay, 1660-1870, 2nd Ed. (Toronto: University of Toronto Press, 1998(1974)), p.101.

Journal, recorded by William Tomison between June 9, 1781 and June 20, 1782. In a letter received by Tomison, from William Walker, dated Hudson House, December 4, 1781, Walker relates the impact that the outbreak was having on the Natives trading or living in the vicinity of the post:

I am sorry that I should have such Disagreeable News, to send You, but the smallpox is rageing, all round Us with great Violence, sparing very few that take it, we have received the News, of above 9 tents of Indians with in here, all Dead, the tents left standing [and] their bodies left Inside Unburried, as for the stone Indians, there are very few if any left alive which will make it one of the Worst Years that ever the Honorable Hudsons Bay Company Servants hath seen both for furs [and] provifsions.....the Indians all Dying by this Distemper that there is no getting a livelyhood, the Indians lying Dead about the Barren Ground like rotten sheep, their Tents left standing, the Wild beast, Devouring them.<sup>26</sup>

Around December 17, 1781, Tomison began writing about the epidemic affecting the tribal groups living near or trading at Cumberland House on the lower Saskatchewan River near present-day The Pas. The tribes included mainly the Cree, Assiniboine and the Blackfoot. Tomison wrote "...I received the Disagreeable News, of that Devouring Disorder the smallpox Raging amongst the Natives, [and] is carrying all off before It, wherever it Comes [and] God Knows what will be the End there of."<sup>27</sup> However, aside from the information on how the epidemic was affecting the Native peoples the excerpt is also informative in that it shows how the traders suffered because of it. This does not mean that the HBC men were actually afflicted by the scourge as few were in comparison to the Natives, but rather the traders depended on the Natives as much if not more than the Natives depended on them for sustenance and survival. Frequently, throughout the

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<sup>26</sup> Extract from letter from William Walker to William Tomison, dated Cumberland House, December 4, 1781. (H.B.C. Arch. B49/a/1-73., pp.33-34.)



journal Tomison mentions that the Fort (Cumberland) was close to starvation during the epidemic because they had no one to trade with. He also mentions that there was no one to make canoes,<sup>28</sup> a job traditionally done by the surrounding Native populations. Because most Natives succumbed to the epidemic, canoes could not be made and therefore the traders were unable to obtain their own food or carry what few furs they had to trade for food at other posts.

Thus, the epidemic not only affected the Native populations, but also the White traders in the area. This fact could not possibly overshadow the horrific loss of life suffered by the Amerindians. As was previously mentioned, the death rate for the Plains area varied from twenty-five to seventy-five percent. In fact, Decker stated that the mortality rate for the Plains Cree, Assiniboine, Ojibwa, Woodland and Swampy Cree was anywhere from fifty to seventy-five percent.<sup>29</sup> Her estimates are derived from the information left by traders John Macdonnell, David Thompson and Alexander Henry, as well as the information left by U.S. Indian Agent Edward Denig. All propose a similar loss of life for the Assiniboine and the Cree living on the Northern Plains of Saskatchewan and Manitoba. One can only imagine what such a loss of life would have done to families, entire tribes and tribal relations in the western interior. Never before had the Amerindians in this area witnessed such a catastrophic event, but due to the lack of extensive documentation it is next to impossible to know exactly how the epidemic affected intertribal relations or even at its most basic level, the individual psychology of those who survived the outbreak. A glimpse at this mental reaction can perhaps be

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<sup>27</sup> Excerpt from the writings of William Tomison in the Cumberland House Journal, dated Monday December 17, 1871. (H.B.C. Arch. B49/a/1-73., p.33.)

<sup>28</sup> Cumberland House Journal. (H.B.C. Arch. B49/a/1-73., pp.47½-48.)

<sup>29</sup> Decker, "We Should Never Be Again the Same People," p.86.

attained from David Thompson's writings about the epidemic. He recorded a statement that a Blackfoot survivor made about the epidemic: "We had no belief that one Man could give it to another, any more than a wounded Man could give his wound to another."<sup>30</sup> One recording mentioned that the Natives "...thought that smallpox had eyes and could see who was afraid of it, so they gathered around the ill rather than isolate themselves."<sup>31</sup>

Suicide, abandonment, revenge warfare and sacrifice, as well as many other reactions followed the epidemic. Suicide in particular is mentioned in many of the journals regarding smallpox epidemics, not only the 1779-83 epidemic but also the 1837-38 and 1870-71 outbreaks. Family members often could not cope with the grief of losing their entire families or loved ones, or they could not bear the physical pain and delirium accompanying the disease. Also, many Native tribes believed that they would appear in the afterlife in the same form that they had died in. Therefore, many could not handle the thought of bearing the same disfiguring pustules in the hereafter.<sup>32</sup> The most common Native medical treatment for the disease, mentioned by Decker, Hackett, Ray and Ramenofsky was the sweat lodge. Natives, mainly men, traditionally gathered in sweat lodges to try to purify their bodies by sweating out their ailments. Although this therapy was excellent for such things as rheumatism, it was terrible for treating acute infections such as smallpox, measles and influenza. This is because most of these diseases are characterized by extremely high fevers, and the heat and profuse sweating involved in the sweat lodge ceremony usually exacerbated the fever. Also, following the lodge, the

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<sup>30</sup> Decker, "Tracing Historical Diffusion Patterns," pp.20-21.

<sup>31</sup> *Ibid.*, p.21.

<sup>32</sup> John F. Taylor, "Sociocultural Effects of Epidemics on the Northern Plains: 1734-1850," **The Western Canadian Journal of Anthropology**, 7(4),(1977), p.62.

Natives would usually plunge themselves into cold water as the final step in purification. Ironically, for most of the participants suffering from these diseases, this 'final step' was literally just that because the combination of extreme heat and fever and then extreme cold often led to shock and consequently death. Yet aside from these brief excerpts on Native reaction to the outbreak, there is very little with which to analyze exactly how a fifty to seventy-five percent loss in population would have affected tribes such as the Cree.

Following the 1779-83 smallpox outbreak the Cree began to withdraw from the northern areas they had taken from the Chippewa. They also withdrew from the northeastern regions, which were quickly occupied by the Ojibwa. From about 1790 onwards the Cree went through a profound social transformation, which witnessed the development of the traditional Plains Cree culture.<sup>33</sup> The Cree went from being a woodland tribe who used canoes for transportation to a buffalo hunting, Plains culture that used horses for travel. Also, following 1790, the Cree began to live in larger villages year round, a practice that was quite different than the small tribal units they were used to in the woodland areas.<sup>34</sup> This is not to say that all the Cree living in the northwestern and eastern regions moved to the Plains, as this was not the case. Many did remain in the forested regions, hence their name the Woodland Cree, but a significant portion of this tribe broke off to form what would become the Plains Cree. Although the number of those Cree who first came to the Plains area was relatively small in 1790, it expanded greatly in later decades, especially after 1800.<sup>35</sup>

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<sup>33</sup> Milloy, p.XV.

<sup>34</sup> Milloy, p.29.

<sup>35</sup> Ray, Indians in the Fur Trade, p.99.

Although there are reports that epidemics hit the Great Plains between 1783 and 1819, they seem to have been sporadic and localized. In 1801-02 Peter Fidler mentions smallpox in the Chesterfield House Journal, but none of the other posts mentioned this outbreak in their journals. Apparently the Arapaho who lived south of the border introduced the epidemic to the area around the South Saskatchewan.<sup>36</sup> However, the outbreak only appears to have hit the Atsina Natives on the Southern Plains. In 1806, virgin soil whooping cough hit the southern regions of Manitoba and Saskatchewan, and it was raging south of the border in the area around the Upper Missouri. Whooping cough is a directly transmitted acute bacterial infection, which has a four-week period of communicability.<sup>37</sup> The mortality rates for this particular disease vary in adults but are usually extremely high for infants.<sup>38</sup> If victims survive they enjoy permanent immunity. Apparently this 1806 outbreak spread from the Red River to the Columbia and from the Missouri to the Saskatchewan.<sup>39</sup> Other than its extent, however, there is little information about what Native groups contracted the disease or the number of mortalities it caused.

In between 1806 and 1819 there does not appear to be any mention of epidemic activity. However, following the formation of the Red River Colony in 1812 epidemic activity increased.<sup>40</sup> This is because the Colony became a major trading depot for Natives. There was a high degree of interaction between the Fort and the Plains Cree, Assiniboine, Mandan, Saulteaux (Western Ojibwa)<sup>41</sup>, and Ojibwa who all traded or lived around the Colony. Thus, Red River had the largest group of susceptibles on the

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<sup>36</sup> Decker, "We Should Never Be Again the Same People," p.88.

<sup>37</sup> Ramenofsky, p.151.

<sup>38</sup> *Ibid.*

<sup>39</sup> Hackett, pp.265-66.

<sup>40</sup> Decker, "We Should Never Be Again the Same People," p.149.

<sup>41</sup> Saulteaux and Chippewa are simply different names for the Ojibwa people - Saulteaux is the name given to the Western Ojibwa and Chippewa is the American name for Ojibwa.

Northern Plains – women, children and the elderly.<sup>42</sup> In addition, the Colony and the surrounding Natives had extensive trading relations with the Natives and forts south of the border in the Upper Missouri region. Therefore, the Colony began to act as somewhat of a disease center. Natives and traders from the east, west, north or from south of the border would unwittingly carry diseases. This is important because many of the epidemics that hit the Plains Cree after 1812 were from the Red River area. As well, contact between tribes on either side of the border became more dangerous between 1800 and 1840 due to the massive expansion of the settlement frontier in the United States. Improved transportation structures such as canals and trains all helped open the west to increased epidemics as they came closer to the urban disease pools.<sup>43</sup> Also, the increased speed of travel due to trains and steamboats, which held greater numbers of people, allowed acute viral and bacterial infections to spread more rapidly and over more extensive amounts of territory.

In 1819 the first dual epidemic hit the west affecting both the Plains and the woodlands tribes. This was a lethal combination of measles and whooping cough that spread from the Red River all the way to the Rockies and from the Upper Missouri to Great Slave Lake.<sup>44</sup> This whooping cough and measles outbreak was far more widespread and devastating than the 1806 outbreak. Both measles and whooping cough share many of the same symptoms: they both affect the respiratory tract, both involve coughs (with measles the cough is present before the rash), and both are more severe in populations that are poorly nourished, especially the chronically ill, the elderly and children. Therefore, due to the similarity of symptoms it is very hard to trace the separate

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<sup>42</sup> *Ibid.*, p.149.

<sup>43</sup> Hackett, pp.317-318.

diffusion of measles and whooping cough throughout 1819-20.<sup>45</sup> However, it appears that both epidemics had an eastern origin and worked their way west via the trade networks.

Whatever the areas of diffusion may have been, the dual outbreak had a devastating impact on most of the tribes it struck, especially the Cree and Assiniboine. The reason for this is that when more than one epidemic hits at the same time, or closely thereafter, the population is already greatly weakened and susceptible. This is especially the case for the elderly, children and women because they are particularly high risks for both diseases.<sup>46</sup> If a person survived either disease, he/she may have been struck down by one of the various secondary complications such as pneumonia, deafness, blindness, diarrhea and starvation, which greatly increased the impact of the epidemic duo. Decker claimed that the whooping cough epidemic was largely confined to the Plains Cree, Assiniboine and Ojibwa, but it also hit the Woodland Cree around Cumberland House and the Swampy Cree around Norway House and York Factory.<sup>47</sup> The extent of the measles outbreak, however, appears to have been greater, yet no less severe to the Cree who apparently suffered the greatest loss of life. Some historians believe that the Cree lost more than twenty-five percent of their population from the combined epidemics, while others contend that the loss was between thirty and fifty percent.<sup>48</sup> Ray concludes that the population of the Plains Cree numbered roughly 2000 to 2700 just prior to 1819,

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<sup>44</sup> *Ibid.*, p.274.

