

AN IMPERIAL RESPONSE, THE PALLISER EXPEDITION OF BRITISH  
NORTH AMERICA FROM 1857 TO 1860: A COMPARATIVE  
EXAMINATION OF BRITISH EXPLORATION POLICY

by

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## ABSTRACT

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The author examines the shift in British exploration policy in North America at the end of the sixth decade in the 1800's. The major vehicle for developing the paper's thesis is the Palliser expedition. Since this shift in policy came at a critical time, a major concept of the paper is to show that the Palliser expedition marked a significant change in British exploration attitudes. To accomplish this point, the author compares prior British exploration techniques with those of the United States before the formation of the Palliser expedition. It is to be noted that the British were definitely lagging behind their American counterparts up to this point. The role of the Hudson's Bay Company, a dominant force in shaping British exploration policy, serves as the model for examining typical British exploration in North America prior to the Palliser expedition. The purpose of this comparison is to put the Palliser expedition in a proper perspective, both as to show how the expedition paralleled the exploration

developments in nineteenth century North America and as to the significance of the expedition in shaping future expeditions and developments in British North America.

The author intends to show that the Palliser expedition served much the same purpose as the Lewis and Clark expedition did in United States exploration history, in that it established the trend for scientific exploration of the western frontier of North America, only this time north of the 49th parallel. A final point of the thesis is to analyze the contributing role that the Palliser expedition had in determining the expansion policies for the settling and development of western Canada.

To answer these questions, the author relied on a variety of sources. The majority of the material came from official records of the Palliser expedition, which included correspondences, journal entries, charts, maps, and autobiographical works of expedition members. Much of the secondary source material came from prior research on the Palliser expedition by Irene M. Spry. The materials from which the comparisons were made came from records of the Hudson's Bay Company, journals of additional expeditions, and narratives or monographs of western Canadian history. Most of the charts, maps, and illustrations used in the paper were taken from the source Exploration-British North America: Papers Relative to the Exploration by Captain Palliser of That Portion of British North America

Which Lies Between the Northern Branch of the River  
Saskatchewan and the Frontier of the United States and  
Between the Red River and the Rocky Mountains.

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## CHAPTER I

## INTRODUCTION

The exploration of the North American West was a period filled with romance and adventure. From the diaries, journals, and records of explorers like Lewis and Clark to the myths, tales, and legends of the "mountain men" and fur traders, the extent, purpose, and organization of nineteenth century western exploration history has revealed itself. As historian William H. Goetzmann wrote in Exploration and Empire: The Explorer and the Scientist in the Winning of the American West, the nineteenth century was an age of exploration for both Americans and Europeans.<sup>1</sup> However, it was an age of exploration that did not occur on parallel stages between the United States and Great Britain, the two nations that held sway over exploration procedure. The United States dominated and set the stage for the developments in exploration techniques, concepts, and objectives. Starting with the Lewis and Clark expedition, new goals and objectives for exploration began to emerge. At the same time, the British, who controlled exploration in North-western America, relied on more traditional methods and

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<sup>1</sup>William H. Goetzmann, Exploration and Empire: The Explorer and the Scientist in the Winning of the American West (New York: W. W. Norton and Company, 1966), p. ix.

goals. Faced with growing American expansionism during the age of "Manifest Destiny", British dominance appeared to be on shaky ground. The time had come for a change in exploration attitudes. The Captain John Palliser expedition to British North America from 1857 to 1860 served as the break from traditional methods. Spurred by American expansionism, by political interests in Canada and Great Britain, and by desires for increased scientific data, the Palliser expedition became the basic foundation of western Canadian exploration, much in the same way that the Lewis and Clark expedition had shaped American western exploration.

To illustrate the significance of Palliser's expedition, the basic differences between American and British exploration techniques prior to 1857 need to be understood. In both cases, exploration served an imperial purpose. Each nation was concerned with expanding its physical size in order to enhance its wealth and power. Differences in techniques surfaced in the goals, objectives, and methods employed by the two governments. In most cases, the methods used to explore reflected the goals and objectives of the exploration.

Before 1857, one goal dominated British exploration policy, economics. Going back to its earliest involvement in exploration and colonization, the British were strongly influenced by the financial rewards of exploration. The mercantile theory, developed at the start of English

colonization, served as the major force in determining British exploration policy.<sup>2</sup> During this period, British exploration of northern and western North America was shaped and directed by the Hudson's Bay Company. Created by a royal charter in 1670, the Hudson Bay Company maintained British policy on exploration of the American northwest until the development of the Palliser expedition. Though the Company faced challenges to its domain, for the most part, all pertinent knowledge of the region was gathered, recorded, and held by the Hudson's Bay Company.

The exploration policy of the Hudson's Bay Company was motivated by the acquisition of furs. From 1670 until the late 1830's the beaver pelt served as the primary objective in determining Company field activities. From 1840 till its dominance over the area had ended, buffalo and other animal skins replaced the beaver as the major source of economic restitution. Since economic motives shaped its policy, the Hudson's Bay Company ignored many of the pertinent goals being adhered to by American explorers. Much of this was done deliberately. Company policy was such that it urged that any information which posed a threat to its control be kept secret.<sup>3</sup> Thus,

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<sup>2</sup>E. E. Rich, The History of the Hudson's Bay Company: 1670-1870, vol. 1 (Glasgow, Scotland: The University Press, 1959), pp. 4-5.

<sup>3</sup>John S. Galbraith, The Hudson's Bay Company As An Imperial Factor, 1821-1869 (Berkeley: University of California Press, 1957), p. 12.



descriptions of the land and its potential for agriculture were grossly distorted. As a result, most British politicians accepted unquestionably the picture that Rupert's Land<sup>4</sup> was nothing more than a "frost kingdom", unfit for both agriculture and settlement.<sup>5</sup> The major differences between British and American exploration policy were now very evident.

Though both nations had similar objectives, the seizure or acquisition of as much territory as possible, the basic methods contrasted drastically prior to 1857. Starting with the Lewis and Clark expedition in 1804, American exploratory techniques embarked on a new stage. Still politically motivated, United States expeditions of western North America encompassed scientific goals. In his orders to Lewis and Clark, President Thomas Jefferson made this point quite clear. Jefferson called for an expedition that would take accurate observations of longitude, latitude, and interesting points of geography. He also wanted the best water route for communication to the Pacific determined. Lewis and Clark were to make sure that any variations in compass readings be noted so that a map of the expedition's endeavors could be construed by an

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<sup>4</sup>Rupert's Land was the name given to the Hudson's Bay Company lands in British North America. The region extended from the land around Hudson Bay westward to the Rocky Mountains. The area was named for Prince Rupert one of the original corporate heads.

<sup>5</sup>Galbraith, Imperial Factor, p. 333.

experienced cartographer.<sup>6</sup>

President Jefferson's deep interest in science added additional scientific precepts to the expedition. Indian ethnology, geological reports, natural history, and botanical specimens became a major purpose of the expedition. Jefferson affirmed the extent of the scientific endeavors when he further ordered Lewis and Clark to astutely observe all Indian nations and their relations with one another. They were to especially note "their language, traditions, monuments, their occupations...and implements for these; their food, clothing, and domestic accommodations...."<sup>7</sup> Above all, Lewis and Clark were to study "the soil and face of the country." Jefferson cited specific items to be assessed. Included in his list were "...vegetable productions,...the animals of the country,...mineral productions of every kind, but particularly metals, lime-stone, pit-coal, and salt-petre; salines and mineral waters..." and a close analysis of pertinent meteorological, botanical, and natural history data.<sup>8</sup> As western historian Goetzmann saw it, "Though commerce in furs was to be a prime objective.

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<sup>6</sup>Thomas Jefferson to Meriwether Lewis, June 20, 1803, Thomas Jefferson Papers, Real 28, Series 1 (Washington, D. C.: The Library of Congress, 1974), March 18-August 31, 1803.

<sup>7</sup>Ibid.

<sup>8</sup>Ibid.

the explorers were to inquire into almost every phenomenon that might prove useful to settlers from the United States."<sup>9</sup>

American exploration continued to progress following the Lewis and Clark expedition. By 1853 technical advancements had reached the point of sending geographical surveys into the field to determine the best site for a trans-continental railroad. While this was going on below the 49th parallel, the recognized boundary between American and British territory, the basic trend in British exploration of North America was still dominated by the Hudson's Bay Company. As Goetzmann noted, "The Canadian explorer, a servant of the company, was conditioned or programmed, not to look for future settlement sites but to concentrate on the search for beaver."<sup>10</sup> As the United States continued to progress in its exploration techniques and, at the same time, solidify its hold on the western lands of North America, the British found their domination of the same region progressively slipping away.

Due to stagnation in their exploratory techniques, a result of Hudson's Bay Company supervision, the British were confronted with a dilemma. They could continue to rely on the Hudson's Bay Company for information on and control of Rupert's Land. The area had been the domain of the Company since 1670. From Hudson Bay, the region extended westward to the Pacific coast, northward along the

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<sup>9</sup>Goetzmann, Exploration and Empire, p. 6

<sup>10</sup>Ibid.

fringes of the Arctic, and south to the 49th parallel. American expansionism had already seized part of the domain when the Oregon boundary dispute ceded control of former British territory below the 49th parallel to the United States. The Hudson's Bay Company had controlled the Oregon Territory before the Treaty of 1846 turned governing of the region to the Americans. Based on this development, the British government had to make a choice that could possibly end their control over the rest of British North America. The choice was whether or not to continue with past trends and leave the fate of their imperial desires on North America in the hands of the Hudson's Bay Company.

The time had arrived for a new era in British exploration policy. With the development of the Palliser expedition, a basic change in exploratory techniques were formulated. It was time to catch up with American trends before it was too late. The Palliser expedition would travel to Rupert's Land and in the process the course of Canadian history was to be greatly influenced. The decision to send Palliser proved to be one that had a tremendous impact on British exploration policy, on the future of the Hudson's Bay Company, on the native population, and on the future expansion policies for the settling and development of western Canada.

## CHAPTER II

## ORIGINS OF PALLISER'S EXPEDITION

The year 1857 proved to be a crucial period in the growth of British exploration policy for the American west. Growing fears of American expansion north of the 49th parallel were evident. The recent Pacific Railroad Surveys and the move for statehood in the Minnesota Territory were two reasons for British alarm. Forces in Canada, led by George Brown and William McDougall, clamored for the opening of chartered lands to settlement. The question of whether to grant renewal of the Hudson's Bay Company charter was associated with the increased fears of American intervention and Canadian expansion. With all of these problems facing them, the British Ministry for the Colonies found themselves in a quandary. Information on the region, Rupert's Land, was at the best minimal. Before a thoughtful decision could be made, the British government realized the need to examine the territory. It was during this interval that Captain John Palliser stepped forward to propose his plan for a reconnaissance expedition of the British North American plains. For Palliser, his desire to return to the open prairies proved to place him in the right place for historical fame.

The basic concept for the Palliser expedition developed ten years before the actual expedition took to the field. It was not based on political or scientific means, but on the desire and whims of a member of the landed gentry in pursuit of his hobby, hunting. In 1848, Captain John Palliser, from Comeragh House near Dublin, Ireland, ventured to the United States to go on a hunting expedition on the western plains. Following the historic routes of Lewis and Clark up the Missouri River to the lands of the Mandan and Sioux Indians, Palliser hoped to hunt for the American buffalo, the grizzly bear, deer, and antelope.<sup>1</sup> He spent close to one year in the United States; much of the time was spent hunting and educating himself on the dangers of the plains and prairies. The hardships and dangers, Palliser faced, seemed to spur him on while a fondness for the savage land developed within him.<sup>2</sup> Above all, his adventures served as a vehicle bringing him in touch with prominent officials of the British government and scientific agencies.

Palliser's background provided the necessary groundwork which later enabled him to be a successful leader of a three-year venture. John Palliser was an example of a

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<sup>1</sup>John Palliser, Solitary Rambles and Adventures of A Hunter in the Prairies, 1853, reprint edition (Rutland, Vermont: Charles E. Tuttle Co., 1969), p. 7.

<sup>2</sup>Ibid., pp. xviii, 79.

nineteenth century Renaissance man. Born in Dublin, Ireland on January 29, 1817, Palliser epitomized the life of the wealthy gentry. Heir to his father's estate, Comeragh House, Palliser followed Colonel Wray Palliser's tradition by joining his father's military company, the Waterford Artillery Militia, in September of 1839. He served off and on again in the militia until he resigned his position in June of 1864. Thus, Palliser obtained the rudiments of a military background which aided in the development of his leadership skills.<sup>3</sup>

Palliser's education enhanced his Renaissance man image. Prior to attending college, Palliser was educated at home and abroad. Using his family library at Comeragh House, Palliser developed a love for the arts and music. Since his family was well travelled, spending time in Florence, Rome, and Heidelberg, Palliser became fluent in French, German, and Italian. His ability to speak French proved essential in both of his adventures in North America. It was an immense aid to his later leadership, since he was able to communicate with the Métis voyageurs,<sup>4</sup>

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<sup>3</sup>Irene M. Spry, ed., The Papers of the Palliser Expedition: 1857-1860 (Toronto: The Champlain Society, 1968), pp. xv-xvii.

<sup>4</sup>The Métis were the descendants of French Canadian and native American blood. Some were also of Scottish and Indian blood. Most of the Métis lived in the Red River Settlement region. The Métis were frequently used by the Hudson's Bay Company to carry or transport freight.

as well as with his botanical assistant, a Frenchman, Eugene Bourgeau.<sup>5</sup>

Palliser's formal schooling took place at Trinity College, Dublin. Though he never received a degree, something common for men of his position, Palliser achieved marks that ran from Superior in Astronomy to Mediocre in Logic and Mathematics. Of key importance to his future role with the expedition, Palliser attended the classes of Professor Humphrey Lloyd on terrestrial magnetism.<sup>6</sup>

Palliser's most important education took place in the field. His love for travel and sport prompted him to follow the route of many mid-nineteenth century adventurers, a hunting expedition on the North American plains. The spirit for adventure was common to the Palliser family. He and three of his brothers were prodigious travellers. Frederick Palliser spent time big-game hunting in Ceylon in 1845. Wray Richard Palliser, a naval commander, rescued a French lady from pirates in the China Sea. Edward Palliser followed Frederick's path and hunted in Ceylon. He also served with the 7th Hussars and was in Canada during the second Riel uprising of 1885 in Saskatchewan. The Riel uprising was one of the possible problems forecasted by John Palliser at the end of the Palliser expedition in 1860. More important, Palliser's brother-in-law, William Fairholme, while stationed in Canada with

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<sup>5</sup>Spry, ed., Palliser Papers, pp. xvii-xix.

<sup>6</sup>Ibid., pp. xxviii-xxix.



the 71st Highland Regiment of Foot, travelled to the "Grand Prairie of the Missouri" to hunt buffalo in 1840. His tales of adventure must have inspired Palliser to follow his path to the American Plains in 1847.<sup>7</sup>

During his eleven months of hunting in the unsettled American prairies and mountains of the Upper Missouri and Yellowstone Rivers, numerous essential developments, which led to the formation of an extensive scientific expedition, were taking shape. First, Palliser polished his skills as a hunter and explorer of the region. He obtained an education on the terrain, environment and weather, and on the Indians of the territory. Though his furthest trek northward took him to the Turtle Mountains, located along the 49th parallel, he gathered valuable knowledge on how to travel through a region which proved to be very similar to much of the land he later explored as leader of the Palliser expedition. His winter adventures, along the Yellowstone River, enhanced his ability to endure extreme hardships. These skills were frequently called upon during the years exploring British North America. Most important, Palliser acquired an understanding of Indian customs and tactics. His hunting trip exposed Palliser to the Blackfoot, a dominant tribe which roamed the open plains along both sides of the 49th parallel. Their prowess had altered prior excursions and expeditions into the domain

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<sup>7</sup> Irene M. Spry, "Captain John Palliser and the Exploration of Western Canada," The Geographic Journal, 125 (June, 1959): 161.

of Palliser's expedition.<sup>8</sup>

The second major development produced by his hunting excursion was an awareness of the need for the British to emulate American exploratory activities north of the 49th parallel. During his rambles, Palliser was exposed to the efforts of the American Fur Company. His association with this company convinced Palliser that there was a growing interest by the American Fur Company on the fur preserves of the Hudson's Bay Company.<sup>9</sup> In addition, while on his hunting ventures in 1848, Palliser had the fortune of meeting James Sinclair. Sinclair, a frequent employee of the Hudson's Bay Company, was a métis from the Red River locale. In their conversations, Sinclair informed Palliser of a mountain pass through the Rocky Mountains, further south than any known or recorded pass used by the Hudson's Bay Company. Sinclair had used the pass in 1841 while he guided a group of emigrants from Red River to the Oregon territory. Sinclair also hinted to Palliser that there was a better pass that he intended to try.<sup>10</sup>

Opportunity seemed to follow Palliser, since he had the chance to discuss the current developments in American exploration with a recent member of a United States survey.