<sup>45</sup> Decker, "We Should Never Be Again the Same People," p.89.

<sup>46</sup> *Ibid.*, p.101.

<sup>47</sup> *Ibid.*, p.97.

<sup>48</sup> Taylor claims the Cree lost around 25% (Hackett, p.276); Decker claims that the Cree lost around 30% (Decker, "We Should Never Be Again the Same People," p.202.); and Ray claims that the loss was between 40 to 50% (Hackett, p.276.)

but they numbered approximately 1600 following the epidemic.<sup>49</sup> Despite the variations in theories of death rates, almost all historians agree that the Assiniboine suffered similar losses to that of the Cree. Thus, only a few decades after the Cree had made their shift to a Plains lifestyle they were rocked by another epidemic, in this case an epidemic duo, less severe than the 1779-83 smallpox outbreak but nevertheless still substantial. However, this blow to the steadily growing Plains Cree would not doom them as a nation because over the next forty years the tribe witnessed a massive influx of Natives from all over the western interior.

The most important contributor to the Plains Cree growth between 1820 and 1860 was the incorporation of many groups of Woodland Cree. This process may have begun soon after the dual epidemics of 1819-20 as it has been reported that the Woodland Cree suffered more than the Plains Cree.<sup>50</sup> Exact figures for this loss are close to impossible to come by, though, because the Woodland groups were so small and scattered over such an enormous area. However, the most important factor leading many of the Woodland Cree and Saulteaux to join the Plains Cree, was a series of epidemics that hit between 1827 and 1837. Most of these outbreaks had a much more significant impact on the woodland areas than they did on the Plains, possibly leading fractured villages and families to seek refuge with their Plains Cree relations. In 1827-28 whooping cough hit, and, although many of the Natives may have gained immunity from the 1819-20 outbreak, there nevertheless would have been a new generation of children who would have suffered from it. This outbreak apparently affected the Woodland Cree and Saulteaux the worst.<sup>51</sup> Whooping cough hit again in 1834 affecting the Cree residing around Carlton, but again

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<sup>49</sup> Ray, *Indians in the Fur Trade*, p.110.

<sup>50</sup> Decker, "We Should Never Be Again the Same People," p.101.

this outbreak had the greatest impact on the Woodland Cree, followed closely by the Ojibwa.

In addition to the whooping cough outbreaks were the influenza epidemics of the 1830s. In 1835 influenza struck the west but the Plains Cree, Blackfoot and Assiniboine were largely spared from this disease because they were off hunting buffalo on the Plains. The Woodland Cree, Ojibwa and Saulteaux were, however, hit much harder, also suffering from starvation and in some cases pneumonia following the outbreak.<sup>52</sup> Hackett also mentions that chickenpox followed this outbreak in some areas, but it is not known to have caused any deaths.<sup>53</sup> Influenza hit again in 1836 and 1837, and due to the fact that immunity from this disease is only long term, but not permanent, the same people may have suffered from it once again. In fact, this outbreak appears to have been part of a much larger influenza pandemic that was generally prevalent across Canada from 1836 to 1837.<sup>54</sup> It is unclear if this outbreak was an extension of the 1835 strain, but by all accounts it appears to have been less severe than the first outbreak.

The importance of these outbreaks, however, lies in the fact that they mainly affected the Woodlands Cree and Ojibwa, but they spared the Plains Cree, Assiniboine and Saulteaux. Undoubtedly, this helped lead to the massive population influx into the Plains Cree by 1860. In fact, between 1823 and 1863, the Plains Cree increased in size by over 10,000.<sup>55</sup> Yet despite the fact that a significant portion of this increase was the result of in-migration, natural growth was also a contributor. This natural increase was mainly due to the fact that the Plains Cree were largely spared from the massive

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<sup>51</sup> *Ibid.*, pp.102-105.

<sup>52</sup> *Ibid.*, pp.119-120.

<sup>53</sup> Hackett, p.364.

<sup>54</sup> *Ibid.*, p.366.



depopulating smallpox epidemic that crushed the Plains tribes between 1837 and 1838. In 1837 a steamboat introduced smallpox into the Upper Missouri area. The epidemic annihilated the Mandan, Arikara and Hidatsa tribes trading and living around the American Forts Union and Clark. It was carried north of the border by Assiniboine, Blackfoot, Cree, Blood and Peigan tribes who fled the Upper Missouri in the attempt to run from the disease.<sup>56</sup> Unfortunately, this only served to spread the epidemic, which ended up destroying around seventy-five percent of the Assiniboine, Blood, Sarcee, Peigan, Blackfoot and Gros Ventre populations.<sup>57</sup> Fortunately for the Plains and Woodland Cree, they were largely saved from this epidemic by the vaccination efforts of William Todd, a physician stationed at Fort Pelly. (Refer to Map#4 on pg.58.) Upon hearing news of the outbreak south of the border Todd went about quickly vaccinating as many Natives in the surrounding areas as possible. Vaccine, by the time of the 1837-38 smallpox outbreak, had become available at many of the western posts, although many post managers did not believe that vaccine could be effective because so little was known about it. In fact, Edward Jenner had discovered smallpox vaccine in Europe only forty years earlier, in 1796. His discovery was very important especially for the Plains and Woodland Cree in 1837-38 who suffered only about a ten percent loss in population compared to a forty to fifty percent decline experienced by other Plains tribes.

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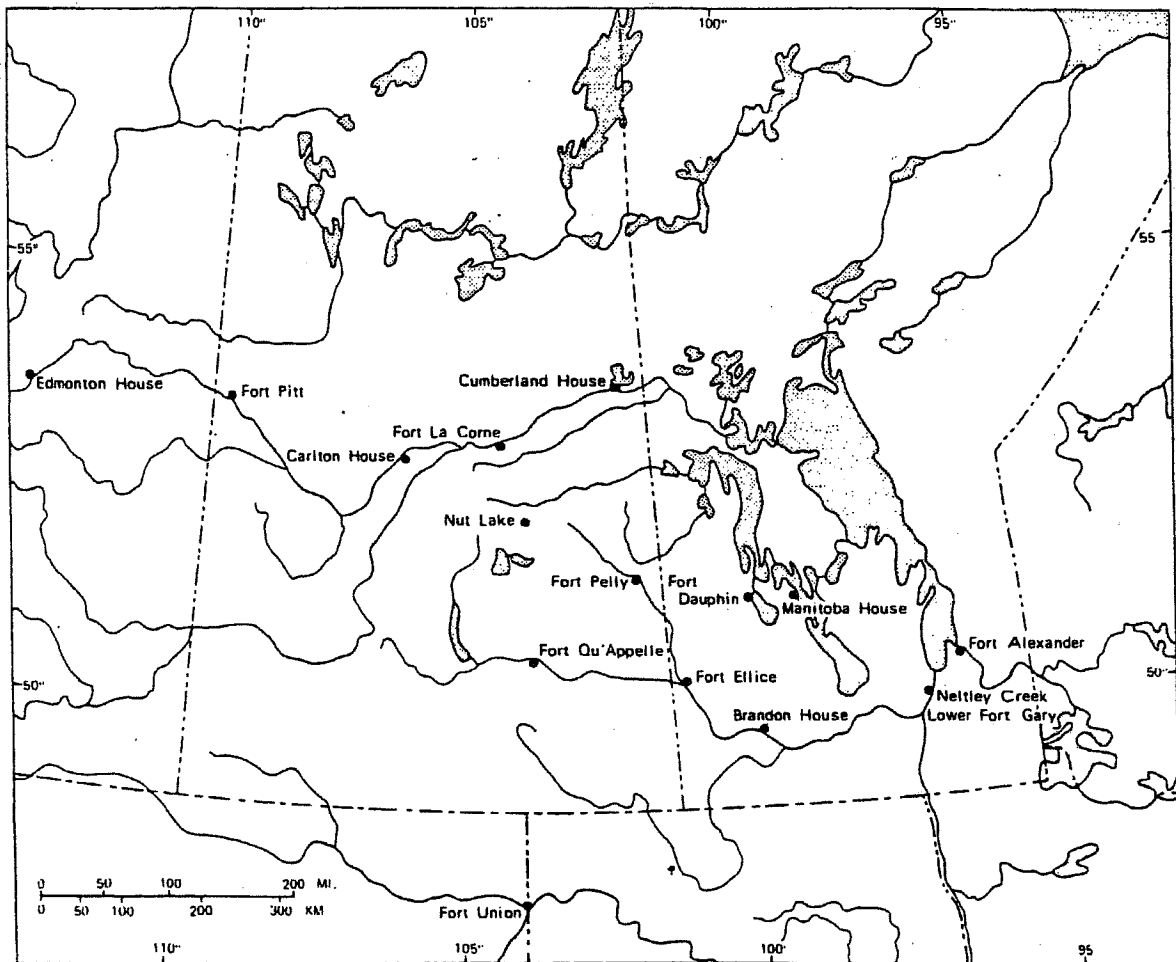
<sup>55</sup> Maureen K. Lux, "Beyond Biology." (Unpublished Dissertation, Simon Fraser University, 1996), p.27.

<sup>56</sup> Arthur J. Ray, "Smallpox: The Epidemic of 1837-38," *The Beaver*, 306(2), (1975), p.9.

<sup>57</sup> Arthur J. Ray, "Diffusion of Diseases in the Western Interior of Canada, 1830-1850," *The Geographical Review*, 66(2), (1976), p.154.

<sup>58</sup> Decker, "We Should Never Be Again the Same People," p.145.

<sup>59</sup> Ray, "Smallpox," p.11.



**MAP #4** From: Arthur J. Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson Bay, 1660-1870, 2nd Ed. (Toronto: University of Toronto Press, 1998(1974)), p.201.

All told, around 17,000 Natives perished on the Northern Plains during the smallpox outbreak of 1837-38.<sup>58</sup> Although some post operators failed to use the vaccine they were given, many did, especially after the urgings of William Todd. He not only succeeded in persuading many other forts to join the vaccination program but he also taught the technique to the Natives whom he treated. In turn, these Natives returned to their villages and vaccinated their friends and family on their own. Thus, the Natives themselves played an important role in keeping the epidemic in check.<sup>59</sup> With the exception of some of the Plains and Woodland Cree who refused to be vaccinated, most escaped the epidemic. In fact, the vaccination efforts helped prevent the spread of the disease to the more northerly tribes and also prevented its spread into the Petite Nord.