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<sup>8</sup>Palliser, Solitary Rambles, pp. 85-99, 123, 134, 160, 265.

<sup>9</sup>Ibid., pp. 79-81.

<sup>10</sup>Palliser Journal, August 3, 1858 and August 17, 1858, Spry, ed., Palliser Papers, pp. 260, 268; see also, p. xlix.

On his return trip to Ireland, Palliser met Captain Cadwalader Ringgold, "who had distinguished himself so highly in the United States South Pacific exploring expedition" and who had recently partaken in a survey of the Pacific Northwest.<sup>11</sup> Filled with a new awareness of American pursuits in exploration and guided by a keen interest in public service, Palliser embarked on a series of steps that provided the elementary concepts for a plan to explore British North America.

Journeying to England in 1848, Palliser spent the next several years acquainting himself with scientists, visiting museums, and relating his hunting adventures to friends. Some of the scientists he came into contact with were W. W. W. Vaux, a numismatist at the British Museum, James Fitzgerald, a member of the antiquities department of the British Museum, and John Ball, a distinguished scientist with a special interest in botany and glaciology. In their conversations, Palliser exhibited an interest in exploration, for he frequently expounded on his true admiration for the exploration achievements of the noted British explorer, David Livingstone.<sup>12</sup> His recent acquaintances prodded Palliser to write a book about his hunting adventures in America. Putting one's adventures in America to words was a popular vehicle in the 1840's and 1850's.

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<sup>11</sup>Palliser, Solitary Rambles, pp. xix, 316.

<sup>12</sup>Spry, ed., Palliser Papers, p. xxi.

Two men who preceded Palliser to the American plains were Captain Frederick Ruxton and Sir William Drummond Stewart. Ruxton told of his accounts in a fictionalized work, Life in the Far West. Stewart's efforts were far more ranging. During his travels, Stewart was assisted by a young artist from Baltimore, Alfred Jacob Miller. Upon his return to Scotland, Stewart produced a novel of the American west entitled, Altowan.<sup>13</sup>

Convinced that it was the proper thing to do, Palliser wrote a book about his experiences. The work was a narrative of his adventures in the United States from his departure in 1847 to his return in 1848. The book, first published in 1853, was titled Solitary Rambles and Adventures of a Hunter in the Prairies. Based on the success of his book, filled with an increased interest in scientific exploration, and yearning for a return to the western prairies, Palliser took a major step at initiating the Palliser Expedition of British North America.<sup>14</sup>

Kindled with a desire to serve his government and at the same time fulfill his wish to return to the prairies he loved, Palliser embarked on a series of events that far exceeded his expectations. On November 10, 1856, Palliser

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<sup>13</sup>Goetzmann, Exploration and Empire, pp. 196-197.

<sup>14</sup>The Routledge Company printed four editions of the book, with 12,000 copies comprising the first edition. Its reprinting coincided with Palliser's membership to the Royal Geographic Society. Palliser, Solitary Rambles, p. xix; Spry, ed., Palliser Papers, see Bibliographical notes, p. 624.

was nominated for membership in the Royal Geographic Society by Professor Charles Grinfell Nicolay, the geographer. His membership was approved at the November 24th meeting of the Royal Geographic Society. Two weeks later the Society was busy examining Palliser's "Plan for the Survey of a large portion of North America." Sufficiently impressed with what it saw, the Society "referred (the plan) to the Expedition Committee with power to act at once."<sup>15</sup>

The Expedition Committee contained two men who would substantially aid the expedition. Sir Roderick Impey Murchinson, president of the Royal Geographic Society, chaired the committee. The other key figure was John Arrowsmith, a cartographer from the renowned Arrowsmith family, one of the leading cartographic firms in Europe. Arrowsmith's 1854 map of North America provided much of the basic information on the geography of the regions explored by the expedition.<sup>16</sup> Since the Expedition Committee was empowered to act at once, Palliser's request showed that his plan had evolved at a crucial time. At the January 12, 1857 meeting of the Royal Geographic Society, the Expedition Committee made its report. The recommendation followed a discussion on a paper by Thomas Banister which called for the construction of a railroad across British North America.<sup>17</sup> The Committee's decision called

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<sup>15</sup>Spry, ed., Palliser Papers, p. xxii.

<sup>16</sup>Ibid.

<sup>17</sup>Spry, "Palliser Exploration of Western Canada," Geographic Journal, p. 172, see note 41.

for sending an expedition into British North America to gather data on the physical features around the 49th parallel. The expedition was to spend two years in the field instead of one year which Palliser requested. The cost of the expedition was set at £5000. Based on the possible survey of the boundary line, the Expedition Committee felt it was necessary to notify "Her Majesty's Secretary of State for the Colonies on subject of the proposed Expedition."<sup>18</sup>

Pairing Palliser's Plan with Banister's presentation on the need for a British transcontinental railway, the appropriate timing of Palliser's appeal revealed itself. Events were moving in rapid succession which powerfully aided the formation of a scientific expedition. In his initial plan, Palliser called for himself to be the only British member of the expedition. Since Palliser intended to make a simple survey of the British prairies, he saw no need to ask for any technical assistants. The personnel deemed necessary to fulfill his survey were a guide and some métis voyageurs. All additional members were to be engaged in the explored territory. He also insisted that his expenses were to be paid by himself. However, the time called for more drastic steps. By 1857, there were more powerful groups showing an interest in the region. Palliser's plan became the springboard for a more sophisticated expedition, one which far exceeded Palliser's

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<sup>18</sup>Spry, ed., Palliser Papers, pp. xxii-xxiii.

own expectations.<sup>19</sup>

With the expedition starting to take shape, a series of predetermined goals were formulated. These goals changed as the governing body of the expedition changed. Realizing that it was giving approval to an expedition into chartered lands, the Royal Geographical Society approached the British government to seek their approval and assistance. In a letter, dated January 13, 1857, Murchinson requested financial backing from the Secretary of State for the Colonies, Henry Labouchere.<sup>20</sup> Murchinson's major reason for approaching the government was based on the United States' recent Pacific Railroad Surveys. Based on these surveys, Murchinson felt the need for a British survey on her North American territory.<sup>21</sup> In seeking the financial assistance of the British government, the question as to who would govern the expedition and what goals were to be fulfilled became a major point of discussion.

In his letter to Labouchere, Murchinson stated the Royal Geographical Society's goals for the expedition. The goals were divided into three distinct functions. First, the expedition was to examine the general region along the South Saskatchewan and if possible, a survey of the 49th parallel was to be pursued. Second, an examination of the

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<sup>19</sup>Ibid., pp. xxiv-xxv.

<sup>20</sup>Roderick Murchinson to Henry Labouchere, January 13, 1857, Spry, ed., Palliser Papers, pp. 495-496.

<sup>21</sup>Ibid., p. 497.

Rocky Mountains was to take place. The major goal was to find a pass, entirely within British territory, that was south of Athabasca Pass and that could be traversed by horses. Third, the expedition was to "report on the natural features and general capabilities of the country and to construct a map of the routes and surveys."<sup>22</sup>

The Royal Geographic Society's invitation to the British government came at a most opportune time. Two reasons prompted royal financial support for the enterprise. First, the efforts of John Ball proved essential. Being a personal friend of Palliser, Ball used his powers as Under-Secretary of State for the Colonies to sway Labouchere. Since Ball was a scientist, his presence assured that the expedition would have some scientific consequences. The second reason was more important. The British government was cautiously anxious to aid the expedition because of growing fears that it would lose the region to the United States.<sup>23</sup> Aided by these two conditions, the crown assumed control of the expedition in order to watch over its financial investment and to direct the formulation of goals that would resolve their fears of losing the area.<sup>24</sup>

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An examination of British fears is essential, since

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<sup>22</sup>Ibid., p. 496

<sup>23</sup>John Ball to Labouchere, January 20, 1857, Spry, ed., Palliser Papers, pp. 499-500.

<sup>24</sup>John Ball to Murchinson, March 6, 1857, Spry, ed., Palliser Papers, p. 505.



those concerns reveal the true reasons for the abrupt change in British exploration policy in North America. This change had a significant impact on numerous areas, but above all it brought John Palliser into the pages of western exploration history. The British had numerous reasons to justify their fears. Starting in 1778, a rivalry for control of North America appeared. In a pitch of Revolutionary War fever, Jonathan Mitchell Sewall proclaimed, "No pent-up Uttica controls your power, but the whole boundless continent is yours."<sup>25</sup> The rivalry intensified into the War of 1812 and later materialized in the Oregon boundary dispute, where the United States proclaimed her intentions of extending northward to the 54° 40' parallel. Though this crisis was solved by a compromise which extended the 49th parallel of the Treaty of 1818 to the Pacific coast, British fears were reaffirmed by a series of events in the 1850's: the Isaac Stevens Railroad Survey of 1853; the discovery of gold along the Fraser River in 1856; the rapid steps toward statehood for the Minnesota territory compounded by their desires on the Red River Settlement; and, the growing desires within Canada for expansion. The final point, which rested on all of the above developments, was the question of what to do with the Hudson's Bay Company charter since the charter placed the governing of the

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<sup>25</sup>J. Barltlett Brebner, Canada: A Modern History (Ann Arbor: The University of Michigan Press, 1970), p. 278.

region under the auspices of the Company.<sup>26</sup>

The United States Railroad Surveys raised two important questions. First, the location of an American transcontinental railroad near the 49th parallel could signify a resurgence of United States desires on British North America. Second, scientific data collected by the Isaac Stevens Survey challenged the basic ideologies on the climate and agricultural potential of the western prairies. Examining the Stevens survey showed why these two questions served to spark renewed British interest in North America.

The Stevens railroad survey was the result of the Pacific Railroad Survey bill passed by Congress on March 2, 1853. It called for a report to be submitted to Congress on the first Monday of January, 1854. The report was to produce information "on all the practicable railroad routes across the trans-Mississippi West to the Pacific Ocean." The Army Topographical Corps was placed in charge. Directions were twofold. First, each survey was to provide a reconnaissance of an area. Second, scientific data was to be collected. Since the surveys were to procure information on exact elevation, grades of the mountain passes, climate, and the resources of the regions travelled through, each survey party was composed of military and scientific personnel. The first to take to the field and the most

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<sup>26</sup>George Bryce: The Remarkable History of the Hudson Bay Company, 1904 reprint (New York: Burt Franklin, 1968), p. 337; Goetzmann, Exploration and Empire, p. 281; Rich, History of Hudson's Bay Company, 2:805; General Report, Spry, ed., Palliser Papers, p. 3.

elaborate of the surveys was the Issac Stevens Survey.<sup>27</sup>

The locale surveyed by Stevens was the proposed northern route lying between the 47th and 49th parallels from St. Paul, Minnesota to the Pacific. The exploratory party was divided into two groups. The western party was led by Captain George B. McClellan. Within his party were naturalist, Dr. Thomas Cooper, and scientist, Dr. George Gibbs. Stevens led the eastern party which included an artist, John Mix Stanley, geologist, Dr. John Evans, and naturalist, Dr. George Suckley. Stevens ordered all members of the expedition to assist in the collection of material for Natural History. Hoping to make his expedition the greatest scientific, topographic expedition since the Lewis and Clark expedition, Stevens gathered all pertinent information on the area. Some of the data was provided by Sir George Simpson, governor of the Hudson's Bay Company. Stevens embarked from St. Paul on June 6, 1853.<sup>28</sup>

In the field, the Stevens expedition enhanced the trends established by Lewis and Clark. Since the goals and objectives were more advanced than the Lewis and Clark expedition, new scientific data was collected. In addition, greater attention was given to the Indian tribes, since

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<sup>27</sup>William H. Goetzmann, Army Exploration in the American West, 1803-1863 (New Haven, Connecticut: Yale University Press, 1959), pp. 274-279.

<sup>28</sup>Goetzmann, Army Exploration, pp. 278-280; Goetzmann, Exploration and Empire, p. 279; Kent D. Richards, Issac I. Stevens: Young Man In A Hurry (Provo, Utah: Brigham Young University Press, 1979), pp. 99-101.

their friendship was important to the future of a trans-continental railway. In a meeting with a group of Assineboines along the Souris River in North Dakota, the Indians expressed concern about their future if the railroad came through and destroyed their basic subsistence, the buffalo. This same concern was frequently directed toward Palliser during the expedition's travels. Stevens' survey was characterized by numerous side reconnaissances, with one under Frederick Lander straying above the 49th parallel onto British soil. The potential of losing the area to the Americans was plain to all. Since the expedition had been well trained and aided by the Smithsonian Institution, the scientific data collected by the Stevens survey contributed to a new awareness of the region's capabilities.<sup>29</sup>

The Stevens survey findings were very imposing. Since he was the governor of the Washington Territory, it was not surprising that Stevens found the area favorable for a railway route. Nevertheless, there were significant observations made by the Stevens survey which challenged the existing views of the region. The major point made by Stevens was that the northern plains around the Great Bend of the Missouri (considered part of the Great American Desert), once thought to be unsuitable for settlement, was now

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<sup>29</sup>Goetzmann, Army Exploration, pp. 280, 307; Goetzmann, Exploration and Empire, p. 279; Richards, Issac I. Stevens, pp. 111-112, 114-115.

pronounced arable and fertile by the geological members. In reports and maps Stevens pointed out areas especially suited for agriculture and settlement. In conjunction with the geological report, the meteorological reports added to new insight on the region. The findings were evaluated by a leading climatologist at the Smithsonian, Lorin Blodget. Blodget's observations revealed that the climate was suitable for middle-latitude crops since the temperatures were "higher during the critical summer growing months than in the same latitudes farther east."<sup>30</sup>

In a series of reports which ended up in a major climatological study written by Blodget in 1857, he concluded that Rupert's Land from the 49th parallel to the upper Saskatchewan were very similar in geography and climate to the regions explored by the Stevens expedition. This view clearly contradicted all previous notions held by the Hudson's Bay Company. Blodget, sensing the need for additional scientific evidence to affirm his observations, expressed in his 1857 report that there was a definite need for a detailed scientific exploration of the area.<sup>31</sup> Faced with this new information and with the

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<sup>30</sup>Lorin Blodget, Climatology of the United States and of the Temperate Latitudes of the North American Continent (Philadelphia: J. B. Lippincott and Co., 1857), pp. 533-534; R. Cole Harris and John Warkentin, Canada Before Confederation: A Study in Historical Geography (Toronto: Oxford University Press, 1974), p. 281; Richards, Issac I. Stevens, pp. 101, 148-150.