As was previously mentioned, the Assiniboine were devastated by the 1837-38 smallpox epidemic. This had an important impact on the Plains Cree, who had not suffered extensively from the epidemic, and thereafter began to move south into the lands vacated by the Assiniboine.<sup>60</sup> (Refer to Map#5 on pg.60.) In fact, many of the remaining Assiniboine may have been absorbed into the Plains Cree, further bolstering their population. Indian Agent Edward Denig believed that the Assiniboine would not have survived at all if they had not merged with the Cree.<sup>61</sup> Thus, the Plains Cree not only absorbed portions of the Woodlands tribes moving in from the North but also the remnants of the Assiniboine tribe to the south of them. This, in combination with the fact

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<sup>59</sup> Ray, "Smallpox," p.11.

<sup>60</sup> Ray, Indians in the Fur Trade, p.192.

<sup>61</sup> Taylor, pp.65-66.

<sup>62</sup> Hackett, p.371.

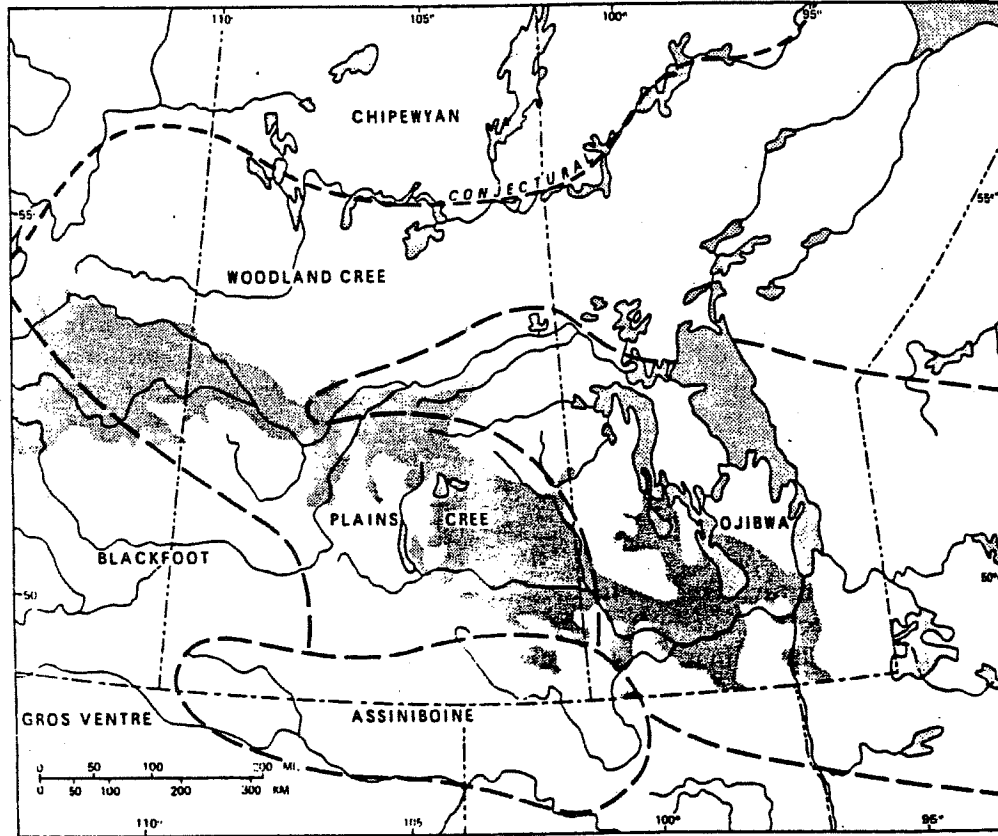


FIGURE 42

TRIBAL DISTRIBUTIONS IN 1860

— — — Approximate limits of tribal territories

▨ Parkland Belt

Source: E. Denig, H. Hind, Capt. J. Palliser

**MAP #5** From: Arthur J. Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson Bay, 1660-1870, 2nd Ed. (Toronto: University of Toronto Press, 1998(1974)), p.184.

that the Plains Cree escaped the 1837-38 smallpox epidemic relatively unscathed, helped the Plains Cree's expansion across much of Southern Saskatchewan.

In general the 1840s appear to have been a decade of heightened epidemic activity. This activity would have been even more difficult to handle than usual because the Plains population would still have been very weak from the depopulating smallpox epidemic of 1837-38. Despite the fact that the Plains Cree were largely spared this epidemic they would not have enjoyed the same immunity to the diseases that hit throughout the 1840s, such as mumps, whooping cough, measles and dysentery. In 1841 mumps is mentioned in the journals but it apparently remained confined to the area around Hudson Bay.<sup>62</sup> Whooping cough returned to the west in 1842 and 1844, but its impact seems to have been the greatest in the Red River Colony. Hackett believed that this was the case because the whooping cough outbreak was followed closely by other maladies such as scarlet fever, mumps and influenza, all of which heightened the epidemic mortality.<sup>63</sup>

Due to the fact that few academics have attempted to analyze the impact of epidemics on the Great Plains in the 1840s and 1850s, it is hard to tell whether the 1842 and 1844 epidemics were spread to the Plains area. Arthur Ray examines the area and topic briefly in Indians in the Fur Trade and "Diffusion of Diseases in the Western Interior of Canada, 1830-1850." However, his work seems to be studying the extent of certain epidemics rather than which tribes were affected and how many succumbed to particular diseases. Ray does mention that one of the diseases that hit Red River between 1842 and 1844, scarlet fever, was less contagious than measles or influenza. Therefore,

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<sup>63</sup> Ibid., p.373.

due to the lack of recordings on scarlet fever, Ray concluded that it was in all likelihood confined to the Red River area.<sup>64</sup> Despite this fact, however, Ray states that mortality was reportedly high. Although scarlet fever may have remained confined to Red River, the fate of the whooping cough outbreak is unknown. It is hard to believe that outbreaks such as these could have remained confined to Red River, especially considering the extensive interaction with the surrounding Native populations. Hackett mentions that whooping cough was reported at Cumberland House in 1844, so it must have diffused throughout much of the area between there and Red River, but beyond this little else is known.<sup>65</sup> However, due to the lack of information one can only speculate.

Influenza epidemics hit the west in 1845, 1847 and 1850. The 1847 outbreak appears to have been the most extensive and damaging to the Plains tribes, extending from Fort Pelly up past Cumberland House and westward past Edmonton House, and it affected both the woodlands and Plains tribes alike.<sup>66</sup> It was spread to the Saskatchewan area from the area around Norway House but its origins are more problematic. Hackett stated that the origins are unknown, but Ray linked them to the Upper Missouri area.<sup>67</sup> Perhaps further research would clarify both the problem of origins of the influenza outbreak and the mortality rate on the Plains. Apparently there were numerous deaths, especially amongst the Woodland Cree in the Saskatchewan District, and this may have once again led many to join their Plains relations. Yet beyond this the record of mortalities is incomplete.

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<sup>64</sup> Ray, "Diffusion of Diseases in the Western Interior of Canada, 1830-1850," (1976), p.151.

<sup>65</sup> Hackett, p.375.

<sup>66</sup> Ray, "Diffusion of Diseases in the Western Interior of Canada," p.148.

<sup>67</sup> Ibid., p.148. and Hackett, p.401.

Measles hit the western interior again in 1846-47, twenty-six years after the last major outbreak in the area. Therefore, a new generation of susceptibles would have been born who lacked immunity. This outbreak was quite extensive, again spreading from the Upper Missouri to the Red River and then out to the Plains and Petite Nord.<sup>68</sup> In fact, in extent the 1846-47 measles epidemic may have rivaled the 1779-83 smallpox outbreak<sup>69</sup> and the death rate appears to have been very high, perhaps only surpassed in the nineteenth century by the 1837-38 smallpox epidemic.<sup>70</sup> However, specific figures are not given and therefore it is hard to tell either exactly how many Plains Cree died or the members of surrounding tribes who succumbed.

Yet further increasing the impact on the area was the dysentery epidemic that hit right after the measles epidemic of 1846. Ray does not focus much on dysentery, believing that it was the measles outbreak that was responsible for most of the mortality. Hackett, on the other hand, claims that dysentery had a higher mortality rate and the death that it caused in combination with the measles outbreak may indeed have surpassed the mortality rate of the 1837-38 smallpox epidemic.<sup>71</sup> Like the measles epidemic, dysentery, also known as bloody flux, was carried on to the Plains from Red River. Dysentery is characterized by watery, often bloody stools, fever, stomach cramps and strain when passing faeces, and in the case of the 1846 outbreak, Hackett claimed that it was a relatively severe strain of dysentery called bacilliary dysentery, which has 20% mortality under hospital conditions.<sup>72</sup> Thus the mortality rate on the Plains, where medical care was scant at best, would have been much higher than 20%. But again

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<sup>68</sup> Hackett, p.402.

<sup>69</sup> *Ibid.*, p.415.

<sup>70</sup> Ray, "Diffusion of Diseases in the Western Interior of Canada, 1830-1850," p.154.

<sup>71</sup> Hackett, p.424.

obtaining information on exact rates of mortality is close to impossible. Hackett concludes that this is because the primary documents are rare and incomplete at best, especially for the year 1846.<sup>73</sup> This problem in documentation is apparent throughout the entire history of epidemic activity in the western interior, and it remained this way until long after the treaty settlements which started in the 1870s.

Documentation on the epidemic activity in the 1850s is similarly obscure. Only one author, Arthur Ray, mentions disease, mainly influenza, as having had an impact on the west. In 1850, influenza hit the area around York Factory and Norway House.<sup>74</sup> This outbreak, however, seems to have been confined to the vicinity of these two forts. There is no evidence suggesting that either the Woodland or Plains Cree intercepted the disease, but there is not enough research to confirm this fact. Beyond 1850 there is no further mention of epidemics until 1865. This could be in part the result of poor primary documentation, the obvious lack of secondary research on the part of academics or simply the result of no diseases being present.

Aside from the presence of diseases, however, there was another factor that influenced the Plains Cree in the 1850s, the disappearing buffalo. Historian John S. Milloy claimed that in the period between 1850 and 1870 the buffalo were beginning to disappear from the Plains.<sup>75</sup> This had an important impact on the Plains tribes who depended on the buffalo as both their main source of food and their main source of trade. Therefore, competition for dwindling herds brought different tribes into direct conflict with one another. Milloy refers to the conflict, in the years between 1850 and 1870 as the

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<sup>72</sup> *Ibid.*, p.421.

<sup>73</sup> *Ibid.*, p.457.

<sup>74</sup> Ray, "Diffusion of Diseases in the Western Interior of Canada, 1830-1850," p.150.

<sup>75</sup> Milloy, p.104.



Buffalo Wars.<sup>76</sup> This is significant in that the increase in hostilities and closer proximity of tribes to one another also signaled an increased loss in life to further add to the loss from epidemics.

Suffice it to say that the Plains Cree went about a drastic transformation in a 150 to 200 year period. They went from being a Woodlands tribe, trading and living in Northern Ontario and Eastern, Northeastern Manitoba, to a Plains tribe, traveling via horses rather than canoes and living and trading off the buffalo herds in the parkland/grassland regions of Saskatchewan. This transformation was complicated by the numerous epidemics that struck the west after 1680, the most significant of which were the smallpox epidemic of 1779-83, the dual measles and whooping cough epidemic of 1819, the devastating smallpox outbreak of 1837-38, and the measles epidemic of 1846. Although smaller scale epidemics did occur in between these major outbreaks, these are the ones that took the greatest toll on human life. As for the Plains Cree, whose numbers continued to be bolstered by the influx of Woodlands migrants until the 1860s, they nevertheless were hit by all of these epidemics and suffered dramatic losses in life except for from the 1837-38 smallpox outbreak. Yet despite these losses they were able to grow as a tribe until the mid 1860s.