<sup>31</sup>Blodget, Climatology of United States, pp. 533-534.

possibility of American intervention by the construction of a railroad, the British government's interest in the region quickened. In his January 13th letter to Labouchere, Murchinson aired his concern over recent American research activities so close to British territory. Murchinson stated, "The United States Government having lately ascertained the great features of the Rocky Mountains within their own territory, we should not be too far behind in extending through the conterminous part of British America, a research so interesting to Geographical Science, and so valuable in relation to many questions of increasing public importance."<sup>32</sup>

Additional British fears, which produced minor concerns, were generated by events which occurred in or very near to British territory in North America. One event was the gold rush along the Fraser River. The discovery of gold in 1856 and the affirmation of its potential in 1857 brought to mind what happened to the California Territory in 1848, when gold was discovered at Sutter's Mill. Small groups of Americans had already started a rush to the region during the first few months of 1857. During his expedition, Palliser frequently wrote about the American mining parties encamped around Hudson's Bay Company posts during the winter months. A second concern reflected developments

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<sup>32</sup>Murchinson to Labouchere, January 13, 1857, Spry, ed., Palliser Papers, p. 497.

near the Red River Settlement.<sup>33</sup>

The rapid growth of the Minnesota Territory posed a threat to British interests. Some English and Canadian leaders believed that once farmers had appropriated land in Minnesota, the flow of migration would continue northward into British territory. By the mid-1850's, the Red River economy was increasingly becoming tied to Minnesota and the American railway system. In 1857, the United States postal service had been extended to Pembina, a town just south of the 49th parallel. The communication system of the Red River region with Pembina was an example of the growing potential of losing the area to the United States. Even after the Palliser expedition had started, events showed that the possibility of losing the expanse to the United States were on the rise. In 1858, Anson Northrup started a steamship service on the Red River, running from Pembina up to Fort Garry in the heart of the Red River Settlement. At the same time a railroad line had been constructed running from St. Paul to the headwaters of the Red River. Coupled with these events, a political movement appeared in 1859 calling for the annexation of the Red River Settlement. The movement was led by James Wickes Taylor, a Minnesota

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<sup>33</sup>General Report, Spry, ed., Palliser Papers, p. 3; see also, Hector's Journal, March 20, 1859, Spry, ed., Palliser Papers, pp. 388-391.

land speculator.<sup>34</sup>

The desire to annex the Red River Settlement as part of the Minnesota Territory was not new in 1859. During the 1840's, a group led by Father Georges-Antoine Belcourt, an American Catholic missionary at Pembina, believed that sections of Rupert's Land were in the proper position for annexing due to the inability of the Hudson's Bay Company to deal with the free trade challenge issued by Minnesota traders. Though this movement quieted, the longing for the Red River Settlement did not disappear. Under Taylor's leadership, the move to annex segments of Rupert's Land resurfaced. Relying on speeches and writings, Taylor proclaimed that it was Minnesota's "Manifest Destiny" to seize control of Rupert's Land. Taylor based his claims on the growing commercial ties between Minnesota and the Red River Settlement.<sup>35</sup> Historian, Irene M. Spry notes that the British were on the verge of losing the region to the United States. In an article, "Captain John Palliser and the Exploration of Western Canada," Spry questions this point: "Would the encroaching spirit of the United States swallow up the Prairies of British North America as it had swallowed

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<sup>34</sup>Brebner, Canada: A Modern History, p. 252; Galbraith, Imperial Factor, pp. 335-336, 356-357; Gerald S. Graham, A Concise History of Canada (New York: The Viking Press, 1968), pp. 136-137.

<sup>35</sup>William E. Lass, Minnesota: A Bicentennial History (New York: W. W. Norton and Company, Inc., 1977), pp. 92-95.



up the Oregon Territory?"<sup>36</sup> If something was not done soon, the British faced the possibility of losing the general area to either the United States or to a new challenge from within her own empire, the Confederation of Canada.

Canadian interests in Rupert's Land first surfaced in the late 1840's. Much of the early agitation against the Hudson's Bay Company's control of the region came from two newspapers, the Globe and the North American, edited respectively by George Brown and William McDougall. Both men envisioned a greater Canada. Initially this was a view held only by Upper Canada. However, a variety of events and conditions developed during the 1850's which increased Canadian concern for Rupert's Land. To start, agricultural development in Canada found itself pressed for land. Though Canada had plenty of land, much of the land was unfit for farming or of poor quality. One reason for this was that frontier settlement had expanded to the Laurentian barrier or the Shield. Thus, the open prairies were perceived as a promised land to the Canadians. The growing efforts of potential settlers were soon coupled with additional clamorings, calling for Canadian action to seize control of Rupert's Land.<sup>37</sup>

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<sup>36</sup>Spry, "Palliser and Western Canada", Geographic Journal, p. 159.

<sup>37</sup>\_\_\_\_\_, Canada One Hundred: 1867-1967 (Ottawa: Canada Year Book, Handbook and Library Division Dominion Bureau of Statistics, 1967), p. 17; Galbraith, Imperial Factor, pp. 334-338; Harris and Warkentin, Canada Before Confederation, p. 180.

Three developments spurred Canadian expansionism in the mid-1850's: the railway boom, the discovery of gold along the Fraser coupled with a possibility of additional gold pockets along the Saskatchewan, and Canadian desires to annex the Red River Settlement before it was lost to the United States. As early as 1851, Allan McDonnell of Toronto proposed a plan for constructing a transcontinental railroad. By 1856, paced by American railway interests below the 49th parallel, Philip Vankoughnut, president of the Executive Council, declared that "Canada should stretch across the Hudson's Bay Company lands to the Pacific and that this vast territory should be bound together by a railroad passing entirely through British territory."<sup>38</sup> However, before a railroad could be built, more accurate knowledge on Rupert's Land needed to be acquired. Thus, on September 3, 1856, Sir Edmund Head, Governor-in-Chief of Canada realizing the need for a reconnaissance, urged that "the Queen's Government ought without delay to obtain full and accurate information as to the Geography and moral condition of this vast country."<sup>39</sup> The news of gold discoveries only served to hasten Canadian desires for expansion and railway development. Based on developments

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<sup>38</sup>Galbraith, Imperial Factor, pp. 336, 357-359.

<sup>39</sup>Head was a personal family friend of Palliser's father and he may have had some influence on instigating Palliser's idea for an expedition. See also, Spry, ed., Palliser Papers, p. lxxii, n. 2.

near the Red River Settlement, south of the 49th parallel, time for drastic Canadian action had arrived.

The appearance of American soldiers in the Minnesota Territory along the British-American border in 1856 denoted further American interest along the frontier. In response to American military occupation near the border, the Canadian government sent 120 men of the Canadian Rifles to Red River Settlement in 1857.<sup>40</sup> At the same time the Canadians started preparations for carrying out the call for a reconnaissance of Rupert's Land made by Sir Edmund Head. Hastened into action due to the recent occurrences, the Canadian government started the formation of their own expedition of the western frontier. Known historically as the Hind-Dawson expedition, it took to the field one month after the Palliser expedition and paralleled its British counterpart. One of its key similarities was that it emphasized the new criteria for exploration, the gathering of scientific data. As preparations were being made, only one roadblock stood in the way of Canadian or British efforts to explore and expand their hold on Rupert's Land, the Hudson's Bay Company.

The solution favored by some of the Canadians and British was the removal of the chartered rights of the Hudson's Bay Company. In Canada, a group of Toronto businessmen, interested in controlling the fur industry, petitioned the Canadian government on April 15, 1857 to use

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<sup>40</sup>Rich, Hudson's Bay Company, 2:804.

"all constitutional means to break the monopoly and incorporate Rupert's Land into Canada." Weakening economic conditions brought on by the Crimean War, high wheat prices, and growing migration from Canada to the American prairies increased the pressures for action in 1857.<sup>41</sup> Thus, historian Spry notes, "Bitter controversy raged over the privileges of the Hudson's Bay Company in the area and over future policies."<sup>42</sup> Numerous questions of what to do filled the air in both Canada and Great Britain. Could the Hudson's Bay Company effectively rule the area faced with growing expansionism by the United States? What type of exploration of Rupert's Land was needed or was one needed at all? Finally, should steps be taken by the British to settle the region, or should it be left to Canada? Faced with these questions, the British government dealt with its last concern, an examination of the fate of the Hudson's Bay Company, its policies, practices, and knowledge of the general domain, before final organization and deployment of an expedition was to be considered.

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The last element, which convinced Her Majesty's Government to give approval and support to the Palliser expedition, took place in London from February through early May of 1857. In accordance with the wishes of

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<sup>41</sup>Galbraith, Imperial Factor, p. 335; Rich, Hudson's Bay Company, 2:803.

<sup>42</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 153.

Labouchere, a Select Committee of the House of Commons was created to hold a hearing on evidence dealing with the current state of the Hudson's Bay Company. The Select Committee was to follow up its hearings with a list of recommendations. The committee was comprised of 19 members who listened to the testimony of 25 witnesses. Their major aim was to determine "the state of those British possessions in North America which are under the administration of the Hudson's Bay Company or over which they possess a License to Trade."<sup>43</sup> In general, the Committee's basic objective was to determine the ability of the Company to rule the region, to examine the current trading trends and political fitness of the Red and Saskatchewan Valleys, and to discover whether the prairies were fit for agricultural settlement.<sup>44</sup> Prior to the formation of the Select Committee, conflicting views were held by members of the British Government.

In July of 1856, Labouchere turned down a petition which requested that direct British rule be established for the Red River Region. Labouchere responded by saying that the "establishment of such a government was simply impossible under present circumstances."<sup>45</sup> However, at the same time that he pondered the fate of the petition,

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<sup>43</sup>Galbraith, Imperial Factor, p. 341.

<sup>44</sup>W. L. Morton, Manitoba- A History (Toronto: University of Toronto Press, 2nd ed., 1967), p. 95

<sup>45</sup>Galbraith, Imperial Factor, p. 339.

Robert Lowe, a vice-president of the Board of Trade, toured Canada to gather data on the economic possibilities of a railroad as well as the dispersion of public lands. Lowe recommended that "Canada should annex Rupert's Land....but in such event the Company would be entitled to just compensation for the loss of its privileges."<sup>46</sup> The Select Committee played an integral role in clearing up the dilemma. As the Committee gathered evidence, it became clear that the Company's hold on Rupert's Land was weakening. The established view that Rupert's Land was a "frost kingdom" seemed about to collapse.<sup>47</sup>

Though the Committee listened to 25 people, the testimony of two men provided the bulk of the evidence leading to the final recommendations. Representing the Hudson's Bay Company was its major administrator in Rupert's Land, Sir George Simpson. Combining previous statements made by Simpson with his official testimony, it was evident that the Company maintained conflicting views on the general make-up and potential of Rupert's Land. Simpson's basic stand was that the region was unfit for settlement and that the charter should be extended for another term.<sup>48</sup>

Leading the opposition was William Henry Draper, a Canadian who was a former leader of the Liberal-Conservative Party

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<sup>45</sup>Galbraith, Imperial Factor, p. 339.

<sup>46</sup>Ibid.

<sup>47</sup>Ibid., p. 333.

<sup>48</sup>Morton, Manitoba- A History, p. 95

and currently the Chief Justice of Canada West. Draper called for extending the Canadian frontier to the Rocky Mountains. A man of vision, Draper called for a transcontinental railroad. However, he reported to the Committee that he was not sure whether Canada "could establish sufficiently easy communication with Red River or whether she could effectively govern that territory." His testimony aided the Palliser expedition, since he concluded his statements with a call for a series of surveys to ascertain a true picture of the region.<sup>49</sup>

Though Simpson held that the area was unfit for settlement, the Select Committee continually questioned him on the validity of the statement. Referring to comments made in his journal and later his narrative of his journey around the world, the Committee pointed out that Simpson frequently noted areas suitable for settlement. In describing the area around Red River, a selection from Simpson's 1841 Journal stated, "From Red River Settlement, until we reached the Red Deer River, the country is exceedingly beautiful presenting all the varieties of prairie and woodland, hill and dale, intersected by rivers and lakes, well adapted, as far as soil admits for pastoral and agricultural settlements."<sup>50</sup> In further questioning, the Committee obtained evidence that

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<sup>49</sup>Rich, Hudson's Bay Company, 2:797.

<sup>50</sup>Glynwdr Williams, ed., London Correspondence Inward from Sir George Simpson, 1841-1842 (London: The Hudson's Bay Record Society, 1973), pp. 52-53.

the Red River settlers were increasingly being drawn toward the United States through communication and trade dealings.<sup>51</sup> The discrepancies between Simpson's testimony with his earlier views was based on recent conditions in the fur industry. The Hudson's Bay Company realized that the great fur trade era was coming to an end. Simpson held this view on the fur trade industry since the 1840's and rationalized his belief that agriculture was needed to add stability to the region. In 1856, he urged the Hudson's Bay Governor-General John Shepard to sell the Company's rights on Rupert's Land before the British government became cognizant of the fact that they were worthless.<sup>52</sup>

Though the Select Committee challenged his testimony on the suitability of the land, Simpson's efforts to keep the true picture of the fur industry hidden proved successful. The Committee's final report reflected this view. It recommended that the "Company's license for monopoly of trade should be continued in the northern region, where there was no likelihood of settlement, but that a Crown Colony be created in Vancouver Island and on the Pacific Slope, and that the way be left open for the acquisition of the valley of the Red and Saskatchewan by Canada."<sup>53</sup> Thus as the Select Committee met, an imperial response was being made by the British government. Approval of the

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<sup>52</sup>Brebner, Canada: A Modern History, p. 251; Galbraith, Imperial Factor, pp. 338-339; Rich, Hudson's Bay Company, 2:794-795.

<sup>53</sup>Morton, Manitoba: A History, p. 95.



Palliser expedition came as a result of the impending problems in Rupert's Land and the need to clarify the true conditions of that domain. On March 28, 1857, Palliser was informed that he would command the expedition that he had first proposed four months earlier. As he soon found out, the expedition that he would lead was one that had grown immensely in comparison with the original plans.<sup>54</sup>

Since Palliser was not an experienced explorer, the question of why the Expedition Committee chose Palliser as its leader seems puzzling. As the expedition's organization developed, it became clear that both scientific and political goals were the foundation of the endeavor. Palliser was not a scientist. Nevertheless, his background showed that he was one of the few people qualified to lead the expedition. Palliser provided two essential prerequisites. To accomplish the political goals of the expedition an impartial observer was deemed necessary. Since Palliser was not politically affiliated or tied in any way with the Hudson's Bay Company, he was considered to be the ideal observer. More important, Palliser's prior travels to the prairies provided the field experience needed to command an expedition through an area that required the body to live off the land from time to time and to travel through perilous Indian lands.<sup>55</sup> To see that Palliser was

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<sup>54</sup>H. Merivale to Palliser, March 28, 1857, Spry, ed., Palliser Papers, p. 510.

<sup>55</sup>Ball to Labouchere, January 20, 1857, and H. Merivale to Murchinson, April 1, 1857, Spry, ed., Palliser Papers, pp. 499-500, 511-512.

an appropriate choice, a look at passages in his book, Solitary Rambles, showed that the British government had made the right decision.

Palliser showed that his earlier experiences were essential in producing skilled leadership. As the expedition moved across Rupert's Land, Palliser's leadership became a major factor for the expedition's success. In his book, Palliser had shown that he was fearless, resourceful, and a skilled hunter. From his excursions across the prairies, he came to write these words of advice to future travellers: "Beyond your guns and horses with their several appurtenances, you will absolutely require nothing on the prairies but your knife, flint, and steel, and pipe, an iron ladle for melting lead, a tin mug and two iron kettles- one for cooking, the other for boiling coffee- with iron covers to them which will respectively do for frying meat and for roasting coffee. Before leaving the Settlements, provide yourself with lead, tobacco, sugar, salt, needles, awls, strong thread, and shoemakers wax, and also one or two dressed skins for making or mending moccasins; and with this equipment, you may pass from Independence to the Pacific Ocean."<sup>56</sup>

From his adventures, Palliser knew what equipment, clothing, and weapons were needed for travels in the prairies. He even learned how to make his own buckskin outfit in a time of need. More important, Palliser's

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<sup>56</sup>Palliser, Solitary Rambles, p. xii.

contact with the Plains Indians gave him insight on how to deal with them, a point which definitely impressed the government officials. Combine these elements of experience with Palliser's fluency in French, which enabled him to converse with the métis guides and voyageurs, choosing Palliser as the expedition's leader proved to be a sound decision in favor of the British government; but more importantly, it brought Palliser to the stage of exploration history.<sup>57</sup>

With government approval of the expedition, the face of the expedition took on new objectives. The solitary adventure that Palliser had planned had taken on much larger perspectives. Instead of leading a one-man sojourn into the prairies of British North America, Palliser found himself leading a multi-faceted venture which required him to oversee the operations of a lengthy exploratory survey, and to fulfill a series of detailed political and scientific objectives. Before the expedition could leave, formulating the scientific and political objectives became the major priority.

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<sup>57</sup>Palliser, Solitary Rambles, pp. viii-xii; Spry, "Palliser and Western Canada," Geographic Journal, p. 157; Murchinson to Labouchere, January 13, 1857, Spry, ed., Palliser Papers, p. 496.

## CHAPTER III

## ORGANIZATION OF THE PALLISER EXPEDITION

Official approval for the Palliser expedition came on March 23, 1857 when the Treasury granted £5000 requested by the Royal Geographic Society for the proposed two-year expedition. However, it was clearly indicated that the Colonial Office had assumed the administrative leadership for the expedition.<sup>1</sup> John Ball's position as Under-Secretary for the Colonies assured that the scientific objectives addressed by Murchinson to Labouchere in the January 13th letter were to be maintained. To fulfill the scientific aspects of the expedition, leading experts in special fields aided in the picking of qualified personnel. Clarification of scientific goals required an in depth study of all prior information and knowledge on Rupert's Land. Finally, with the government's assumption of the administrative leadership, specific goals, dealing with political and economic objectives, were formulated and added to the expedition's itinerary.

Based on the recent developments of the past decade, the political-economic goals reflected the major concerns

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<sup>1</sup>James Wilson to Labouchere, March 23, 1857, Spry, ed., Palliser Papers, pp. 509-510.

discussed during the Select Committee hearings. First, the expedition was to determine the possibility for settlements in the Red River-Saskatchewan Valley and the value of the land for agricultural production. Second, Palliser was to determine the best route for immigrants to the Red River Settlement. Third, the expedition was to determine if a railroad could be constructed across the Rocky Mountains and through the region on both sides of the mountains. Fourth, the expedition was to ascertain if the Hudson's Bay Company should remain in control as the governing body of Rupert's Land.<sup>2</sup>

With basic objectives developed, the second concern of the expedition's leaders dealt with an assessment of the lands to be explored. In his original plan, Palliser had proposed to travel westward from the Red River Settlement to the Oldman River, just south of the 50th parallel. From this point, Palliser intended to travel south-southeasterly to the eastern edge of the Rocky Mountains. He then proposed to examine two possible passes, within British territory, through the Rocky Mountains, concluding his westward travels along the 49th parallel until he reached the Gulf of Georgia.<sup>3</sup> His itinerary included an examination of only a small section of Rupert's Land. With the new scientific

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<sup>2</sup>Keith Morris, The Story of the Canadian Railway (London: William Stevens Limited, 1916), p. 23; Rich, Hudson's Bay Company, 2:806.

<sup>3</sup>Spry, ed., Palliser Papers, p. xxiii.

goals set by the Royal Geographic Society and the political-economic goals of the Colonial Office, the area to be explored increased tremendously.

The region selected for exploration now ran from Lake Superior or the 89° longitude westward to the 115° longitude and it extended from the 49th parallel northward to the 55th parallel. Since the Hudson's Bay men had travelled their domain for years, knowledge of the general region was well documented except for the area below the South Saskatchewan or Bow River. This expanse had been abandoned by the Hudson's Bay Company because of hostile Indians within the region. Though much of the information provided by the Hudson's Bay men dealt only with the fur-producing ability of the land, the Company proved to be a viable asset to the expedition on two stages: geographic knowledge, and field operations.<sup>4</sup>

Assistance of the Hudson's Bay Company fell on the shoulders of Sir George Simpson. Since Simpson was in London for the Select Committee hearings, Palliser had the opportunity to meet with him and obtain Simpson's advice. Simpson's book, Journey Around the World, gave an excellent account of the region around the North Saskatchewan from Fort Edmonton to Simpson Pass near the 50° 30' latitude. Simpson provided insight on the other possible passes through the Rocky Mountains that were not marked on current

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<sup>4</sup>Blakiston Report, Spry, ed., Palliser Papers, p. 550; see also Spry, ed., Ibid., p. lv.

maps. In his book, Simpson referred to James Sinclair's endeavor leading a group of Red River settlers to the Columbia. He noted that Sinclair crossed the mountains "through a still more southerly pass than we pursued not only shorter but better in every respect, so that even with families, and encumbered with baggage as they were, they effected the passage of the mountains with infinitely less labour and in a shorter time than we accomplished it."<sup>5</sup> The pass that Simpson was alluding to was the same pass that Sinclair later told Palliser about during their meeting while Palliser was on his hunting excursion in 1848.

Besides providing information on possible mountain passes, accounts from Simpson's book aided in developing a rudimentary understanding of the agricultural ability of the land. Though he proclaimed the land unfit for settlement during his Select Committee testimony, Simpson had referred to its potential as early as 1826, when he suggested that agriculture should come to Rupert's Land, especially the raising of livestock.<sup>6</sup> Even though he balked at revealing too many of the specific details about Rupert's Land in person, Simpson's best assistance came in the field. Travelling ahead of the expedition on his annual inspection, Simpson left orders at Company houses or posts to help the

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<sup>5</sup>Williams, ed., Correspondence from Simpson, 1841-1842, pp. 52-53.

<sup>6</sup>Brebner, Canada: A Modern History, p. 251; Rich, Hudson's Bay Company, 2:806; Palliser to Ball, March 5, 1857, Sproy, ed., Palliser Papers, p. 502.

expedition, especially in providing supplies. As the expedition trekked through British North America, they found manpower, supplies, and horses awaiting them at Hudson's Bay Company facilities. Simpson's assistance lasted until the expedition's last season. At this time, he gave orders that no additional credit was to be given due to late payment for previous purchases.<sup>7</sup>

Another aid, in providing information on the regions to be explored, was Palliser's membership in the Royal Geographic Society. Here, Palliser's association with John Arrowsmith proved valuable. Arrowsmith furnished Palliser with all his maps of British America. These maps were filled with information gathered from the travels and explorations of David Thompson, Dr. John Rae, Peter Fidler, and a variety of other field expeditions in service to the Hudson's Bay Company. The most recent Arrowsmith map was constructed in 1854. The map exhibited the current knowledge of the land then available. Palliser used this chart as the base map for the expedition.<sup>8</sup> Keeping with their past practice of withholding key information, the map had a few blank spots. Also, the Company kept the materials of Thompson and Fidler out of the expedition's hands, claiming that Fidler's material was at Hudson Bay House in Canada and that Thompson's material was in family

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<sup>7</sup>Palliser Journal, September 5, 1859, Spry, ed., Palliser Papers, p. 479.

<sup>8</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 153.



hands.<sup>9</sup> Nevertheless, upon completion of the expedition, Dr. Hector reported, "The 1854 Arrowsmith map gave very correctly on whole great general features of the region explored."<sup>10</sup> Since detailed information from the Hudson's Bay Company was scarce, the Expedition Committee relied upon other sources for information.

Besides the 1854 Arrowsmith map, the expedition used three other maps for assessing the regions scheduled for exploration. The three maps were David Thompson's survey map of Lake of the Woods, Captain Henry Walsey Bayfield's map of the Kaministikwia River, and Sir John Franklin's Perch Lake map from his Narrative of a Second Expedition to the Polar Seas in the Years 1825, 1826, and 1827. All three maps were used to provide insight on the regions explored during the expedition's inauguration. However, a major void was created when Palliser was unable to obtain the rest of Thompson's private maps. As mentioned, the Canadian government was forming its own expedition and had purchased Thompson's maps from his family. Thus there were blanks on part of the areas, especially along the 49th parallel from 101° to 112° west latitude. Any additional geographic material was gathered as the expedition travelled

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<sup>9</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 153.

<sup>10</sup>Spry, ed., Palliser Papers, p. xliv, n. 1

through British North America.<sup>11</sup>

Knowledge of the climate was collected from three sources. Hudson's Bay Company records served as a foundation to build upon. Much of their information promoted the "frost kingdom" concept. More recent information from a neutral observer was furnished by General John Henry Lefroy. Lefroy had conducted a series of magnetic observations from 1842 to 1844 in Rupert's Land. Also in London for the 1857 Select Committee hearings, Lefroy provided his expertise on both the environment of the regions and on his magnetical observations.<sup>12</sup> The last chunk of climate data came as a by-product of the Stevens Survey of 1853. The meteorological report prepared by Blodget challenged many of the preconceptions on Rupert's Land.

Blodget's report maintained that the area west of the 98th meridian, extending north from the 43rd parallel to the 58th parallel, was completely suitable for settlement. He compared the region to Western Europe which was influenced by the Gulf Stream. Blodget claimed that the thermal lines rose much higher in latitudes west of the Great Lakes. He also contended that there was plenty of rainfall due to the abundance of "grassy Savannas." Blodget deduced that the summer season was long enough to produce the grains of

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<sup>11</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 154; Palliser Journal, June 12, 1857, Spry, ed., Palliser Papers, p. 47; Spry, ed., Ibid., p. xxiii.

<sup>12</sup>Spry, ed., Palliser Papers, pp. xxix-xxx, see also biographical notes, p. 600.

cool temperate latitudes, such as wheat and corn. However, he realized that more precise data was needed to verify his views. Palliser's expedition, using the information provided by Blodget, served to corroborate Blodget's contentions.<sup>13</sup>

As Palliser gathered information for the expedition, steps were taken to recruit the necessary scientific personnel. In order to fulfill the expedition's goals, the Royal Geographic Society, with Ball's assistance, requested five qualified people: a leader, two scientific assistants, and two engineers.<sup>14</sup> All five men were chosen and trained in England. As its leader, Palliser's responsibilities included commanding the field work and taking astronomical observations. Finding the four remaining assistants required alterations to the original list of personnel. Initially, the two scientific assistants were to be a naturalist-geologist and a Draughtsman-surveyor. Through the efforts of botanist Sir William Hooker, a leading member of the Royal Geographic Society, a botanist replaced the Draughtsman-surveyor as a scientific assistant.<sup>15</sup> Additional problems occurred in selection of the engineers. Hoping to save money, the Royal Geographic Society sought

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<sup>13</sup>Blodget, Climatology of the United States, pp. 529-532.

<sup>14</sup>Murchinson to Labouchere, January 13, 1857, Spry, ed., Palliser Papers, p. 496.

<sup>15</sup>Ibid., p. 496; see also p. xxv.

volunteers from the Royal Engineers. Instead, the expedition ended up with a volunteer from the Royal Artillery and a recruited civilian school teacher.<sup>16</sup>

The naturalist-geologist picked by Murchinson was James Hector, M.D. A recent graduate of the University of Edinburgh, Hector appeared as an unlikely choice based on his degree. However, Hector had spent much of his schooling taking classes on geology, natural biology, and botany. His only previous experience in exploring came from taking long field trips during vacations.<sup>17</sup> In essence, Hector was much like Palliser, an impartial observer with hidden talents. Though only twenty-three at the expedition's start, Hector became a seasoned and accomplished traveller, admired by both peers and potential foes, the Plains Indians. According to Peter Erasmus, one of Hector's field assistants, Hector was "admired and talked about by every man that travelled with him and his fame as a traveller was a wonder and a byword among many a tepee that never saw the man."<sup>18</sup>

Besides serving as doctor and naturalist-geologist, Hector became the major cartographer and illustrator of the expedition. Facing the problem of a limited budget, the expedition failed to hire an experienced artist or a

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<sup>16</sup>General Report, Spry, ed., Palliser Papers, p. 40.

<sup>17</sup>Spry, ed., Palliser Papers, pp. xxxiii-xxxiv.

<sup>18</sup>Peter Erasmus, Buffalo Days and Nights, as told to Henry Thompson (Calgary: Glenbow-Alberta Institute, 1976), p. 75.

photographer. Nevertheless, Hector proved to be an adept field illustrator-cartographer. His illustration of the Roche Percee rock formations was just one sample of this ability. A key feature of the maps made by Hector was the small profile illustration at the bottom of the map which showed the elevation of the mapped area.<sup>19</sup>

The second scientist picked was Eugene Bourgeau. Bourgeau's services as botanist were procured by Sir William Hooker. Bourgeau was the most experienced member of the expedition, as well as being its oldest at forty-four. Though French, he had performed before as a botanist for the British Royal Botanic Gardens and for John Ball. Bourgeau's experience resulted from botanical excursions in Spain, North Africa, Algeria, and on the Canary Islands. Even though the prairies of British North America were in an area of unfamiliar weather and terrain for Bourgeau, his experience made him an excellent addition, enhancing the scientific value of the expedition.<sup>20</sup>

According to contemporaries, Bourgeau was one of the best at preparing dried plants. His talents enabled him to expertly complete his work and at the same time, instill a compulsive desire to finish their assigned tasks into his fellow scientists. In a letter to Hooker, Palliser assessed Bourgeau's performance: "He has been a most active

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<sup>19</sup>Spry, ed., Palliser Papers, p. xxxvii; see also Appendix B-2.

<sup>20</sup>Ibid., p. xxviii.

energetic and excellent companion, always hard at work in which his whole soul seems engrossed and no matter what his fatigues or privations may be his botanical specimens are always his first care."<sup>21</sup> Bourgeau's only shortcoming was that he could not speak English, but this was overcome by Palliser's fluency in French.<sup>22</sup>

The only volunteer for the expedition was Lieutenant Thomas Wright Blakiston of the Royal Artillery. Blakiston saw the expedition as a way to professional and personal advancement. His personal reason for joining the expedition was to fill a desire to travel, hopefully making a name for himself in the process.<sup>23</sup> For more valid reasons, Blakiston requested membership in the expedition based on his experience. Serving in the Royal Artillery, Blakiston specialized in the art of magnetical observations. Though he was only a volunteer, Blakiston came highly recommended. Both General Edward Sabine, a leading student of terrestrial magnetism, and Lefroy concurred that Blakiston would be a great addition as the magnetical observer.<sup>24</sup>

Blakiston contributed substantially to the expedition's scientific consequences. As magnetical observer, he collected a variety of data from his daily observations which

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<sup>21</sup>Ibid., p. xxvi, n. 2 and p. xxvii, n. 6.

<sup>22</sup>Ibid., p. xxviii, n. 4.

<sup>23</sup>Ibid., p. xxxi.

<sup>24</sup>Ibid., p. xxix.

were recorded in charts. His fondness for natural history provided additional prestige to the expedition's scientific collections. Since ornithology was a personal love, Blakiston collected specimens of birds which he later sent back to the London Zoological Society.<sup>25</sup>

The final scientific position was filled by the selection of John William Sullivan. His services were obtained through Dr. Edward Purcel of Palliser's former school, Trinity College of Dublin. Sullivan's duties were to assist Palliser in astronomical observations and to act as secretary for the expedition. Sullivan's background made him the perfect assistant to Palliser. He was a teacher at the Greenwich Natural School, which required an excellent mathematical foundation. He was also capable of speaking French. Since he was secretary, one of his duties was to transcribe Bourgeau's letters into English before they were sent back to England. A task not easily done since Bourgeau frequently misspelled words.<sup>26</sup>

Although only twenty-one, Sullivan contributed more than expected. According to Palliser, Sullivan took most of the astronomical observations, recording them on the charts. He also provided a map, made from his examination

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<sup>25</sup>Ibid., p. xxx; see also Appendix C-2.

<sup>26</sup>H. Merivale to Palliser, March 28, 1857, Spry, ed., Palliser Papers, pp. 510-511; Spry, ed., Palliser Papers, pp. xxxv-xxxvii, see n. 2, page xxxvii.

of the 49th parallel through the British Kootenay Pass.<sup>27</sup> Thus, the Expedition Committee collected a formidable corps to carry out an innovative exploration of British North America. As decided, all additional members of the expedition were hired in the field by either Simpson or by the expedition's leaders.