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<sup>76</sup> Ibid., pp.103-105.

## *CHAPTER THREE*

### *THE IMPACT OF THE SCARLET FEVER OUTBREAK OF 1865 AND THE SMALLPOX EPIDEMIC OF 1870-71 ON THE PLAINS CREE AND HOW THESE AFFECTED TREATY NEGOTIATIONS.*

The 1860s and 1870s are the most neglected decades of study for epidemic disease on the Great Plains. No historian goes into detail on any of the epidemics that struck this area during these years, beyond a brief mention. This becomes increasingly interesting and perhaps ambiguous when taking into account that these were the two decades that directly preceded treaty negotiations and settlement, hence effectively bringing an end to the nomadic Plains Indian lifestyle. Thus the researcher must rely solely on the primary documents, which are incomplete or simply do not exist. The only mention of disease in the 1860s points to a scarlet fever epidemic and possibly a measles outbreak in 1865.

Milloy states that the epidemic afflicted the Blackfoot in the spring of 1865 and around 1,100 died from it.<sup>1</sup> He goes on to say that the Blackfoot initially blamed the outbreak on the HBC traders, but they eventually turned their aggression towards the Americans, the Cree and the Assiniboine. Yet he fails to mention whether these attacks may have spread the epidemic to the Cree themselves. A more informative excerpt is given by John McDougall in Pathfinding on Plain and Prairie (1898). McDougall, a missionary working amongst the Natives in the vicinity of Edmonton House, discusses

the scarlet fever outbreak in 1865. As with many other epidemics, rumour preceded the outbreak that many of the southern Indians were already dying from the disease. He does not specify at this time, exactly what the disease was, as he claims there was little information to go on.<sup>2</sup> McDougall fears that the disease would 'soon cover the whole country' because the government had not put in place any quarantine regulations and the spread of the contagion would have been hastened by the existing tribal warfare on the Plains.<sup>3</sup> When the epidemic was finally recorded as hitting, sometime near the end of March or early April of 1865, McDougall states that measles accompanied scarlet fever, creating a dangerous combination.

Among the Blackfeet and the southern tribes hundreds had died, and already the mortality was large among the northern Crees. From camp to camp the disease spread. As winter still lingered and the deep snow was again turning into water on the plains and in the woods, these lawless roving people without quarantine protection, lacking the means of keeping dry or warm, and altogether destitute of medicine or medical help, became an easy prey to the epidemic.<sup>4</sup>

McDougall goes on to discuss how he and his family helped attend the sick and dying and that contempt towards the Whites, whom the Indians blamed for bringing the disease, was ever present during the 1870-71 smallpox outbreak. But McDougall ends his description of the epidemic duo here, and fails to elaborate on the extent of damage after they ran their course.

Perhaps a glimpse of the possible damage can be gleaned from an HBC letter from W.J. Christie to W.G. Smith which discusses the 1870-71 smallpox epidemic. Christie mentions that the Indian population had hardly recovered in the Saskatchewan

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<sup>1</sup> John S. Milloy, *The Plains Cree: Trade, Diplomacy and War, 1790-1870*, (Winnipeg, 1988), p.114.

<sup>2</sup> John McDougall, *Pathfinding on Plain and Prairie*, (Toronto, 1898), p.37.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, pp.37-38.

District from the scarlet fever outbreak of 1865-66 when smallpox broke out five years later.<sup>5</sup> The excerpt is rather brief and does not elaborate on what tribes would have been affected by the fever, but the mention of it affecting the 'valley of the Saskatchewan' hints at the possibility that some of the Cree living along this large water route may have been infected. Thus, it does appear that scarlet fever and possibly measles hit the Plains area around 1865 and that it had a significant toll on the numbers and strength of the Native peoples it struck. However, the extent of the damage is obscure due to the lack of information.

The final changes experienced by the Plains Cree prior to 1870 were increased warfare with the Blackfoot and a move by some bands towards agriculture. The increased hostility between the Blackfoot and the Plains Cree was not simply the result of the Scarlet Fever epidemic among the Blackfoot and possibly the Cree, but it was also because of the clash over the area where the dwindling buffalo populations roamed. The Cree seemed to have been the ones pushing west onto Blackfoot territory, a move which heightened hostilities. According to Milloy, this warfare led to an increase in Cree casualties, which were becoming quite alarming by 1869.<sup>6</sup> Milloy also mentions that some bands of Plains Cree were making a move towards agriculture by 1860 as they realized that the buffalo were getting scarce. Yet, what makes this point so interesting is that Milloy claimed that the shift was made free of missionary influences.<sup>7</sup> Thus, by 1870 the Plains Cree had already hit the peak of their population, and were thereafter declining in numbers from increased warfare. As well, some Cree bands, although only

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<sup>5</sup> Extract from letter from W.J. Christie to W.G. Smith, dated Edmonton House, October 11, 1870. (H.B.C. Arch. A.11/99, fos. 344-345d.)

<sup>6</sup> Milloy, p.115.

<sup>7</sup> *Ibid.*, p.109.

the minority, had begun to make the shift towards agriculture, a choice which would not have been easy for such a highly nomadic society. Therefore, by 1870 the Plains Cree were prime targets for a massive epidemic as they inhabited the area where diffusion of epidemics from the Upper Missouri was greatest and their population had peaked. Not only is smallpox more devastating amongst larger populations, but it also spreads more easily through interaction, in this case warfare, with infected nations. Such was the case with the Plains Cree, who in their incessant warfare with the Blackfoot Nations, contracted smallpox in the spring of 1870.

As was the case with the 1837-38 smallpox epidemic, the 1870-71 outbreak seemed to have originated in the Upper Missouri region. The earliest observation of the disease in Canada was made by Erasmus in Buffalo Days and Nights. He recalls a hunting expedition on which he accompanied some Cree hunters in their search for buffalo. He does not specify where this hunting party was hunting, but, since most of the remaining buffalo from 1870 on were only located in the most southerly regions of both Alberta and Saskatchewan, it can be assumed that the party was searching in this area. Erasmus stated that in April of 1870 their hunting party came across a Blackfoot camp which they realized had been infected with smallpox. The Cree hunters wanted to attack the camp as the Blackfoot were in a weakened state, but Erasmus warned adamantly against it.<sup>8</sup> Obviously the Cree were still largely unaware of contagion despite the numerous epidemics which struck the tribe before 1870. The leaders of the hunting party, of which Erasmus was one, absolutely forbade any contact with the camp and any guns, blankets or remaining goods from the camp were not to be touched.<sup>9</sup> Erasmus'

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<sup>8</sup> Peter Erasmus, Buffalo Days and Nights, (Calgary, 1976), pp.203-204.

<sup>9</sup> Ibid., pp.204-05.

knowledge of how the disease could spread was perhaps the result of his education at an English church. However, it appears that he was not the only 'half-breed' leader of the group and as a result there may have been others among the group that understood the extreme danger of contagion and how highly transmittable smallpox could be. No other account of the outbreak, aside from Erasmus', dates its introduction as early as April. Thus, due to the fact that Erasmus claimed that their warnings in the early spring to avoid the camp were heeded it must have been transmitted in the early summer months as stated by most other primary documents.

It appears that the disease did not make its debut in the Saskatchewan District until late June or early July of 1870. McDougall in, In the Days of the Red River Rebellion claims that rumours of the outbreak to the south of the present-day American/Canadian border were causing great fear amongst the Indians in the spring around Fort Victoria in the Edmonton District.<sup>10</sup> He mentions that the rumours were still looming heavily in the early summer as reports from the south attested to entire villages being destroyed by the scourge.<sup>11</sup> McDougall does not mention a specific date when the disease hit Canada, but there are two reports in the HBC records which point to the month of July. In a letter from W.J. Christie, Edmonton House, to the Chief Factors and Traders of the Northern Department, January 5, 1871, Christie summarized the history of the epidemic in the Saskatchewan District. Christie claimed that the epidemic made its appearance in the District in July.<sup>12</sup> However, a report in the Fort à la Corne journal, dated 1870, pinpointed the outbreak at Cumberland at July 9, in which it said that the

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<sup>10</sup> McDougall, p.117.

<sup>11</sup> Ibid., p.122.

<sup>12</sup> Extract from letter from W.J. Christie to the Chief Factors and Chief Traders, Northern Department, dated Edmonton House, Saskatchewan District, January 5, 1871. (H.B.C. Arch. B.239/c/20).

disease was just beginning.<sup>13</sup> Thus if the disease was beginning at Cumberland in early July, it would suggest that smallpox was first introduced to the Saskatchewan District from south of the border sometime in June as it would have taken about a week or more for it to spread up to Cumberland. (Refer to Map#4 on pg.58.) Possibly two to three weeks may have been more reasonable not only for travel but also for the disease to move beyond its incubation stage into the visible symptoms of smallpox, a process which can take between nine to fourteen days.<sup>14</sup>

The documents suggest two possible methods by which smallpox was introduced into the Saskatchewan District. The first theory is found in the missionary Egerton Ryerson Young's records, which propose that the epidemic was spread from the state of Montana into Saskatchewan via some White traders.<sup>15</sup> However, Butler and McDougall, as well as the HBC records all attribute the outbreak to a band of young Cree warriors who attacked an infected Blackfoot camp. Butler gives a credible account of the possible route of infection. He believed that the illness was communicated to the Piegan Indians living around the headwaters of the Missouri. From there it spread to their Blackfoot relations whose hunting grounds extended from present day Montana into the southern regions of Alberta and Saskatchewan. Sometime in late 1869 the Blackfoot became infected, but the Cree raiding party, who were apparently warned by missionaries to avoid the Blackfoot, went ahead despite the advice and attacked a Blackfoot camp. Butler gives the month of April as the date of the attack, the same as Erasmus.<sup>16</sup> However, Erasmus claimed that his group avoided the area so it must have either been a

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<sup>13</sup> Fort à la Corne, July 9, 1870. (H.B.C. Arch. B.2/a/6).

<sup>14</sup> A.F. Ramenofsky, Vectors of Death, (Albuquerque, 1987), p.147.

<sup>15</sup> Egerton Ryerson Young, By Canoe and Dog-Train Among the Cree and Salteaux Indians, (London, 1892), p.197.

different group of Cree or he was wrong. Nevertheless, from Butler's account the Cree raided the camp, but it was deserted so they ended up pillaging the goods that were left behind and mutilating the decomposing bodies.<sup>17</sup>

Soon after the attack, the epidemic appeared in the camps of the returning Cree raiders. It is strange, though, that the disease took almost two months to spread from the raider's camp to Cumberland House where it was beginning around July. This is especially questionable considering the frequent contact between the Natives during the spring and summer months. Unfortunately it is a mystery that cannot be solved as most of the posts within the Saskatchewan District had no district journals for the spring and summer of 1870.<sup>18</sup> Regardless of the exact date, Butler claimed that by the beginning of July, smallpox "...of the very worst description was spread throughout some 500 miles of territory, appearing almost simultaneously at the Hudson's Bay Company's posts from Rocky Mountain House to Carlton."<sup>19</sup> Young also notes how fast the epidemic moved throughout the country, stating that "...it spread with amazing rapidity and fatality."<sup>20</sup> Thus by the end of July smallpox, whose very mention struck fear into the hearts of everyone, had permeated much of the Saskatchewan District.