Of the sixty-plus voyageurs hired by the expedition, two men proved to be very valuable, James Beads and Peter Erasmus. Beads joined the expedition when it started at Sault Sainte Marie. He served the expedition throughout its entirety. An experienced Hudson's Bay Company man, Beads was provided by Simpson. Erasmus joined the expedition in the second year. He became a valuable guide and assistant to Hector. For a frontiersman's perspective on the Palliser expedition, Erasmus recorded much of his personal experiences with the expedition and his views on its members in a book entitled, Buffalo Days and Nights.<sup>28</sup>

With the scientific membership settled, the Expedition Committee turned to its last two tasks before the expedition took to the field, assembling scientific equipment and firming up precise scientific and political objectives. Because of the expedition's scientific importance, the Committee concurred on a detailed list of materials. The

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<sup>27</sup>General Report, Spry, ed., Palliser Papers, p. 36; See Appendix B and C-2.

<sup>28</sup>Erasmus, Buffalo Days, pp. 52-60; Spry, ed., Palliser Papers, pp. xxviii, see also biographical notes, p. 595.



materials list called for the following items: Three pocket chronometers and one observing watch; three sextants and three artificial horizons; Four prismatic compasses; A Spring Steel yard; one small astronomical telescope; Magnetic instruments; Four barometers and four spare tubes; two Aneroid barometers; two cases of Thermometers, six in each case; two Spirit thermometers for very low temperatures; one maximum and one minimum thermometers and two boilers.<sup>29</sup> Besides these materials, a few thousand sheets of paper were brought for pressing of botanical specimens and a portable microscope was provided for field inspection of specimens.<sup>30</sup> Since daguerreotype photographic equipment was now available, Palliser requested one for the expedition. However, Labouchere felt that it was too expensive, making it the only piece of equipment denied to the expedition. Its value may have been questionable due to the rough terrain, but without a skilled artist or a photographic device, a tremendous void was created. Hence, Hector's maps and illustrations became the only pictorial record of the expedition.<sup>31</sup>

With the scientific apparatus completed, the next major step was the development and assessment of the expedition's directives. While the rest of the members

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<sup>29</sup>Minutes of North America Expedition Committee, March 16, 1857, Spry, ed., Palliser Papers, pp. 506-507.

<sup>30</sup>Spry, ed., Palliser Papers, p. li, n. 6.

<sup>31</sup>Ibid., p. lxii.

discussed the expedition's proceedings, Blakiston travelled to Kew Observatory to refine his skills on magnetic observations.<sup>32</sup> Preparations in London required a clear understanding of the field orders, since the itinerary and field operations of each member were clearly determined by the Expedition Committee.<sup>33</sup> The orders, which resulted from assessing the complex issues facing the British government, were divided into two categories. One set dealt with the specific functions of each member. The second set of general orders proclaimed the activities of the entire group during field operations. Palliser's expedition was plainly taking on a close resemblance to the scientific surveys of the United States. Learning from their efforts associated with the Palliser expedition, the British quickly caught up with their American counterparts.<sup>34</sup>

The general orders were divided into three groups: itinerary, group functions, and the basic responsibilities of its leader, Palliser. The general itinerary called for the expedition to explore three routes. First, an examination of the "route and country between Fort William on Thunder Bay to Red River Settlement" was the highest

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<sup>32</sup>Ibid., p. lvii.

<sup>33</sup>Labouchere to Palliser, March 3, 1857, Spry, ed., Palliser Papers, p. 5.

<sup>34</sup>Don W. Thomson, "The 49th Parallel," The Geographic Journal, 134 (June, 1968):209-214.

priority.<sup>35</sup> Second, Palliser was to examine "the Southern prairies from the Assineboine River to the headwaters of the South Saskatchewan," being very attentive to the land features of this region that was previously deemed unknown.<sup>36</sup> Third, an inspection of the Rocky Mountains was ordered to see if there existed a "more practicable pass than Athabasca Pass." Athabasca Pass was too far north, making it useless in any railway program.<sup>37</sup> Most of the expedition's time dealt with the fulfillment of the last two phases of the itinerary.

The composite group orders instructed the members to observe anything that would extend scientific knowledge on Rupert's Land. Just like the Lewis and Clark expedition, each member of the Palliser expedition was to note both the geology and natural history of any region traversed. Included in their observations, the expedition was to cite "the nature of the soil, its capabilities for agriculture, the quantity and quality of timber, and any indications of coal or other minerals." The height of the land was to be determined and "recorded with utmost accuracy." Observing Hector's maps showed how accurately this was accomplished. Finally, all assigned members were to keep written accounts of their observations, with the results embodied in a journal. As orders developed, the similarity of the

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<sup>35</sup>General Report, Spry, ed., Palliser Papers, p. 4.

<sup>36</sup>Ibid., p. 4.

<sup>37</sup>Ibid.

Palliser expedition with the Lewis and Clark expedition became more evident, to the point that the expedition epitomized the accomplishments of Lewis and Clark within British territory.<sup>38</sup>

The journal ordered by the Expedition Committee was kept by Sullivan. Sullivan collected the field notes of the members and compiled them into a journal during winter camp.<sup>39</sup> At times, Palliser failed to maintain daily field notes, but as the expedition matured through experience so did the keeping of records. The group was also ordered to forward any important information back to England at any opportune time. Faced with impending decisions, the British government valued any data which would aid in the formation of more educated judgements. The material was to be specifically addressed to "Her Majesty's Principal Secretary of State for the Colonies, Downing Street, London."<sup>40</sup>

Palliser's general instructions called for three things. All three tested his leadership ability, especially the first directive. First, Palliser administrated the work of his four scientific assistants, each of whom received his specific orders separately from different individuals. Second, Palliser was responsible for compiling

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<sup>38</sup>Ibid., pp. 4-5.

<sup>39</sup>Spry, ed., Palliser Papers, p. lviii, n. 4.

<sup>40</sup>Labouchere to Palliser, March 31, 1857, Spry, ed., Palliser Papers, p. 5.

any data connected with the political side of the expedition. His major concern was carrying out a feasibility study on the effectiveness of the Hudson's Bay Company, emphasizing a study of their ability to govern Rupert's Land. Third, Palliser was ordered to complete the assigned tasks in two years. However in Murchinson's letter to Labouchere on January 13, 1857, Murchinson hinted that a third year might be needed. As it turned out, Palliser travelled from the expedition's winter camp, at the end of the first season, back to New York to send a message requesting a third year. Eventual approval came, but it started a series of debates on the necessities for additional expenditures. The debates on the financial aspects of the expedition plagued Palliser and the British government for years. Criticism of the initial budget, set at £5000, was voiced; even though costs were always minimized. Yet, the results of the first season's endeavors convinced the government to grant the extension for a third year.<sup>41</sup>

To ease criticism, the Royal Geographic Society argued that the expedition was an attempt to parallel the American Railroad Surveys. Based on this, they felt that the final costs were justified. Just comparing Palliser's expedition with only one of the American surveys, the Stevens Survey, verified the point held by the Royal Geographic Society.

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<sup>41</sup>Labouchere to Palliser, March 31, 1857, Spry, ed., Palliser Papers, pp. 5-6; Murchinson to Labouchere, January 13, 1857, Spry, ed., Palliser Papers, p. 407, see also p. li.

The Stevens Survey took one year to complete at the cost of \$48,000, exceeding its original budget by \$8,000. Based on the rate of exchange of the period, the British pound sterling was just under a five dollar to one pound ratio, meaning that one British pound was equivalent to five dollars. Thus, Palliser's three seasons of exploratory work had a final outlay of \$65,000 compared to Stevens' \$48,000 for one season's work. Based on this comparison, the efforts of the Palliser expedition were well worth the investment.<sup>42</sup>

Palliser's specific orders asked that he do the following. In case of his inability to carry on the expedition's leadership, Palliser was to turn over his duties to either Dr. Hector or Lieutenant Blakiston.<sup>43</sup> Though he never left the expedition permanently, Palliser left Hector in command during his trip to New York. Though this was for only a few months, it was the beginning of a chain-of-command crisis that eventually led to Blakiston's resignation. The dilemma, created over the chain-of-command, was one of the many tests that Palliser faced as leader of the expedition.<sup>44</sup>

Palliser was further commanded by Labouchere to "avoid

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<sup>42</sup>Goetzmann, Army Exploration, pp. 275, 305; Murchinson to Labouchere, January 13, 1857, Spry, ed., Palliser Papers, p. 497.

<sup>43</sup>Labouchere to Palliser, March 31, 1857, Spry, ed., Palliser Papers, p. 5.

<sup>44</sup>Blakiston Report, Spry, ed., Palliser Papers, p. 556.

all risk of hostile encounters with any native tribes by selecting a line of route with utmost caution."<sup>45</sup> Besides the completion of his orders, Palliser used his time either assisting his companions or by hunting for food to maintain the food supplies for critical times when stocked food ran low. Yet, critics of the expedition claimed that Palliser simply wanted the expedition sent to fulfill his desires to hunt buffalo. Though he did spend time hunting, it was a secondary element, done either to collect natural history specimens, replenish food reserves, or minimize costs. Based on the journal entries, it was apparent that the Palliser expedition was not a hunting expedition to the Grand Prairies.<sup>46</sup>

The rest of the expedition's duties were handled by the scientific assistants. Hector's orders entailed the specifics of how to deal with the collection of fossils. Murchinson directed Hector's activities. As the expedition progressed, Hector became the most active member, working year round in the field.<sup>47</sup> Blakiston received his special orders from General Sabine. Since Sabine had travelled as astronomer on two previous exploratory voyages to the Arctic in the 1820's, he had become one of England's

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<sup>45</sup>Labouchere to Palliser, March 31, 1857. Spry, ed., Palliser Papers, p. 6.

<sup>46</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 158; Spry, ed., Palliser Papers, p. lvi.

<sup>47</sup>Palliser to Secretary of State for Colonies, July 8, 1860, Spry, ed., Palliser Papers, pp. 540-541.

leading proponents of magnetic observations.<sup>48</sup> Sabine's instructions called for Blakiston to make hourly magnetic readings during winter months. Blakiston was assisted by the other members in fulfillment of the orders. Included with the observations, Blakiston was to record the "magnetic declinations, air temperatures, weather conditions, and barometer and hygrometer readings."<sup>49</sup>

Bourgeau's directions came from Sir William Hooker. Besides being the botanical collector, Bourgeau was charged with taking thermometer readings at various stations. A major part of these observations were temperature readings of the soil during winter months at depths of two to three feet.<sup>50</sup> Bourgeau was also assigned to observe the types of trees, fertility of soil, scarceness of vegetation, and plant diseases.<sup>51</sup> The development of explicit orders aided the expedition's efficiency. The final result, which produced immense rewards, was a well-organized and highly successful expedition.

The last set of orders dealt with the initial objectives of the itinerary. As the expedition prepared for departure from England, the group was divided into two parties. Scheduled to leave on April 4, 1857, the first

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<sup>48</sup>Spry, ed., Palliser Papers, see Biographical Notes, p. 608.

<sup>49</sup>Blakiston Report, Spry, ed., Palliser Papers, p. 552.

<sup>50</sup>Bourgeau's Final Summing Up, Spry, ed., Palliser Papers, pp. 588-589.

<sup>51</sup>Ibid.



party was led by Palliser, who was assisted by Hector, Bourgeau, and Sullivan. Based on their orders, the group was to travel to Sault Sainte Marie and pick up two birch canoes and 16 voyageurs. Once Palliser reached the western side of Lake Superior, an examination of the Kaministikwia River was the first objective. Here, Palliser was ordered to locate and to determine the navigability of the White Fish River.<sup>52</sup> While finalizing their plans in England, the first group suffered its first setback: Palliser suddenly took ill with typhus fever. It appeared that he would not be able to go with the expedition; however, destined to make his mark on exploration history, Palliser recovered in a couple of weeks. Their departure was delayed until May 16, 1857. Before leaving, the group suffered one true loss. Losing an election in Limerick, Under-Secretary of State for the Colonies, John Ball decided to resign from political office in May of 1857. Hence, the expedition's most ardent supporter in the Colonial Office was gone. It was the start of numerous political problems that muted the immediate success of the expedition.<sup>53</sup>

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<sup>52</sup>Bryce, Remarkable Hudson Bay Company, p. 338; Exploration-British North America: Papers Relative to the Exploration by Captain Palliser of That Portion of British North America which lies between the Northern Branch of the River Saskatchewan and the Frontier of the United States: and Between the Red River and Rocky Mountains (London: George Edward Eyre and William Spottiswood, 1859 and 1860; reprint; New York:Greenwood Press, 1969), in source, Palliser to Labouchere, June 10, 1857, p. 4; Labouchere to Palliser, March 3, 1857, Spry, ed., Palliser Papers, p. 3.

<sup>53</sup>Spry, ed., Palliser Papers, pp. lvi-lvii.

The second party consisted of Blakiston and the magnetic instruments. His orders called for him to travel with the equipment from London to Canada on the Hudson's Bay Company's work boat, The Prince of Wales. Blakiston's destination was York Factory, located at the mouth of the Hayes River in Hudson Bay. Sailing from England on June 21, 1857, Blakiston reached York Factory seven weeks later. From here, he was ordered to carry the instruments onto Carlton House. During his travels in the interior, Blakiston was to examine the transportation routes for their viability. Located just west of the confluences of the two Saskatchewan, on the southern bank of the North Saskatchewan, Carlton House or Fort Carlton was the winter quarters for the expedition's first season. Blakiston reached Fort Carlton on October 23rd and by November 12th he had started his observations.<sup>54</sup>

The individual expedition first proposed by Palliser had dramatically changed. Challenged by growing threats to its domain in British North America, the British government seized control of the Palliser expedition. By that act a new imperial response had emerged. In an effort to gain essential data, to assist in the decision making process, the British government had prompted a new direction in exploration policy. Emphasizing the collection of

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<sup>54</sup>Blakiston Report, Papers Relative to Palliser, pp. 30-31.

scientific information, such as agricultural feasibility, meteorological readings, geological and geographic ventures to locate minerals and mountain passes, and determine the best emigration route, the Palliser expedition served as a break from past explorations into British North America. Coupled with the political objectives, the expedition's commencement initiated a new age in British exploration policy.<sup>55</sup>

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<sup>55</sup>General Report, Spry, ed., Palliser Papers, pp. 40-41.

## CHAPTER IV

## THE PALLISER EXPEDITION IN THE FIELD

By examining the Palliser expedition's field work, the various hours, efforts, and challenges faced by its members are evident. The expedition's endeavors provided moments of reward and failure. Though the leadership ability of Palliser was frequently tested, pre-expedition organization promoted an air of confidence. Repeated encounters with Indians, a chain-of-command crisis with Blakiston, acquisition of supplies and horses, and alterations in routes were some of the problems confronted by Palliser and his associates. As each member became accustomed to the new environment, performance of duties and dealing with problems were expertly handled. Because of its ability to adapt to challenges, the expedition accomplished most of its predetermined objectives. At the end of the three years of work, the expedition's efforts produced a prodigious amount of data that far exceeded the original expectations. Each member contributed to the overall success. A major product of the expedition's labors was a series of comprehensive reports. These reports were published as The Parliamentary Papers of 1859, 1860, 1863, and 1865. They were compiled from letters,

field information sent by dispatch, or from the journals and field notes amassed by the expedition's members.<sup>1</sup> From these materials, a detailed chronological study of the three seasons of exploration can be analyzed. Thus, an examination of the expedition's data affords the student of western exploration a look at the scientific and political consequences of the Palliser expedition.

After recovering from its initial setback, Palliser's bout with typhus, the first party left England aboard the Arabia on May 16, 1857. Palliser's party reached New York on May 28th. Here, they experienced problems with the Custom House. Custom's officials wanted to examine all of the baggage, which would have forced Palliser to unpack all the cases containing the barometers, thermometers, and other sensitive items. Unwilling to cooperate, Palliser was rescued from this delay by two Americans, Mr. Harmon Pompelly and Mr. Charles Wheatly. Both men had a background in geology and mineralogy. Realizing the importance of keeping the instruments tightly packaged, they used their influence to sway the officials at the Custom House. Palliser's equipment was allowed through unexamined.<sup>2</sup> After this small delay, Palliser's party departed for Detroit on June 2nd. Four days later, the party boarded the United States steamer, the Illinois. Their destination

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<sup>1</sup>Spry, ed., Palliser Papers, see Notes on Sources; Published Material, pp. 613-614.

<sup>2</sup>Palliser Introduction, May 31, 1857, Spry, ed., Palliser Papers, p. 41.

was Sault Sainte Marie, the designated location for picking up the expedition's canoes and voyageurs.<sup>3</sup>

Reaching Sault Sainte Marie on June 10, 1857, Palliser procured the services of 16 voyageurs and two canoes.<sup>4</sup> Most of the voyageurs were métis of Iroquois and French blood. The one key crew member to join the expedition at this time was James Beads, an experienced Hudson's Bay Company servant. Beads' services were transferred to the expedition throughout its entirety. His experience as a veteran traveller throughout Rupert's Land proved to be a valuable asset.<sup>5</sup> With acquisition of the voyageurs and canoes completed, Palliser first exhibited his leadership ability. Instead of departing from Sault Sainte Marie in his canoes, Palliser convinced Captain Wilson of the Illinois to take his party across Lake Superior to Isle Royale. Palliser realized that the ice floes on Lake

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<sup>3</sup>Palliser Journal, June 6, 1857, Spry, ed., Palliser Papers, p. 42.

<sup>4</sup>During their travels, Palliser's expedition used four modes of transportation. On their first leg of travel, canoes were used to take them to Fort William and on to Fort Garry located on the Red River. The first two canoes were the large "canot du maitre", used to transport large amounts of freight. They were 24 to 30 feet long and about four to five feet wide. The expedition used the smaller "canot du norde" during their examination of the waterways from Fort William to Fort Garry. From Fort Garry, the expedition relied on the use of horses, carts, and wagons. During winter months, the members used either snowshoes or dog sledges for travel; see Palliser to Labouchere, July 16, 1857, Papers Relative to Palliser, pp. 5-6; See also, Spry, ed., Palliser Papers, pp. 90, 93, 183, 185.

<sup>5</sup>Palliser Journal, June 10, 1857, Spry, ed., Palliser Papers, p. 44.

Superior would slow down and endanger their trip to Fort William.<sup>6</sup> While crossing Lake Superior, the observation of numerous ice floes confirmed Palliser's decision. The party disembarked near Isle Royale. From here, they canoed across Lake Superior into Thunder Bay. Entering the Kaministikwia River, Palliser arrived at Fort William (Thunder Bay) on June 12, 1857.<sup>7</sup>

With the main body in British North America, the expedition officially started its work on June 13, 1857. Palliser's explorations took place during both summer and winter months. The bulk of the expedition's work was done over the three summer seasons. The first summer season dealt with an examination of the "southeastern portion from Lake Superior to the elbow of the South Branch of the Saskatchewan, and from the British boundary line or the 49th parallel to Fort Carlton (near modern day Prince Albert), in latitude 50°52' North and longitude 106°13' West."<sup>8</sup> Winter explorations were primarily the efforts of Dr. Hector. During the first winter, Hector travelled by dog sled from Fort Carlton to Fort Edmonton. Taking 13 days, the trip covered a distance of 393 miles.<sup>9</sup> From

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<sup>6</sup>Ibid., p. 45.

<sup>7</sup>Palliser Journal, June 12, 1857, Spry, ed., Palliser Papers, p. 48.

<sup>8</sup>Palliser to Secretary of State for Colonies, July 8, 1860, Papers Relative to Palliser, p. 21.

<sup>9</sup>Hector Journal, January 10, 1858, Spry, ed., Palliser Papers, p. 200.

Edmonton, he journeyed to Rocky Mountain House at the eastern base of the Rocky Mountains. Geological readings were the main objective of this trip. While taking his readings, Hector noted that there were coal beds around Rocky Mountain House.<sup>10</sup> Retracing his trail, Hector finished the first season's effort back at Fort Carlton on April 5, 1858.

During the expedition's second summer, Palliser spent time probing the region between the North and South Saskatchewan Rivers and examining the Rocky Mountains for available passes within British territory. Upon Palliser's orders, three branch surveys were mounted to inspect the terrain. Palliser commanded an examination of the Rocky Mountains around the 50th parallel. Dr. Hector was ordered to explore the section above the 50th parallel and below the 53rd parallel where Athabasca Pass was located. Lieutenant Blakiston's directions called for a survey of the Kootenay Passes. His job was to determine if either pass was located in British territory. Upon completion of each branch survey, the groups were to meet at the second season's winter quarters, Fort Edmonton.<sup>11</sup>

The second winter season saw Hector, Sullivan, and Palliser involved in exploration. Hector inspected an area around the Athabasca River. Following the river into

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<sup>10</sup>Hector Journal, January 15, 1858, Spry, ed., Palliser Papers, p. 209.

<sup>11</sup>Palliser to Secretary of State for Colonies, July 8, 1860, Papers Relative to Palliser, p. 21.



the mountains, he traversed the Athabasca Pass and returned back to Fort Edmonton.<sup>12</sup> Palliser and Sullivan examined the region south of Fort Edmonton. Spending much of their time hunting buffalo to replenish food reserves, they came across a Blackfoot hunting party. Palliser and Sullivan camped with them during most of their winter trip. Because of this, both men were able to observe and report on Blackfoot ethnology.<sup>13</sup>

The third season's work started in June of 1859. Leaving Hector to gather supplies and to wait for additional orders, Palliser and Sullivan headed southeast through Blackfoot country. According to Palliser, this area had been recently considered "too dangerous to be accessible." Friendships made during the previous winter season greatly aided the success of these travels. Palliser reached an area close to the most western point examined during the 1857 season. From here, Palliser's party travelled westward along the "country between the South Saskatchewan and the British boundary line." Nearing the Rocky Mountains, Palliser divided the members into three groups to carry out branch surveys. Hector returned to examine the passes discovered by his efforts in 1858. Sullivan was ordered by Palliser to follow the 49th parallel westward to see if a

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<sup>12</sup>Hector to Secretary of State for Colonies, July 8, 1860, Papers Relative to Palliser, pp. 25-26.

<sup>13</sup>Palliser to Secretary of State for Colonies, May 23, 1859, Papers Relative to Palliser, pp. 6-7.

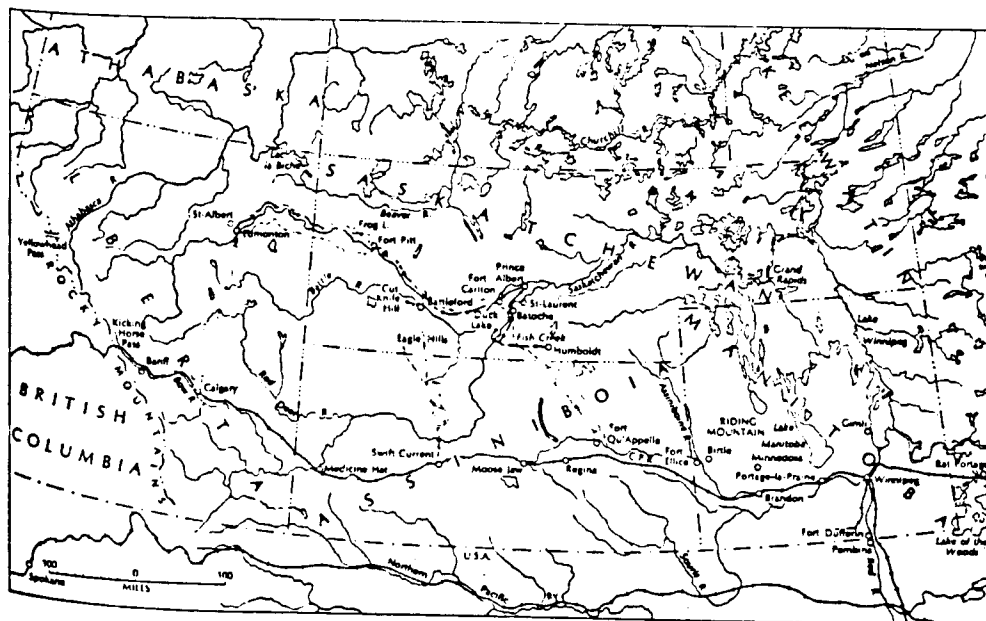
feasible route lay entirely in British territory. With his Indian guides, Palliser journeyed by water into American territory. Fort Colville, (Colville, Washington) a Hudson's Bay Company trading post, was his destination. After he examined the British territory north of the 49th parallel, Palliser met with the rest of the expedition's members at Fort Colville in October of 1859, concluding the final season of exploration.<sup>14</sup>

A closer study of each season's work shows that the Palliser expedition was marked by many accomplishments. Though there were problems and setbacks, a careful look at each contribution suggests the true significance of the Palliser expedition. The imperial response to growing concerns in British North America produced a new era in exploration for the British. The three years of work by the Palliser expedition provided a wealth of information on the geological, meteorological, botanical, ethnological, and geographical background of Rupert's Land. Hoping to emulate the trends started by the Lewis and Clark expedition and more recently enhanced by the Stevens Survey, the Palliser expedition's detailed objectives required a more exact survey than any effort that had preceded it. Combining political-economic goals with scientific aims, the Palliser expedition was bound to have a significant impact on British North America and on future exploration

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<sup>14</sup>General Report, Spry, ed., Palliser Papers, pp. 27-28; Palliser to Secretary of State for Colonies, July 8, 1860, Papers Relative to Palliser, p. 21.

techniques. In fulfilling their objectives, the expedition made a series of recommendations. Coupling the expedition's field work with their recommendations, a clearer understanding of the Palliser expedition's importance on exploration history is evident.



(Map refers to general area explored by Palliser expedition from 1857-1859; note the location of Canadian Pacific Railroad.)

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In conjunction with imperial orders, the first season's efforts prompted a better understanding of the feasibility of an immigrant route from Canada to the Red River region, of the agricultural potential of the Red River area, of Indian reaction to possible settling of Rupert's Land, of climatic problems, and of environmental conditions. Starting from Fort William, Palliser's first order of business was to determine the navigability of the White

Fish River. Passing 26 rapids during the first afternoon, Palliser surmised that the White Fish was too small and useless.<sup>15</sup> During the examination of the White Fish River, a tragedy almost occurred. While setting up camp, Palliser's Indian guides were cutting down a dead pine tree they had set on fire; however, a change in wind direction had the burning tree falling in Palliser's direction. Palliser managed to jump out of its path, but his canoe was smashed "to atoms."<sup>16</sup>

Rejoining the main body, Palliser led the expedition westward to the Rainy River. The land was heavily timbered and filled with rich alluvial soil. However, due to inclement weather, frequent lakes, and the rugged terrain of the land, it was noted that a road through the region would be very difficult and costly.<sup>17</sup> Palliser believed that the best time to travel through the area would be during winter months when the numerous lakes were frozen and travel by dog sled would be possible.<sup>18</sup> Upon reaching Fort Garry (Winnipeg), Palliser made two recommendations to the British government. First, he observed that due to the heavy construction costs for the arduous route between Canada and the Red River Settlement, the best route for

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<sup>15</sup>General Report, Spry, ed., Palliser Papers, p. 6.

<sup>16</sup>Palliser Journal, June 15, 1857, Spry, ed., Palliser Papers, p. 54.

<sup>17</sup>Palliser Journal, June 28, 1857, Spry, ed., Palliser Papers, p. 72.

<sup>18</sup>Ibid., p. 70.

emigration was through the United States to the Red River region.<sup>19</sup> Second, as to the possibility of settlement in the region, Palliser noted that the lack of pasture lands disqualified the area as a site for settlement or for herding cattle to the western plains. Palliser believed that the only economic value in the region were the mineral deposits discovered along their routes.<sup>20</sup>

On their trek from Fort William to Fort Garry, the expedition's journals showed that the day-to-day events were always in flux. Nerves were often tested. Travels through the Lake of the Woods to Red River were hindered by insect attacks. Flies and mosquitoes bothered both men and horses so much that Palliser was forced to break camp at three or four in the morning.<sup>21</sup> However, the greatest test of nerves, facing the expedition, was the inevitable encounters with Indians. Since part of the expedition's orders called for Palliser to fill in the current blank spaces on maps of Rupert's Land, the expedition had to travel through territory occupied by numerous Indian nations. Many of the tribes were common enemies. The Blackfoot confederacy, the Blackfoot, Bloods, and Piegans, were rivals of the Cree, Plains Assineboine, and the

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<sup>19</sup>Palliser to Sir E. B. Lytton, May 20, 1859, Spry, ed., Palliser Papers, p. 524; see also, General Report, Spry, ed., Palliser Papers, p. 7.

<sup>20</sup>General Report, Spry, ed., Palliser Papers, p. 35.

<sup>21</sup>Palliser Journal, July 12, 1857, Spry, ed., Palliser Papers, p. 85, see also p. 95, n. 1.

Stoney Indians.<sup>22</sup> Palliser's party came to mingle with Indians from the Assineboine, Cree, Blackfoot, Blood, Piegan, Stoney and Lac La Pluie nations. Due to the efforts of Palliser and Hector, all direct confrontations turned out in favor of the expedition. The first meeting set the tone and imprinted a lasting notion on Palliser, opening his mind to the fears and apprehensions facing the future of the Indian. Palliser found the same concerns among the Indians that the Stevens Survey noted four years earlier.<sup>23</sup>

The first meeting occurred on July 1, 1857, at Fort Frances located on the Rainy River. Here, a group of Lac La Pluie Indians awaited Palliser to discuss their fate. Concerned with the growing inevitability of settlement, the old chief of the Lac La Pluie approached Palliser and spoke:

I do not ask for presents, although I am poor and my people are hungry, but I know you have come straight from the Great Country, and we know that no men from that country ever came to us and lied. I want you to declare to us truthfully what the Great Queen of your country intends to do to us when she will take the country from the fur company's people. All around me I see the smoke of white man rise. The "Long Knives" (Americans) are trading with our neighbors for their lands and they are cheating them and deceiving them. Now, we will not sell or part with our lands.<sup>24</sup>

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<sup>22</sup>General Report, Spry, ed., Palliser Papers, p.37.

<sup>23</sup>Palliser Journal, July 1, 1857, Spry, ed., Palliser Papers, p. 76.

<sup>24</sup>Palliser to Labouchere, July 15, 1857, Papers Relative to Palliser, p. 8.

Palliser responded saying that "their land would be protected by the Queen and no one would force them off their land."<sup>25</sup> Though he would recommend that Indian rights be protected, Palliser lacked the power to see his promise to the Lac La Pluie nation fulfilled.

The Lac La Pluie chief commented on a key issue at the heart of the Palliser expedition, the future of the Hudson's Bay Company. From the moment that the expedition took to the field, Palliser was busy observing the operations of the Hudson's Bay Company. Since the Lac La Pluie chief noticed that the Company was in precarious shape, it did not take long for Palliser to come to a conclusion on the fate of the Hudson's Bay Company. Responding to questions raised by Labouchere, Palliser replied that "if the Hudson's Bay Company continued to rule the area now faced with growing competition by native and half breeds, the same violence of the North West Company and Hudson's Bay Company feuds prior to the 1821 merger will appear."<sup>26</sup> Based on his observations, Palliser recommended that the charter should not be renewed and that two colonies be established, one west of the Rocky Mountains with the seat of government at Vancouver and the other colony east of the Rocky Mountains with its seat of government at the Red

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<sup>25</sup>Palliser Journal, July 1, 1857, Spry, ed., Palliser Papers, p. 77.

<sup>26</sup>Palliser to Labouchere, March 13, 1858, Spry, ed., Palliser Papers, p. 516.