The reaction to the outbreak on the part of both Natives and non-Natives varied from hostility to fear, flight, inoculation and the eventual quarantine of the Saskatchewan District. Erasmus discussed the measures which one band attempted to pursue in order to avoid the epidemic. He talked about a meeting in which the chiefs called the band together in order to warn them against coming into contact with someone or something

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<sup>16</sup> Francis William Butler, The Great Lone Land, (Edmonton, 1968), p.368.

<sup>17</sup> Ibid., p.368.

<sup>18</sup> Remarks On Statements Made by the Reverend E.R. Young. (H.B.C. Arch. B.239/k/3)

<sup>19</sup> Butler, p.369.



that might be infected. Yet Erasmus noted the futility of this due to the strength of Native mores. He claimed that even though quarantine was preached, the traditions of the people would not allow for abandonment of one's relatives, visiting the sick, or dying family and friends, and sharing their possessions with the community.<sup>21</sup> Therefore, most Natives were doomed from the start due to their entrenched traditions. Those that did heed the warnings and split up into small groups to live in the northern woodland sections generally avoided the scourge. But the percentage of those that did flee to those that stayed was very small.

The most common reaction displayed by the Natives was hostility towards non-Natives. Young mentioned a band of Cree warriors that sought vengeance on 'all Whites' whom they blamed for the introduction of the epidemic. They travelled around to a few different missions, Victoria Mission, Mission House and a local fort with the intention of attacking the White inhabitants, but at each place they discovered that some of the traders and missionaries had become sick. Realizing that the Whites must not have been responsible for the epidemic, they gave up and went home.<sup>22</sup> McDougall also notes hostility at Fort Victoria where the Natives "...went around armed to the teeth, and were ready for any excuse to commit violence. This was a white man's disease, and they hated the whites."<sup>23</sup> In one account a couple of bands of Cree who had been suffering very badly from the malady came to Fort Pitt for the sole purpose of acquiring some medicine. Yet, like all the other forts where the disease had broken out, the doors were kept closed, neither allowing people in nor out for fear of contagion. The Natives would have

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<sup>20</sup> Young, p.197.

<sup>21</sup> Erasmus, pp.209-210.

<sup>22</sup> Young, pp.197-198.

<sup>23</sup> McDougall, p.127.

perceived this closure of the forts and lack of medicine as further evidence of the malicious intent on the part of non-Natives to destroy them. So the Cree outside Fort Pitt, attempted to spread the infection to the inhabitants by throwing their dead against the stockades<sup>24</sup> and rubbing infected matter on door handles and window frames.<sup>25</sup> It is obvious from this case that the Cree around Fort Pitt had at least some knowledge of contagion because of their attempt to spread it to those in the fort. It is strange that they did not use this knowledge in the attempt to avoid the epidemic themselves.

The non-Native population generally reacted with fear of a possible revolt or with pleas to the exterior districts for medical aid and provisions. As the letter from W.J. Christie to W.G. Smith dated Edmonton House, October 11, 1870 shows, there was a great fear among both Whites and Natives of the approaching winter as there would be no provisions at the forts and none could be delivered due to the trade ban.<sup>26</sup> In the letter Christie admits that the situation was already very tense between the Whites and Natives, and with the approaching winter he feared that starvation would undoubtedly lead to violence.<sup>27</sup> The fear of starvation and violence intensified after October 22, 1870 when the Governor of Manitoba issued an ordinance banning all trade with the infected Saskatchewan District for six months.<sup>28</sup> Long before the Ordinance was made official, quarantine was invoked as a result of individual discretion. Most forts refused to receive goods brought in by Natives both inside and directly outside the Saskatchewan District. There was also a problem with obtaining provisions in the early summer of 1870 as the

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<sup>24</sup> Extract from letter from W.J. Christie to D.A. Smith, dated Carlton House, September 6, 1870. (H.B.C. Arch. A.11/99, fos, 300-301.)

<sup>25</sup> Butler, p.369.

<sup>26</sup> Extract from letter from W.J. Christie to W.G. Smith, dated Edmonton House, October 11, 1870. (H.B.C. Arch. A.6/44, p.145.)

<sup>27</sup> Ibid., (H.B.C. Arch. A.6/44, p.145.)

<sup>28</sup> Remarks On Statements Made by the Reverend E.R. Young. (H.B.C. Arch. B.239/k/3)

Red River Resistance had halted trade from Red River to many of the forts in the Saskatchewan District which depended on it. McDougall stated that due to the epidemic, lack of government protection, doctors and medicine they were left to their own resources.<sup>29</sup> Ammunition was also running low in some areas in the fall of 1870 so those that did remain untouched by the epidemic were limited in what they could hunt with.<sup>30</sup> Therefore, by the fall and early winter of 1870 the Saskatchewan District was in a desperate state.

Unlike the 1837-38 epidemic when most of the Plains Cree had been vaccinated prior to the outbreak, the 1870 scourge seemed to catch almost the whole Saskatchewan District unprepared. In fact, there was no vaccine on hand in either the posts in Alberta or Saskatchewan. Only in Red River was vaccine to be found and it was quickly used to vaccinate the inhabitants.<sup>31</sup> From the very beginning of the epidemic right through to the spring of 1871 there seems to have been demands for medicine or vaccine. The two were quite often referred to interchangeably when it came to smallpox as there was no medicine that could help ease the effects of the disease except vaccine and it could only be useful in preventing the inception of smallpox. Unfortunately, the vaccine was useless if used after smallpox had been contracted.

One of the first official requests for vaccine was by D.A. Smith, the Head of the Northern Department, from the Saskatchewan District to London in September of 1870. Smith apparently wrote the request on the 6th of September, but the response was not

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<sup>29</sup> McDougall, p.121.

<sup>30</sup> Young, p.200.

<sup>31</sup> Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay, 1660-1870, 2nd Ed. (Toronto, 1998(1974)), p.191.

written until October 14, 1870.<sup>32</sup> The interesting aspects about this letter are firstly, the request was sent straight to London, suggesting that the vaccine was in very short supply in North America. Secondly, a significant period of time had elapsed between when the letter was received and when the response was made. The reply from London with a "...small packet of vaccine Lymph..." was received at Fort Garry on November 27, 1870.<sup>33</sup> Thus it took two months to receive any vaccine, by which time the epidemic had already done extensive damage. There were further problems with the vaccine because some of the shipments were damaged as was the case reported by Butler in the early months of 1871. He notes that some of the bottles he received had been damaged by frost.<sup>34</sup> Maureen Lux comments that in some cases, where vaccine could not be obtained, inoculation was used and this helped save many lives in the vicinity of Fort Qu'Appelle.<sup>35</sup> This type of inoculation involved using the blood of a recently vaccinated person to vaccinate another. This method, although old by 1870, was helpful in granting a person immunity. However, inoculation also had many dangers because it usually involved an outbreak, although milder than the natural inception of smallpox, and it could also be transmitted to others, unlike the cowpox vaccine which was in regular use at this time. The advantage of inoculation over vaccine was that it usually granted the patient lifetime immunity, but vaccine only provided about three years of protection until around the turn of the century when a new and longer lasting vaccine was discovered.<sup>36</sup> In general, most

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<sup>32</sup> W.G. Smith to D.A. Smith, dated London, October 14, 1870. (H.B.C. Arch. A.6/44, p.145.)

<sup>33</sup> Extract from letter from D.A. Smith to W.G. Smith, dated Fort Garry, November 27, 1870. (H.B.C. Arch. A.11/99, fo. 324.)

<sup>34</sup> Butler, p.372.

<sup>35</sup> Maureen Lux, "Beyond Biology: Disease and its Impact on the Canadian Plain Aboriginal People, 1880-1940.," (Unpublished PhD. Dissertation, Simon Fraser University, 1996), p.29.

<sup>36</sup> For more information on inoculation and vaccination refer to Donald R. Hopkins' Princes and Peasants: Smallpox in History, (Chicago and London, 1983). It provides an excellent history of smallpox and the numerous methods employed by people in the past in the attempt to halt the disease.

of the Saskatchewan District had not been vaccinated or inoculated before the onset of the epidemic and would remain that way until the winter of 1870-71. By this time thousands had lost their lives and the greatly feared starvation had set in.

One of the most common after effects of epidemic disease is famine. Due to the fact that smallpox is such a virulent disease it generally leaves very few unaffected. Therefore, very few able bodied people would be around to tend to the sick or hunt and gather food to keep their people nourished. Despite the strength of family mores that Erasmus spoke of, family bonds, in the depths of an epidemic, often weaken as was the case noted by Butler: "...the poor plague-stricken wretches lay down to die - no assistance of any kind, for the ties of family were quickly loosened, and mothers abandoned their helpless children upon the wayside..."<sup>37</sup> A letter dated Edmonton House January 5, 1871 also showed how the epidemic incapacitated the Natives whose situation was compounded by the scarcity of the buffalo: "...the Indians & Halfbreeds [sic] are doing little or nothing, hardly able to find enough Food to support themselves & Families. Little or no Provisions were traded at any of our Forts the past Summer, and it will be a struggle to carry on our own Servants, and starving Freeman & c. through the winter."<sup>38</sup> Most accounts dealing with the epidemic mention a similar state of desperation and starvation. Thus, widespread famine in the Saskatchewan District contributed to the rising death rate from the epidemic into the winter months of 1870-71.

Starvation was not the only factor resulting from the epidemic which was bolstering the death rate because secondary complications such as warfare and even

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<sup>37</sup> Butler, p.369. Erasmus may be a more reliable source for understanding the strength of Native family mores because he was closer to the Aboriginal population than Butler.

<sup>38</sup> Extract from letter from W.J. Christie to the Chief Factors and Chief Traders, Northern Department, dated Edmonton House, Saskatchewan District, January 5, 1871. (H.B.C. Arch. B.239/c/20).

suicide all helped to contribute. Butler discussed some of the secondary complications when talking about the death rate around Edmonton House. He claimed that the Natives huddled together in small groups devoid of medical assistance. In many cases delirium set in and some wandered into the cold, and rain for hours with no protection, frequently leading to death by exposure.<sup>39</sup> Suicide may also have contributed to the death rate. It is a frequent reaction to diseases such as smallpox, which has a very severe psychological effect on its victims because of the hideous scars left on the survivors. Survivors are also prone to take their own lives if they have lost numerous loved ones to an epidemic. Trimble discusses suicide among the Mandan during the 1837-38 smallpox epidemic quite frequently in his dissertation, but there are very few authors who mention it when referring to the 1870 outbreak on the Plains. Most documents simply hint at suicide with the exception of one account in McDougall. In In The Days of the Red River Rebellion, McDougall recalls a situation in which all that remained of a family was a man and his son. Once the son died, the father "...raised himself up, gave a leap, and himself fell dead."<sup>40</sup> Although 'suicide' is not mentioned explicitly, perhaps because it was a taboo subject, the passage definitely points in that direction. The accounts of suicide may have been much greater had many of the forts in the Saskatchewan District maintained their journals during the worst season of the epidemic - the summer of 1870.

Warfare also helped contribute to the depleting population because many Natives would blame their foes for their illness. Scape-goating is another common reaction following the outbreak of an epidemic. As with the situations when the Natives blamed the non-Natives for the outbreak, they also blamed their traditional enemies. The

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<sup>39</sup> Butler, p.370.