River Settlement.<sup>27</sup>

With his first assessment of the Hudson's Bay Company's control of Rupert's Land completed, Palliser turned his attention to concluding preparations for the second stage of exploration. From Fort Garry, Palliser was to examine the region along the 49th parallel from the Red River to the Turtle Mountains. He was also to appraise the agricultural potential of the plains as the expedition moved toward its winter headquarters at Carlton House. Before the expedition was able to take to the field, two problems surfaced: the first dealt with the procurement of horses, and the second involved the hiring of Indian guides. Before the expedition's members had even arrived in British North America, Palliser had sent to the Hudson's Bay Company a priorities list for the calibre of horses deemed necessary for exploration. The request called for the purchase of 24 good horses, "eight of them first rate buffalo runners, the other sixteen above average run of the ordinary pack horses, which might be used for following buffalo in a pinch."<sup>28</sup> Upon his arrival at Fort Garry, Palliser found twenty horses of second rate quality awaiting the expedition.<sup>29</sup> Palliser soon discovered that the métis residents of Red River had taken the best horses on

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<sup>27</sup>Ibid., p. 518.

<sup>28</sup>Palliser Journal, July 13, 1857, Spry, ed., Palliser Papers, p. 84.

<sup>29</sup>Palliser Journal, July 6, 1857, Spry, ed., Palliser Papers, p. 84.



their annual summer buffalo hunt. Throughout the expedition's life Palliser constantly faced the problem of obtaining good horses.<sup>30</sup>

The inability to hire an experienced guide was a personal setback for Palliser. From his previous hunting excursions in 1848, Palliser had the fortune of hunting with a noted Missouri guide named Boucharville.<sup>31</sup> It was Palliser's intent to hire Boucharville as the expedition's guide through the British plains and prairies. During their first meeting, Boucharville taught Palliser how to deal with Indians and how to live off the land.<sup>32</sup> However, Palliser received news that Boucharville had been recently killed by a Sioux war party. Because of this disaster, Palliser was forced to hire a variety of Indian guides and only one, Nimrod, a Stoney Indian, provided any consistent service.<sup>33</sup> With guides and horses ready, the only item left was to secure the scientific equipment and provisions on the six Red River Carts and two American wagons purchased by Palliser.<sup>34</sup> Included in the provisions were

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<sup>30</sup>Palliser Journal, July 13, 1857, Spry, ed., Palliser Papers, p. 90.

<sup>31</sup>Palliser, Solitary Rambles, p. 199.

<sup>32</sup>Ibid., p. 210.

<sup>33</sup>Labouchere to Murchinson, January 13, 1857, Spry, ed., Palliser Papers, p. 497, n. 1.

<sup>34</sup>The Red River Cart was built admirably to suit the conditions of the country. It was built entirely of wood, thus whenever one broke down it could be repaired as long as wood or buffalo were near. The carts were used throughout the expedition's travels on the prairies. The

flour, tea, sugar, trade goods for Indiana, and pemmican, a mixture of ground buffalo and fruits.<sup>35</sup> The expedition was ready to start its exploration of the prairies.

To accomplish his examination of the boundary region and of the prairies, Palliser divided the expedition into two groups. The main body was ordered to continue on to Fort Ellice, located at the confluence of the Assineboine and Qu'Appelle Rivers. By doing this Palliser hoped to give the scientific members more time to perform their duties. The second group which was comprised of Palliser and his three scientific associates departed from Fort Garry on July 14, 1857. Their destination was the southern boundary and the American settlement of Pembina.<sup>36</sup> Upon reaching Pembina, a survey of the boundary took place. To fix the exact location of the 49th parallel, a joint reading was done through the assistance of Charles Iddings, United States Civil Engineer. Iddings was employed by the American Land Company. His job was to survey the land just south of the boundary to prepare for settlements. The fear that American interests were approaching the Red River region were now confirmed by Palliser. After completing their survey of the boundary, Palliser's party continued

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wagons proved to be less valuable. Without draught horses to pull them, they quickly became difficult to support. By the time the expedition reached Carlton House both wagons had been lost to the expedition; see Palliser Journal, July 14, 1857, Spry, ed., Palliser Papers, p. 93, n. 3.

<sup>35</sup>Palliser Journal, July 14, 1857, Spry, ed., Palliser Papers, pp. 93-94.

<sup>36</sup>Ibid., p. 92

on a westerly route along the 49th parallel.<sup>37</sup>

For the first time the scientific body of the expedition had the opportunity to observe the natural wonders of the western plains. The first phenomenon unleashed upon the expedition was a common problem associated with plains travel, sudden and violent thunderstorms. Given the chance to make meteorological observations, the scientists noted the frequency and the immense power of the lightning produced by the storms. Palliser recorded that the lightning seemed to bounce off the ground and extend back into the skies. While writing a letter to Labouchere, Palliser reported that he saw an Indian tent struck by lightning, killing all four occupants.<sup>38</sup> Another phenomenon viewed by the expedition during their westward trek along the 49th parallel was a grasshopper or locust storm. All records remarked how dark the sky became as the locust approached the expedition. Travelling through regions where the locust had fed, Palliser commented on the utter destruction done to the vegetation.<sup>39</sup> The expedition now left the plains for a brief examination of the Turtle Mountains.

The Turtle Mountains were the western extreme for the boundary survey during the first season. It was noted that

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<sup>37</sup>Palliser Journal, July 25, 1857, Spry, ed., Palliser Papers, pp. 100-101.

<sup>38</sup>Palliser to Labouchere, July 16, 1857, Papers Relative to Palliser, p. 8.

<sup>39</sup>Palliser Journal, August 1, 1857, Spry, ed., Palliser Papers, pp. 108-109.

the Turtle Mountains were in direct line with the 49th parallel. With the survey completed, Palliser's party headed northward to rejoin the main body at Fort Ellice. The fort was reached on August 15, 1857. During an examination of the region around the fort, Hector discovered coal deposits along the Souris River. Though the area was frequented by Hudson's Bay Company men, company records did not make mention of the mineral deposits in this locale.<sup>40</sup> Preparations were made to move the expedition in a westerly direction along the Qu'Appelle River to the South Saskatchewan. Since he wanted to add to the expedition's success, Palliser convinced James McKay, the Hudson's Bay Company factor in charge of Fort Ellice, to serve as the expedition's guide for the rest of the season. Palliser's decision to employ McKay came at a most opportune time. While preparing to move the expedition, the current chief guide and interpreter, James Ferguson, was now trying to dissuade the expedition's hired help from continuing their westward trek into Blackfoot country. Knowing many of the men, McKay was able to sway the members to continue. Nevertheless, a change in the expedition's itinerary took place when Palliser reached the South Saskatchewan.<sup>41</sup>

Palliser's itinerary called for the expedition to

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<sup>40</sup>Palliser Journal, August 21, 1857, Spry, ed., Palliser Papers, p. 129.

<sup>41</sup>Palliser Journal, August 26, 1857, Spry, ed., Palliser Papers, p. 131.

proceed westward to the Red Deer River Falls. But the decision sparked a crisis. The men balked at going any further for two reasons: winter was rapidly approaching and they feared travelling any deeper into Blackfoot territory. Unsure of what to do, Palliser conferred with McKay. Palliser adhered to McKay's advice to advance to Fort Carlton, so that "your men will not break up and bring about the end of the expedition."<sup>42</sup> Though he was compelled to end the westward movement of the expedition, this incident showed Palliser's flexibility as leader. Following the decision to head for winter camp at Fort Carlton, the expedition turned northward after crossing the South Saskatchewan. In his journal accounts of the area Palliser exhibited his powers of observation. Describing the beauty of the river, Palliser wrote:

The river, averaging 600 yards in width, is depressed at the elbow 228 feet below the surface of the plains; but at the base of the Coteau the valley is very much deeper and wider, and the river channel winds through its bottom, leaving large points of dense wood on the left bank, but on the right great deposits of blown sand. The banks are everywhere composed of drift with immense quantities of boulders, till the Coteau is approached, when soft purple clays with cretaceous fossils occur and having a slight dip to the north-east, rise from under the drift,...<sup>43</sup>

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<sup>42</sup>Palliser Journal, September 26, 1857, Spry, ed., Palliser Papers, pp. 150-151.

<sup>43</sup>Palliser Journal, September 22, 1857, Spry, ed., Palliser Papers, p. 147.

Other journal entries shed light on the dangers of travel, natural history, and daily life in the camps. While crossing the South Saskatchewan one of the wagons overturned as it was being ferried across. Sinking to the muddy bottom, the wagon became embedded in the mud. Both wagon and supplies were lost to the expedition.<sup>44</sup> Shortly after crossing the river, the expedition had its first chance to hunt buffalo. These first hunting episodes added a certain caution into the potential hazards of this noble sport. On October 1, 1857, two men luckily escaped serious injury. Each man was involved in separate incidents. The first scare occurred when one of the hired voyageurs stopped to reload his rifle. While reloading, a spark from his pipe ignited powder both in his hand and in his powder horn. The powder horn was blown to pieces; however, the explosion only singed the man's whiskers, eyelashes, and eyebrows.<sup>45</sup>

The other incident involved an Indian guide, Nichwia. After killing a buffalo cow, Nichwia complained that his ramrod was missing. Giving up his search for the ramrod, Nichwia started to clean the buffalo only to discover the remains of his ramrod inside the buffalo. Apparently, he had forgotten to remove the ramrod after reloading.

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<sup>44</sup>Palliser Journal, September 26, 1857, Spry, ed., Palliser Papers, p. 151.

<sup>45</sup>Palliser Journal, October 1, 1857, Spry, ed., Palliser Papers, p. 155.

Luckily the rifle had failed to misfire.<sup>46</sup> Though dangerous, the hunting excursions served the expedition in a variety of ways. They provided food, so that bagged supplies like pemmican, flour, and sugar were conserved, and they served as a release from the drudgeries of daily routines. More important, the hunting episodes added knowledge on the natural history of Rupert's Land. Many examples of wildlife, killed for either food or specimens, filled pages of the journal. From September 27, to the 30th of September, 1857, Palliser recorded the killing of a grizzly, an elk, black-tailed deer (mule deer), white-tailed deer, and pronghorn antelope. Detailed measurements of the size and weight were regularly catalogued, as well as the color and location of the animals.<sup>47</sup>

The first season's summer explorations were terminated when the expedition reached Fort Carlton on October 8, 1857. Preparations for winter camp became the major objective. Before the voyageurs were paid and sent back to the Red River Settlement, Palliser decided that he would return with them. His intention was to continue on to Montreal to meet with Sir George Simpson to settle financial matters, then proceed to New York to get valuable instruments repaired and send a letter to the Colonial Secretary requesting a third summer. Palliser and Hector discussed

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<sup>46</sup>Ibid.

<sup>47</sup>Palliser Journal, September 28 to September 30, 1857, Spry, ed., Palliser Papers, pp. 152-154.

winter procedures. It was agreed that Fort Carlton would serve as a base camp for scientific experiments and for reconnoitering excursions. Palliser left Hector in charge while he was gone. This decision was the start of the chain-of-command crisis between Palliser and Blakiston.<sup>48</sup>

With all business apparently in order, Palliser left with McKay, John Ferguson, and a small group. However, in his hurry to reach the Red River area before winter set in, Palliser failed to leave any specific instructions for Blakiston, who had not arrived at winter headquarters.

Arriving at Fort Carlton on October 23, 1857, Blakiston found only Bourgeau at the fort and no orders. The distinct disregard for proper procedure angered Blakiston. Because of his military background, Blakiston felt that he should have been made second-in-command. He had already been in the military for six years. During this brief period, Blakiston had been promoted to 1st Lieutenant. Also, he had participated in the Crimean War, where he received awards for his meritorious performance. Considering his prior experience in leadership situations, Blakiston anticipated that he would assume control of the expedition in Palliser's absence. Instead, based on what he discovered at Fort Carlton, it was obvious that Hector was Palliser's choice. The problem increased during the field endeavors of the second summer. Left

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<sup>48</sup>Palliser Journal, October 8, 1857, Spry, ed., Palliser Papers, pp. 161-162.



behind to await orders and complete his scientific observations, Blakiston believed that his value to the expedition was being ignored.<sup>49</sup>

A major reason for this chain-of-command crisis was that Palliser and Blakiston were only in direct contact with each other for fourteen days. This lack of direct contact was a major reason why Blakiston felt he was being ignored. In addition, Palliser was not informed about Blakiston's personal orders from General Sabine; thus it was difficult for Palliser to give specific field orders to Blakiston. Though this crisis hindered the operations of the expedition, it did not negate the scientific consequences.<sup>50</sup>

Based on these developments, Blakiston resigned from the expedition at the end of his summer efforts. Before departing, Blakiston completed orders calling for an examination of the Kootenay Passes. He returned to Fort Carlton in October of 1858 and during the winter, Blakiston followed Palliser's 1857 route on his way home to England. His departure also saw the loss of the magnetic instruments that he took along with him.

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<sup>49</sup>Blakiston Report, Papers Relative to Palliser, pp. 31-33; Palliser to Secretary of State for Colonies, May 23, 1859, Papers Relative to Palliser, pp. 6-7; Irene M. Spry, The Palliser Expedition: An Account of John Palliser's British North American Expedition 1857-1860 (Toronto: The MacMillan Company of Canada Limited, 1963), pp. 75-76, 86-87.

<sup>50</sup>Ibid.

Placing aside his disagreement over Palliser's choice of Hector as temporary commander, Blakiston joined his scientific associates in fulfilling their winter objectives. Blakiston spent the rest of the winter compiling data from the magnetic, meteorological, and temperature readings. Bourgeau assisted him in obtaining hourly observations throughout most of the winter. Sullivan spent most of his time amassing the field notes of each member into a journal.<sup>51</sup> The bulk of the field work was done by Hector. His efforts produced additional scientific data, Indian ethnology, and a gentlemen's agreement which provided the expedition safe passage through Blackfoot territory during the 1858 summer explorations. Besides spending time on geological observations and acquainting himself with Indian customs, Hector's travels required him to procure men and horses for explorations during the upcoming summer.

Hector's travels took him to the eastern base of the Rocky Mountains, at the Hudson's Bay Company Rocky Mountain House. Around Rocky Mountain House Hector examined coal deposits and ventured into the Rocky Mountains for rock samples. While at Rocky Mountain House, Hector encountered a Blackfoot party. After exchanging gifts of "tobacco, trinkets, and papers", Hector obtained a verbal agreement from the chiefs which enabled the expedition to

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<sup>51</sup>Blakiston Report, Papers Relative to Palliser, p. 31; Hector Journal, October 16 to October 22, 1857, Spry, ed., Palliser Papers, pp. 177-179.

move across the prairies between the North and South Saskatchewan.<sup>52</sup> Before departing from Rocky Mountain House Hector had the fortune of obtaining the services of a noted Stoney Indian hunter who was very knowledgeable on the Rocky Mountains. His Indian name, which translated meant "the one with a thumb like a blunt arrow," was too difficult to pronounce, so he was known as Nimrod to the expedition. Hector secured a commitment from Nimrod that he would meet Hector in the mountains during the summer.<sup>53</sup>

One sample of Indian ethnology observed by Hector was the Indian cure for hydrophobia, a result of a bite from a rabid wolf. The cure called for wrapping "the patient in an old buffalo robe and flinging the person into the fire until it is well singed, when he is considered done."<sup>54</sup> Hector was also able to view the use of the buffalo Pound. The Pound was a circular strong fencing about 50 yards in diameter. The Indians used it to capture buffalo by herding them into the encirclement. Once accomplished, the slaughter of the buffalo took place until all the animals were deemed dead. There were conflicting views on when the Plains Indians used the Pound. According to some reports, the Pound was used year around while other reports indicated it was used only during winter months.

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<sup>52</sup>Hector Journal, January 15 to January 19, 1858, Spry, ed., Palliser Papers, pp. 209-213.

<sup>53</sup>Hector Journal, January 20, 1858, Spry, ed., Palliser Papers, pp. 214-215.

<sup>54</sup>Hector Journal, October 13 to October 15, 1857, Spry, ed., Palliser Papers, p. 176.