<sup>40</sup> McDougall, p.126.

difference between the two was that they were more likely to follow through with threats on other Natives than they were against the White population. This was mainly due to the fact that the Natives did not want to damage their trading relationship with the Whites and because the non- Native population was generally better armed than the Aboriginals. McDougall noted that the result of continued and even heightened warfare in some cases, during an epidemic, is that it increased the suffering and misery.<sup>41</sup> Continued warfare also acted as a conduit for the spread of disease because warriors moving in and out of camps carrying infected loot or bringing infection on themselves would either begin an epidemic in an uninfected band or perpetuate an existing outbreak by introducing fresh infection.

In some cases epidemics also acted as an excuse to attack a disease-weakened enemy. John Milloy gives an example of this when he mentions a Cree attack on a Blackfoot camp in the fall of 1870. A band of between 600 and 800 Cree and Assiniboine set out to attack a village of Blackfoot they thought were weakened by the outbreak . The Cree were wrong in their assumption and ended up being heavily defeated, losing between 200 to 300 warriors.<sup>42</sup> That such a large-scale attack took place when the Cree themselves were still suffering heavily is strange to say the least. Revenge assaults may be understandable, but an attack of this magnitude, when the Cree were obviously suffering terribly, as attested to in both the primary books and the HBC records, is questionable. Since Milloy gives no reference for his entry, it is almost impossible to verify the information. Conversely, it is not mentioned in Butler, McDougall, Erasmus, Young nor in the HBC documents that were examined.

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<sup>41</sup> *Ibid.*, p.130.

<sup>42</sup> Milloy, pp.116-117.

Assessing the Native death rate after the 1870-71 smallpox epidemic is rather difficult due to the incomplete journals in the Saskatchewan District during the worst months of the epidemic. However, the HBC records and published primary accounts propose some figures which can be used to make an assessment. But before numbers can be dealt with, it is important to discover both the duration and geographical extent of the epidemic. Most accounts mention that the epidemic continued into the winter of 1870-71, but the strain of smallpox seems to have been milder and less deadly. Butler's excerpt from the early months of 1871 mentions that smallpox was still evident at Forts Pitt, Victoria and Edmonton, but it was a weaker strain than that which had hit in the summer and autumn months.<sup>43</sup> Butler's account seems to somewhat contradict an excerpt in the HBC letter dated December 28, 1870. The latter mentions that smallpox had subsided at Carlton, but it was still "...committing fearful ravages..." amongst the Natives at Edmonton House.<sup>44</sup> Due to the proximity of both the entries, Butler's, at the beginning of 1871, and the HBC letter dated the end of December, either one of the informants was mistaken or the epidemic changed its virulence in a relatively short time. The former is the more likely alternative, but there are no similar documents available for this particular time period to assess the credibility of the sources. As well, it is not likely that the milder strain, which Butler spoke of, could have committed the fearful ravages that the documents discuss, because the milder form of smallpox or Variola minor has only a 1% death rate as opposed to normal smallpox Variola major which has an expected death rate of between 10 to 100%.<sup>45</sup> Whatever the case may have been in December or January, it

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<sup>43</sup> Butler, p.372.

<sup>44</sup> Extract from letter from D.A. Smith to W.G. Smith, dated Fort Garry, December 28, 1870. (H.B.C. Arch. A.11/99. fo. 342-342d.)

<sup>45</sup> Ramenofsky, p.147.



appears that by the spring of 1871 the epidemic had finally subsided. There are references to smallpox in some HBC records, but it was a much milder form by March and only very few cases are reported. By July the epidemic was declared over as it had not reappeared in the summer months of 1871.<sup>46</sup>

As with the accounts of the duration of the epidemic, the accounts of its extent are also problematic. A letter at Fort Garry in September of 1870 mentioned that smallpox "...is travelling rapidly in this direction a case of it having appeared within sixty miles of this place within the past week."<sup>47</sup> However, in a letter dated Fort Garry, June 14, 1871 it was stated that smallpox "...did not appear to be gaining much ground in the neighbouring Districts...".<sup>48</sup> Arthur Ray supports this statement by claiming that vaccination programs and quarantine prevented the epidemic from infecting the Swan River and Red River Districts.<sup>49</sup> Beyond this, though, there is very little information regarding the geographical limits of the disease. From information gathered from the HBC documents an approximate disease extent is shown on Map#6 (on pg.82). This area appears to have been the hardest hit by the epidemic. It is, however, quite possible that some bands in areas outside of the Saskatchewan District may have been infected due to familial relations. In fact, due to the virulence of this particular epidemic it is quite likely that Natives in surrounding districts were affected, especially when considering that the summer months, the most severe time of the epidemic, were also a time of

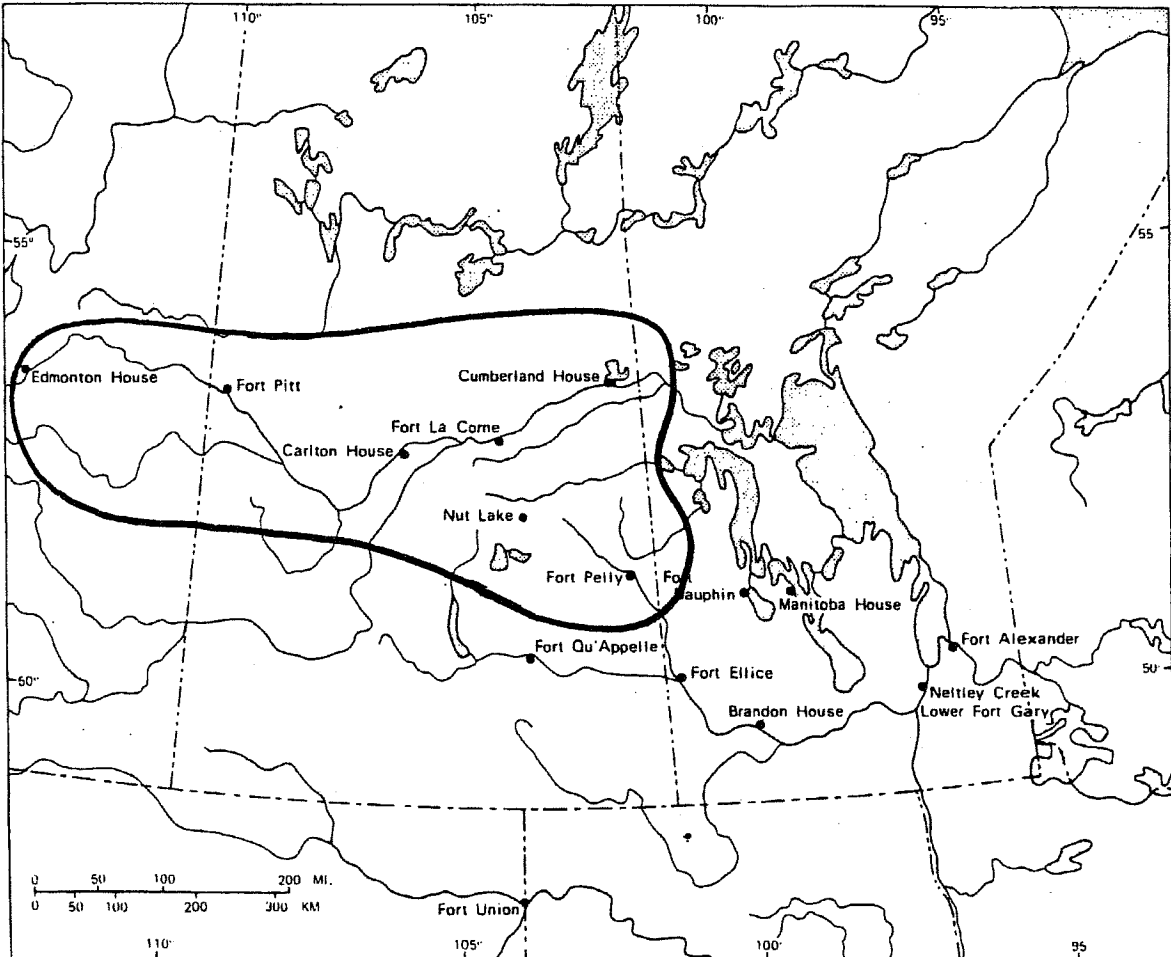
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<sup>46</sup> J.H. McTavish to W. Armit, dated Fort Garry, July 29, 1871. (H.B.C. Arch. A.11/100, fo. 103d.)

<sup>47</sup> Extract from D.A. Smith to W.G. Smith, dated Fort Garry, September 14, 1870. (H.B.C. Arch. A.11/99, fo. 260.)

<sup>48</sup> J.H. McTavish (Clerk in charge at Fort Garry) to W. Armit, dated Fort Garry, June 14, 1871. (H.B.C. Arch. A.11/100, fo. 89.)

<sup>49</sup> Ray, Indians in the Fur Trade, p.192.



**MAP #6** Added line represents area hardest hit by the 1870-71 Smallpox Epidemic. From: Arthur J. Ray, Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson Bay, 1660-1870, 2nd Ed. (Toronto: University of Toronto Press, 1998(1974)), p.201. Additions made by R. Brain.

visiting, trade, war and hunting. Thus interaction and spread were more than probable. Yet, once again, due to the lack of documentation in the HBC records one might have reason to believe that the epidemic did not assume the strength or permeate other districts as it did in Saskatchewan.

As was the case with so many other details about the epidemic, it is difficult to estimate how many succumbed to the disease. In January of 1871 Butler claimed that around 1,200 Natives had died so far from the epidemic along the North Saskatchewan River. This figure did not include the Blood, Blackfoot or Piegan Indians.<sup>50</sup> In the HBC records, a letter around the same time as Butler's notation puts the loss of Natives at at least 2,000 since June of 1870.<sup>51</sup> Again this number is corroborated in a letter dated January 22, 1871, except this particular excerpt mentions that in the Saskatchewan District alone 2,000 had perished since July.<sup>52</sup> That the number of deaths could be so high is understandable due to the virulence of the disease and several different entries of corroborating evidence.

If there is a possibility of the number of deaths due to the epidemic being any different, then the number would likely be increased. There are numerous reasons for this, the first being that the epidemic broke out in the late spring - early summer when there was maximum interaction between tribes. Secondly, by 1863 the Cree had expanded as mentioned earlier to around 11,500. Therefore, the greater the population and the larger the villages the more virulent and lethal smallpox can become. Thirdly, the majority of people in the Saskatchewan District had not been vaccinated, nor did they

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<sup>50</sup> Butler, p.372.

<sup>51</sup> Extract from letter from D.A. Smith to W.G. Smith, dated Fort Garry, December 28, 1870. (H.B.C. Arch. A.11/99, fo. 342-342d.)

<sup>52</sup> D.A. Smith to W.G. Smith, dated Fort Garry, January 22, 1871. (H.B.C Arch. A.11/100, fos. 379-80.)

obtain any vaccine until months after the epidemic was in full swing. As well, the journals and letters attest to a massive loss of life, quite often referring to dead Indians being seen everywhere one turns. One entry talks about the terrible stench of death wafting across the Plains from dead camps and corpses remaining unburied.<sup>53</sup> Yet perhaps the most compelling entry in regards to the HBC is the excerpt from November 21, 1871 which mentions how the losses from the epidemic the previous year would affect the present year's trade. The chairman at this meeting of the General Court of the Hudson's Bay Company noted that returns were extremely low that year (1870) due to the epidemic and would continue to be low due to the loss of Natives that had formerly been relied on to do the hunting.<sup>54</sup> Yet while these remarks may suggest a massive population loss there are no specific numbers given.

The best way to evaluate how the epidemic affected the Plains tribes, the Cree in particular, is to examine population assessments before and after the epidemic. This method allows for more than just the inclusion of death directly from smallpox but also from secondary infections, starvation, warfare, suicide and flight. Captain John Palliser's estimate for the Plains Cree population in 1863, which is widely regarded as the most accurate figure, is 11,500. This number had declined from Mandelbaum's calculation of 12,500 Cree in 1860.<sup>55</sup> In 1871 Butler estimated that the Plains Cree numbered about 7,000 persons.<sup>56</sup> This estimate is further reduced by Lieutenant-Governor Morris in

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<sup>53</sup> Extract from letter from W.J. Christie to D.A. Smith, dated Carlton House, September 6, 1870. (H.B.C. Arch. A11/99, fos. 300-301.)

<sup>54</sup> Extract No. 30. At the General Court of the Hudson's Bay Company held on November 21, 1871. (H.B.C. Arch. B.239/k/3).

<sup>55</sup> Milloy, p.72.

<sup>56</sup> Butler, p.387.

1873, to about 5,000 Plains Cree.<sup>57</sup> Hence, between 1863 and 1871 alone, the Plains Cree experienced a population loss of 4,500 or roughly around 40% - a rather drastic decrease considering only eight years had elapsed. In the same time period, the Blackfoot population dropped from 6,000 to 4,000 and the Assiniboine from 1,000 to 500.<sup>58</sup> Losses in the Blood and Piegan tribes were not as severe. It is obvious, then, that the Cree were not the only ones to suffer as is evidenced in the population decline of the Assiniboine. As well, what can be surmised from this information is that the Saskatchewan District, in which the Plains Cree and Assiniboine dwelled, was the hardest hit, as is apparent from the high mortality rates among these two tribes.

It is not likely that the Plains Cree were able to reestablish their populations in the brief time between the epidemic and Treaty 4, 1874 and Treaty 6, 1876, especially if other epidemics threatened. McDougall mentioned that mumps hit in either 1871 or 1872, but there is no further mention of the outbreak, which he claimed to be quite severe.<sup>59</sup> No other references to the disease in 1871-72 occur in related documents. Nevertheless, the severe loss in population of the Plains Cree, which was mainly due to the smallpox epidemic of 1870-71, played a significant role in treaty negotiations a few years later.

In the years between 1871 and the conclusion of Treaties 4 and 6 there was increased anxiety amongst the government officials, traders and other non-Native people in the vicinity of the Saskatchewan District. The fear of hostility by destitute tribes had not subsided with the epidemic. In fact, starvation is frequently mentioned about the

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<sup>57</sup> Arthur Ray, Jim Miller and Frank J. Tough, Bounty and Benevolence: A History of Saskatchewan Treaties, (Montreal, 2000), p.99.

<sup>58</sup> Butler, p.387.

<sup>59</sup> McDougall, p.206.

Plains tribes from 1870 onwards. Coupled with the debilitating epidemic were the continually decreasing buffalo herds. This fear on the part of White officials became even more pronounced after 1871 when peace was concluded between the Plains Cree and the Blackfoot, the two most feared tribes in the west. There was also some conjecture of an alliance with the powerful and warlike tribes in the United States such as the Sioux. Thus in the early 1870s the government had on its hands a possible unification of hostile nations who were plagued by poverty and starvation,<sup>60</sup> still reeling from smallpox, the loss of the buffalo, warfare, and the sale of their lands by the Hudson's Bay Company to the Dominion of Canada in 1870. Along with the HBC land transfer, the government assumed legal responsibility for the Native peoples who had traditionally been supported in times of need by relief efforts on the part of the Company. Although the HBC assumed as much of the burden as they could during the 1870-71 epidemic, their supplies were not adequate to cope with the widespread destitution on the Plains.

As early as 1871 Natives were petitioning the government for aid, as was the case with the letter from Fort Edmonton from Sweet Grass and other chiefs. He mentioned the scarcity of game, the anger over the sale of their lands and he requested that the government make "...provision for us against years of starvation. We have had a great starvation the past winter, and the small-pox [sic] took away many of our people, the old, young, and children."<sup>61</sup> He also requested further provisions in order to conclude a treaty and a delegation to meet with them for discussions. Yet this and most other requests for aid came from the future Treaty 6 area in the vicinity of Edmonton House, Fort Pitt,

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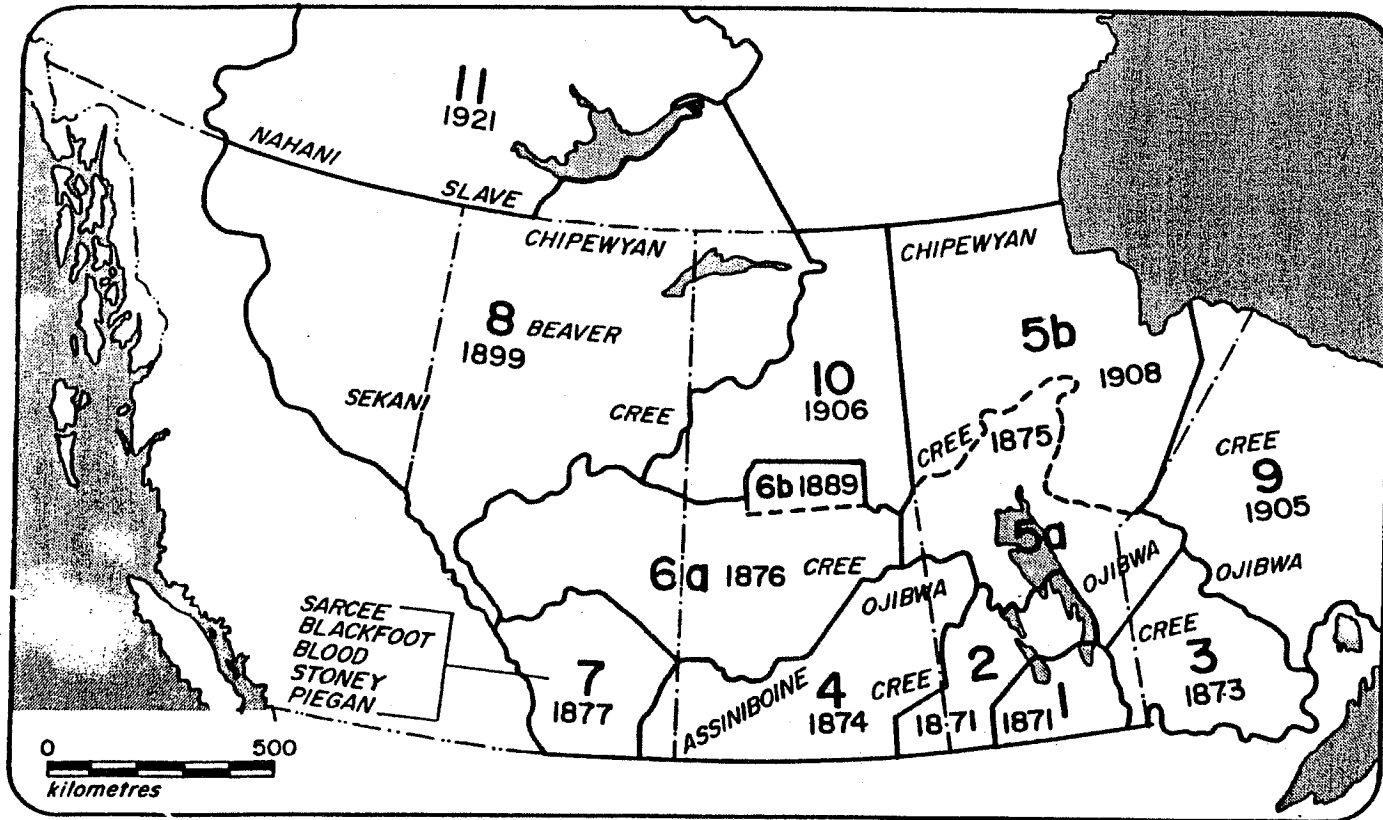
<sup>60</sup> Ray, et.al., Bounty and Benevolence, p.104.

<sup>61</sup> Alexander Morris, Treaties of Canada with the Indians of Manitoba and the North-West Territories, (Saskatoon, 1991), p.171.

<sup>61</sup> Ibid., p.95.

Carlton House, Fort à la Corne and Cumberland House. This is the same region shown in Map#6 (pg.82.) to have been the most affected by the epidemic. And it would be this same area which would make up the main geographical extent of Treaty 6 as shown on Map#7 (pg.88).

In fact, there is almost no mention of starvation or sickness /disease in any of the Treaty 4 negotiations of 1874. The only reference comes from a speech made by the Lieutenant-Governor to the Cree and Saulteaux in September, 1874. As well as preaching the benevolence of the Queen, and the positive aspects of treaty negotiations, the Governor also mentioned that he would give them agricultural implements and livestock as well as a reserve. This would enable the Natives to live better and grow in population rather than lose so many to sickness.<sup>62</sup> It is quite obvious that the sickness he is referring to is disease, particularly smallpox and possibly mumps because both would have been relatively fresh in his audience's minds. Other than this there is not much mention of disease, although, there are numerous references to provisions, money, equipment, land etc., given by the Queen to 'her Red children' in order to make their lives better. This security, if only in the way of food, would be more than enticing to anyone who had felt the fury of the 1870-71 smallpox epidemic and the ensuing starvation. Yet perhaps the most obvious reason for the lack of reference to disease and famine in Treaty 4 talks as opposed to Treaty 6 is because at the time of the latter talks the scenario for the Natives was much worse. Treaty 6 encompassed the area around Edmonton House, Carlton House, Fort Pitt, Fort à la Corne and Cumberland, all of which, especially the



**MAP #7** From: J. R. Miller, *Skyscrapers Hide the Heavens: A History of Indian-White Relations in Canada*. 2nd Ed. (Toronto: University of Toronto Press, 1991), p.166.



first three, were crushed by the epidemic. To complicate this problem, the buffalo had disappeared from this area by the 1870s but could still be accessed to a certain extent by the tribes of the Treaty 4 area. Thus, perhaps Treaty 6 was an outcome of this intense suffering and also the increasing hostility due to deprivation, sale of their lands, loss of the buffalo, and the decline of the fur trade.

Evidence of recent suffering on the part of the Plains Cree clearly exists as these issues were discussed in the treaty negotiations. In the negotiations at Fort Carlton in 1876 one of the Cree chiefs, Mistawasis, made a speech which addressed the many problems faced by the Plains Cree in 1876, especially the disappearance of the buffalo and the subsequent change in traditional Plains lifestyle. In addition, the chief referred to the epidemic of 1870-71: "We are few in numbers compared to former times, by wars and the terrible ravages of smallpox. Our people have vanished too. Even if it were possible to gather all the tribes together, to throw away the hand that is offered to help us, we would be too weak to make our demands heard."<sup>63</sup> Mistawasis, along with other Cree chiefs such as the elder Ahtakakup, believed that the only way the Cree people could survive was through accepting the treaty. Yet in this treaty they insisted on three things which were absent from any of the previous numbered treaties - the medicine chest and the famine and pestilence clauses. Traditionally the Natives received medicine or food in times of need from the HBC posts,<sup>64</sup> but since the government had taken over the HBC holdings in 1869-70<sup>65</sup> the Plains Cree wanted the government to assume the medical and sustenance responsibilities that the HBC had in previous decades. Morris, in Treaties of Canada with the Indians of Manitoba and the North-West Territories, makes frequent

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<sup>63</sup> Ray, et.al., Bounty and Benevolence, p.131.

<sup>64</sup> Ibid., p.9.

mention of the Cree's attempt to put in place these requests, and he states that the problem had been solved by the promise that "...in the event of a National famine or pestilence such aid as the crown saw fit would be extended to them, and that for three years after they settled on their reserves, provisions to the extent of \$1,000 per annum would be granted them during seed time."<sup>66</sup> Also, it was promised that a "...medicine chest will be kept at the house of each Indian agent, in case of sickness amongst you."<sup>67</sup>

Thus, it is clear that disease and the subsequent starvation played a crucial role in having these stipulations included in Treaty 6. Frequently, throughout the Treaty 6 negotiations smallpox was mentioned as well as famine as an after effect of disease and also the disappearance of the buffalo. Those who refused the treaty such as Big Bear, did so because they believed that the deal would not be enough to feed and clothe their people. Eventually starvation amongst his band would also compel him to adhere to the treaty.

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<sup>65</sup> Ibid., p.108.

<sup>66</sup> Morris, p.178.

<sup>67</sup> Ibid., p.218.

## *CONCLUSION*

In order reach an assessment on the role of the smallpox epidemic in Treaty 6 it may be helpful to ask the question: would the Plains Cree have come to the negotiation table if the epidemic of 1870-71 had not occurred? The answer is, perhaps eventually, but not in 1876. They were greatly weakened by the smallpox outbreak which came at a time when their main source of food, the buffalo, was already scarce on their lands. Their numbers declined drastically due to the epidemic and the ensuing starvation from which they were unable to rebound as in former times due to the loss of game. So eventually, because of the decline in buffalo and the ever encroaching White population the Plains Cree would have been forced to take treaty. However, this process was hastened by the crippling epidemic and the 40% decline in their population between 1863 and 1871. Through the Treaty the Plains Cree ostensibly gained the medical and sustenance security they needed in a time of rapid change. The government also had much to gain: the major item when it came to dealing with the Native population was that they supposedly neutralized a potential threat to national security. The cost of cementing a treaty with the warrior societies of the Plains would have been far less costly than a potential war with hungry and angry allied tribal groups in both Canada and the United States.

Epidemic disease has played a much more crucial role in Native-White relations than has usually been assumed. Historians and other scholars rarely address this issue

beyond mere demographics, and this is exemplified in the lack of literature on the role of disease in treaty negotiations and settlements. Studies have been conducted on epidemics on the Plains leading up to the treaties, but almost all end by 1850 and most remain in dissertation form. No study concentrates on the decades of the 1860s and 1870s aside from mere mention and only one scholar continues the study in 1880 after most of the treaties on the Great Plains had been concluded. The result is that authors have sidestepped the alarming 1870-71 smallpox epidemic which devastated the Plains tribes, especially the Plains Cree in the area of Treaty 6. The 1870-71 epidemic hit in a time when game, the buffalo in particular, was becoming scarce on the Plains trade with the HBC was declining, the land had been sold to the Dominion of Canada by the HBC and there continued a steady intrusion of non-Natives to the area. Thus, although epidemic disease was not the sole reason that the Plains Cree entered into treaty discussions, it was nevertheless a pivotal factor as it prevented them from posturing or indeed negotiating from a position of strength.

# BIBLIOGRAPHY

## UNPUBLISHED PRIMARY SOURCES:

### Provincial Archives of Manitoba

Alexander Morris Papers.

### Hudson's Bay Company Archives

Carlton House District Reports.

Carlton House Post Journals.

Correspondence Between D.A. Smith and W.G. Smith.

Correspondence Between J.H. McTavish and W. Armit.

Correspondence Between W.J. Christie and D.A. Smith.

Correspondence Outwards and Inwards (to London and from London).

Fort à la Corne Journal.

Fort Garry Post Journals

Fort Edmonton Post Journals.

Statements by the Reverend E.R. Young

### Saskatchewan Archives Board

Dr. R.G. Ferguson Papers. Volume of Research Notes (683 typed pages) re Tuberculosis Among the Plains Indians.

## PUBLISHED PRIMARY SOURCES:

Butler, William Francis. The Great Lone Land: A Narrative of Travel and Adventure in the North-West of America. Edmonton: M.G. LTD, 1968.

Cardinal, Harold and Walter Hildebrandt, Treaty Elders of Saskatchewan: Our Dream Is That Our Peoples Will One Day Be Clearly Recognized As Nations. Calgary: University of Calgary Press, 2000.

Erasmus, Peter. Buffalo Days and Nights. As told to Henry Thompson. Calgary: Glenbow-Alberta Institute, 1976.

McDougall, John. In the Days of the Red River Rebellion: Life and Adventure in the Far West of Canada, (1868-1872). Toronto: William Briggs, 1903.

McDougall, John. Pathfinding on Plain and Prairie: Stirring Scenes of Life in the Canadian North-West. Toronto: William Briggs, 1898.

Morris, Alexander. Treaties of Canada with the Indians of Manitoba and the North-West Territories. 1880 Reprint. Saskatoon: Fifth House Publishers, 1991.

The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France 1610-1791. Edited by: Reuben Gold Thwaites. New York: Pageant Book Company, 1659.

Young, Egerton Ryerson. By Canoe and Dog-Train Among the Cree and Salteaux Indians. London: Charles H. Kelly, 1892.

### *SECONDARY SOURCES:*

Crosby, Alfred W. Jr. "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America." **William and Mary Quarterly**, 33(1976): pp.289-299.

Crosby, Alfred W. Jr. The Columbian Exchange: Biological and Cultural Consequences of 1492. Connecticut: Greenwood Press, 1972.

Decker, Jody F. "Country Distempers: Deciphering Disease and Illness in Rupert's Land Before 1870," In: Reading Beyond Words: Contexts for Native History. Eds. Jennifer S.H. Brown and Elizabeth Vibert. Peterborough, Ont.: Broadview Press, 1996.

Decker, Jody F. "Tracing Historical Diffusion Patterns: The Case of the 1780-82 Smallpox Epidemic among the Indians of Western Canada," **Native Studies Review**, 4(1), 1988. pp.1-24.

Decker, Jody F. "We Should Never Be Again the Same People: The Diffusion and Cumulative Impact of Acute Infectious Diseases Affecting the Natives on the Northern Plains of the Western Interior of Canada 1774-1839," Unpublished PhD. Dissertation, York University, 1989.

Dobyns, Henry F. "Estimating Aboriginal American Population: An Appraisal of Techniques with a New Hemispheric Estimate," **Current Anthropology**, 7(1966): pp.395-449.

Dobyns, Henry F. Their Number Become Thinned: Native American Population Dynamics in Eastern North America. Knoxville: The University of Tennessee Press, 1983.

Dollar, C.D. "The High Plains Smallpox Epidemic of 1837-38," **Western Historical Quarterly**, 8(1), 1977. pp.15-38.

Hackett, Paul F.J. "'A Very Remarkable Sickness': The Diffusion of Directly Transmitted, Acute Infectious Diseases in the Petit Nord, 1670-1846," Unpublished PhD. Dissertation, University of Manitoba, 1999.

Hopkins, Donald R. Princes and Peasants: Smallpox in History. Chicago and London: The University of Chicago Press, 1983.

Lux, Maureen K. "Beyond Biology: Disease and its Impact on the Canadian Plains Native Peoples 1880-1930." Unpublished PhD. Dissertation, Simon Fraser University, 1996.

Lux, Maureen K. Medicine that Walks: Medicine, Disease, and Canadian Plains Aboriginal People, 1880-1945. Toronto: University of Toronto Press, 2001.

McGrath, Janet W. "Biological Impact of Social Disruption Resulting From Epidemic Disease," **American Journal of Physical Anthropology**, 84(4), 1991. pp.407-419.

Mandelbaum, David G. The Plains Cree: An Ethnographic, Historical and Comparative Study. Regina: Canadian Plains Research Center, University of Regina, 1979.

Miller, J.R. Skyscrapers Hide the Heavens: A History of Indian-White Relations in Canada. 2nd Ed. Toronto: University of Toronto Press, 1991.

Milloy, John S. The Plains Cree: Trade, Diplomacy and War, 1790-1870. Winnipeg: University of Manitoba Press, 1988.

Pfeiffer, Susan and Fairgrieve I. "Evidence From Ossuaries: The Effect of Contact on the Health of Iroquoians," In The Wake of Contact: Biological Responses to Conquest, Clark Spencer Larsen and George R. Milner, eds. New York: A John Wiley & Sons, Inc., Publication, 1994.

Ramenofsky, A.F. Vectors of Death: the Archaeology of European Contact. Albuquerque: University of New Mexico Press, 1987.

Ray, Arthur J. "Diffusion of Diseases in the Western Interior of Canada, 1830-1850," **The Geographical Review**, 66 (2), 1976. pp.139-57.

Ray, Arthur J. Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay, 1660-1870. 2nd Ed. Toronto: University of Toronto Press, 1998 (1974).

- Ray, Arthur J. "Smallpox: The Epidemic of 1837-38," **The Beaver**, 306 (2), 1975. pp.8-13.
- Ray, Arthur J., Jim Miller and Frank J. Tough. Bounty and Benevolence: A History of Saskatchewan Treaties. Montreal & Kingston: McGill-Queen's University Press, 2000.
- Snow, Dean R. and Lanphear, Kim M. "European Contact and Indian Depopulation in the Northeast: The Timing of the First Epidemics." **Ethnohistory**, 35(1), 1988. pp.15-33.
- Shoemaker, Nancy. American Indian Population Recovery in the Twentieth Century. Albuquerque: University of New Mexico Press, 1999.
- Stanley, George F. The Birth of Western Canada: A History of the Riel Rebellions. Toronto: University of Toronto Press, 1936.
- Starnam, William A. "The Biological Encounter: Disease and the Ideological Domain," **American Indian Quarterly**, 16(1992): pp.511-519.
- Taylor, John F. "Sociocultural Effects of Epidemics on the Northern Plains: 1734-1850," **The Western Canadian Journal of Anthropology**, 7(4), 1977. pp.55-81.
- Trigger, Bruce G. Natives and Newcomers: Canada's "Heroic Age" Reconsidered. Montreal & Kingston: McGill-Queen's University Press, 1985.
- Trimble, Michael K. "Epidemiology on the Northern Plains: A Cultural Perspective." Unpublished PhD. Dissertation, University of Missouri-Columbia, 1985.
- Wissler, Clark. "Population Changes Among the Northern Plains Indians," **Yale University Publications in Anthropology**, 1: (1936). Reprint. New Haven; Human Relations Area Files, 1970. pp.3-20.
- Wright, J. Leitch Jr. The Only Land They Knew: American Indians In The Old South. Lincoln: The University of Nebraska Press, 1999.