Based on his observations Hector concurred that the Pound was used only by Indians during the winter.<sup>55</sup> Hector now started his return to Fort Carlton. Stopping at Fort Edmonton, Hector hired additional field hands for the summer explorations. It was here that Hector obtained the valuable services of Peter Erasmus. As mentioned before, Erasmus became a close associate to Hector and later recorded his views of the Palliser expedition in his book, Buffalo Days and Nights.<sup>56</sup>

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The second season began with Palliser's return to Fort Carlton on June 6, 1858. During his travels back to Rupert's Land, Palliser tested one of his beliefs on the best route for emigrants to the Red River region. He felt that the use of steamboats on the Red River would make this route very desirable. To prove his theory, Palliser purchased a canoe at Crow Wing, Minnesota, and proceeded to journey from the headwaters of the Red River onto Pembina. Two days later he reached Fort Garry, convinced that the waterway was capable of handling steamboat traffic.<sup>57</sup> Before Palliser arrived at Fort Carlton, preparations were already underway for the start of explorations. Supplies were collected and fresh pemmican was

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<sup>55</sup>Hector Journal, October 13, 1857 and December 26, 1857, Spry, ed., Palliser Papers, pp. 176 & 197.

<sup>56</sup>Erasmus, Buffalo Days, p. 58

<sup>57</sup>Spry, The Palliser Expedition, pp. 80-82.

made from a recent buffalo kill. The main objectives were to examine the territory between the two Saskatchewan and to explore the Rocky Mountains for useable passes. As the main body readied itself, Palliser met with Blakiston for the first time in the field. Aware of the growing tensions between Blakiston and the rest of expedition's leadership, Palliser ordered Blakiston to wait for additional supplies coming from Norway House. Once the supplies had arrived, Blakiston was to travel westward to Fort Edmonton. From here, he was to head for the forks of the Medicine Lodge and Red Deer Rivers, the rendezvous point for the mountain explorations. Palliser hoped that Blakiston's removal would ease the animosity that had developed. Plus, he felt that it would give Blakiston more time to take additional magnetic readings, further increasing the scientific data collected by the expedition.<sup>58</sup>

With the Rocky Mountains more than 400 miles west of Fort Carlton, Palliser commenced with an exploration of the prairies on June 15, 1858. This trek presented Bourgeau his first opportunity to continue his botanical research since the termination of the first season. Because it was spring on the prairies, Bourgeau was constantly at work gathering specimens.<sup>59</sup> The rest of the

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<sup>58</sup>Erasmus, Buffalo Days, pp. 65-66; Palliser Journal, June 15, 1858, Spry, ed., Palliser Papers, p. 230, n. 1.

<sup>59</sup>Palliser Journal, June 15 to June 30, 1858, Spry, ed., Palliser Papers, pp. 230-239; Spry, The Palliser Expedition, pp. 116-117.

scientific members continued their jobs, taking notes on the natural history, recording soil temperatures at three foot depths, and assessing the fertility of the soil. A general consensus was that the soil, "made up of at least a foot of vegetable mould," was both fertile and fit for immediate settlement.<sup>60</sup>

As the expedition travelled through Blackfoot territory, the verbal agreement between Hector and the Blackfoot chief was soon tested. Though they had frequent meetings and occasional run-ins with numerous tribes, all encounters ended favorably for the expedition. These meetings added to the insight on Indian concerns as potential settlement of the prairies approached. As Erasmus noted in Buffalo Days and Nights, many of the Indians expressed a general concern on the plight of the buffalo. It was evident that the herds were dwindling and moving further west.<sup>61</sup> Indian ethnology was also observed whenever the expedition came in contact with the Plains tribes. One custom reported on by the expedition came from a meeting with a group of Sarcees, allies of the Blackfoot. In his journal, Sullivan recorded:

We invited them to sit down and smoke. The chiefs were pleased with their reception, and inquired all about the purpose of our journey; they remained with us the whole night. We observed that several of them had lost a joint

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<sup>60</sup>Sullivan Journal, July 2 to July 6, 1858, Spry, ed., Palliser Papers, pp. 240-243; Spry, The Palliser Expedition, p. 118.

<sup>61</sup>Erasmus, Buffalo Days, pp. 71-72.

of one of their fingers. This we learned was the consequence of a custom common to them with many other kindred tribes; of biting off the joint of a finger when unsuccessful in the performance of a vow. Among their women also, as among those of the Blackfeet, it is not uncommon to find many without a nose or minus an ear, bitten off by their husbands in a fit of jealousy.<sup>62</sup>

Moving southwesterly, the Palliser expedition had reached the valley of the Red Deer River. Hector was anxious to determine if the reports on coal deposits in the vicinity were true. While approaching the river's edge, the coal deposits were located. A couple of the coal banks were at least fifteen feet in width. Hector reported that the coal was of fair quality, giving off a "good heat".<sup>63</sup> The expedition was now in view of the Rocky Mountains. While travelling to the rendezvous point, Blakiston rejoined the main party on July 30, 1858. Before reaching their destination the expedition came across a large herd of buffalo and promptly gave chase. Seventeen cows were killed, so it was decided that a camp should be set up to make final preparations for outfitting the branch surveys into the Rocky Mountains. The camp was called "Slaughter Camp" due to the prodigious buffalo killing. The meat would be necessary for the separate

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<sup>62</sup>Sullivan Journal, July 11, 1858, Spry, ed., Palliser Papers, p. 247.

<sup>63</sup>Sullivan Journal, July 21, 1858, Spry, ed., Palliser Papers, pp. 252-253; Spry, The Palliser Expedition, p. 121.

expeditions into the mountains.<sup>64</sup>

The next two months were spent completing four branch surveys into the Rocky Mountains. Hector left with a group to conduct geological surveys above the 50th parallel. Blakiston carried out an exploration of the Kootenay Passes. Bourgeau examined the lower ranges of the mountains collecting botanical specimens. The last branch survey was led by Palliser. Anxious to examine the regions along the 49th parallel, Palliser and Sullivan partook in a brief reconnaissance of the parallel. Palliser's plans were to travel easterly until his party reached as close as possible the western most point of the 1857 boundary survey. However, due to a shortage of supplies, Palliser was forced to return to "Slaughter Camp" to replenish his stores before he continued on to examine the Rocky Mountains below the 50th parallel.<sup>65</sup>

The most significant results of the mountain surveys were the discovery of feasible passes through the Rocky Mountains. A direct result of the discovery of new passes was the construction of the first trans-Canadian railway. Even surveys of previously known passes provided additional data. Before resigning, Blakiston completed his trek through the Kootenay Passes. Though the Kootenay Passes

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<sup>64</sup>Palliser Journal, July 31, 1858, Spry, ed., Palliser Papers, pp. 258-259.

<sup>65</sup>Palliser Journal, August 3, 1858, Spry, ed., Palliser Papers, pp. 259-260; Spry, The Palliser Expedition, p. 124.



were already used, it was deemed necessary to explore them to determine their potential for large volume traffic. In all, the expedition reported the finding of six passes: Kananskis Pass, Lake Pass, Beaver Foot Pass, Vermillion Pass, Little Fork Pass, and Kicking Horse Pass. The first three were discovered by Palliser, while the last three were examined by Hector and credited to him.

Initially, Palliser believed that the discovery of Vermillion Pass was the most significant. According to Palliser, Vermillion's ascent to its height was the most gradual.<sup>66</sup> Even though he found Vermillion Pass to be a definite site for a major railway route through the mountains, Palliser frequently commented on a major obstacle to mountain travel, fallen timber. In his journal, he wrote:

The obstacle which a burnt forest presents to the traveller is of all others the most arduous; sometimes we were in a network of trees, lying at all angles the one to the other, and requiring no small amount of skill to choose which should be removed first. It was extraordinary to observe the great care taken by our horses in extricating their feet and legs from dangerous places. The poor brutes seemed to be very expert as this kind of work, and even when caught they would evince the utmost patience, and free themselves gently as possible.<sup>67</sup>

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<sup>66</sup>Bryce, Remarkable History of Hudson Bay Company, p. 339; General Report, Spry, ed., Palliser Papers, pp. 23-25.

<sup>67</sup>Palliser Journal, August 19, 1858, Spry, ed., Palliser Papers, p. 270.

In the long run, Kicking Horse Pass became the most important pass discovered by the expedition. Twenty-seven years later this same pass became the major route of the Canadian Pacific Railroad through the Rocky Mountains. Meeting with Nimrod, his Stoney Indian guide, Hector began his examination of the mountains on August 11, 1858. As he progressed into the mountains, Hector kept detailed notes on each mountain and valley. He transferred the information to maps or sketches while he travelled.<sup>68</sup> Following the Bow River, Hector's party entered Vermillion Pass in the middle of August. Hector noted that a passable road could easily be built through the pass.<sup>69</sup> The party descended to the western side of the mountain and headed northerly. Finding their supplies running short, Hector ordered the party to recross the mountains to find game. On August 29th, while following a large stream Hector was involved in an accident which led to the discovery of Kicking Horse Pass. Attempting to catch his horse, Hector was kicked unconscious by a blow from the animal. Initially, the rest of the party thought that the good Doctor was dead; however, he slowly recovered and the search for a route back through the mountains continued. Following the newly named stream, the Kicking Horse River,

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<sup>68</sup>Hector Journal, August 11, 1858, Spry, ed., Palliser Papers, p. 290. Morris, Canadian Railway, pp. 23-25.

<sup>69</sup>Hector Journal, September 2, 1858, Spry, ed., Palliser Papers, pp. 311-312.

so named in honor of the recent accident, the party ascended into the mountains. Shortly after the start of their ascent, a new pass was discovered, Kicking Horse Pass. The party quickly made its way through the pass until they found themselves viewing the headwaters of the Bow River.<sup>70</sup> Leaving the mountains, Hector rejoined the rest of the expedition's members at the site of the winter headquarters, Fort Edmonton. The second summer of exploration had reached a successful culmination in early October of 1858.

Though Blakiston had left the expedition, the other scientific members kept themselves busy during the winter months. Sullivan and Bourgeau spent most of their time recording meteorological readings. While they remained busy at the base camp, both Palliser and Hector spent much of their time travelling from one Hudson's Bay Company post to another. Once again Hector proved to be an avid adventurer. Leaving Fort Edmonton, Hector followed the course of the Athabasca River up to Fort Assineboine. Here, he observed the effects of the chinook, warm gusts of wind that rapidly increased the temperatures of a region as much as 40 degrees. From Fort Assineboine, Hector moved on to Jasper House near the eastern base of the Rocky Mountains. Taking temperature readings along the base of the mountains, Hector noted that the mean temperature was 15° warmer than the western portions of Canada. In addition, he discovered

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<sup>70</sup>Hector Journal, August 30 to September 3, 1858, Spry, Palliser Papers, pp. 309-313.

that the accumulation of snow was much less than that of the prairies.<sup>71</sup>

Based on observations during his travels, Hector reaffirmed the fears that an American movement to the Fraser River gold deposit sites was true. While at Fort Pitt, Hector ran into a party of eleven Americans travelling from St. Paul, Minnesota to the Fraser River. Hoping to cross the mountains before winter had set in, the party was forced to stop at Fort Pitt until spring. Following this meeting, Hector began his return trek to Fort Edmonton in anticipation of a third season of work. Throughout his travels, Hector was once again assisted by Peter Erasmus.<sup>72</sup>

Though he had not received official word to proceed with a third season, Palliser used his winter jaunts to prepare for another summer of exploring. Palliser spent most of his time meeting with chiefs of the Blackfoot nation. Determined to explore the region between the North and South branches of the Saskatchewan River, Palliser used his frequent encounters to enhance the diplomatic efforts accomplished by Hector the previous winter. While visiting Rocky Mountain House, Palliser developed an amiable relationship with Old Swan, one of the Blackfoot chiefs. Old Swan made Palliser a grandson. This affiliation proved to be very valuable during the summer excursion through the

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<sup>71</sup>General Report, Spry, ed., Palliser Papers, p. 26; Spry, The Palliser Expedition, pp. 188-189.

<sup>72</sup>Hector Journal, April 20, 1859, Spry, ed., Palliser Papers, pp. 388-391.

domain of the Blackfoot. After completing his business Palliser spent the rest of his time hunting with the Indians. His expertise as a hunter impressed the Indians, further cementing the close bond that Palliser had developed. With the arrival of spring, Palliser left the Rocky Mountain House locale and returned to Fort Edmonton.<sup>73</sup>

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The third season began on a sad note. Due to a prior commitment, Bourgeau was required to leave the expedition to return to Europe for an expedition to the Caucasus Mountains.<sup>74</sup> As preparations were made for their final endeavors, Hector noted that the once traditionally hard-working Hudson's Bay Company voyageurs were now being infiltrated by "lazy French half breeds". To the expedition's leadership, this development further signified the demise of the Hudson's Bay Company.<sup>75</sup> With provisions low at Fort Edmonton, Palliser decided to head for the prairies to hunt buffalo and other game in order to supplement their food stores. Hector was ordered to remain at Fort Edmonton and await for the confirmation from the Colonial Office to

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<sup>73</sup>Palliser Journal, February 9, 1859 and July 9, 1859, Spry, ed., Palliser Papers, pp. 343-344 & 409-410; Spry, The Palliser Expedition, pp. 186-187.

<sup>74</sup>Hector Journal, May 25, 1859, Spry, ed., Palliser Papers, p. 393; see also General Report, p. 27.

<sup>75</sup>Ibid.

proceed with the third season.<sup>76</sup>

The main body spent the next week replenishing its provisions and awaiting Hector's arrival. Hector rejoined the expedition on June 19, 1859, with a letter from the Colonial Office. The dispatch called for Palliser to complete an observation of the region between the two Saskatchewan and to return home westward through the Rocky Mountains. The reason for returning by way of the Pacific was to obtain additional information on the land on the western side of the Rocky Mountains. Most of these orders were based on recommendations made by Palliser in a memo sent to the Colonial Office in the winter mail.<sup>77</sup>

With orders in hand, the Palliser expedition commenced the final season in Rupert's Land. Heading southeast, Palliser moved toward the forks of the South Saskatchewan and Red Deer Rivers. Crossing through hostile Indian territory for the last time, the expedition was frequented by numerous Indian visits. This region had been considered too dangerous by the Hudson's Bay Company. They had not traded in the general area since the Bow River Expeditions of 1822-1824 found the region unsafe for trade.<sup>78</sup> However, thanks to the diplomatic efforts of

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<sup>76</sup>Palliser Journal, May 26 to June 13, 1859, Spry, ed., Palliser Papers, pp. 396-400; see also General Report, p. 27.

<sup>77</sup>Palliser Journal, May 25 and June 19, 1859, Spry, ed., Palliser Papers, pp. 395 & 402.

<sup>78</sup>Spry, The Palliser Expedition, p. 209.

Palliser and Hector, the expedition came away unscathed from all Indian encounters. The frequent meetings did provide opportunities to observe Indian ethnology and to gather pertinent information on Indian attitudes.<sup>79</sup> During their travels to the forks of the Red Deer and South Saskatchewan Rivers, Palliser noted that more Americans were seen heading for the gold sites on the Fraser River. Throughout its entirety, Palliser made sure that the expedition not only observed its political objectives, he insisted that daily adherence to the scientific goals be sustained. Numerous meteorological readings were kept along with geographic measurements of the height of the land.<sup>80</sup>

Upon reaching the South Saskatchewan, Palliser turned south toward the Cypress Mountains and the 49th parallel. He sent Sullivan to examine the land along the boundary line. After Sullivan returned to the main body, Palliser prepared for the final objectives of the expedition, a re-examination of the Rocky Mountains and an assessment of its western side.<sup>81</sup> He decided to divide the expedition into two surveys. Palliser and Sullivan were to recross the Rocky Mountains through the North Kootenay Pass. Since Palliser did not know what Blakiston had done during

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<sup>79</sup>Ibid., pp. 214-215.

<sup>80</sup>Palliser Journal, June 13, 1859, Spry, ed., Palliser Papers, p. 404.

<sup>81</sup>Palliser Journal, July 29, 1859, Spry, ed., Palliser Papers, pp. 421-422.

his survey in 1858, it was deemed necessary to evaluate this section again. Once on the western side of the Rocky Mountains, Palliser planned to continue along the boundary line until he met with the Boundary Commission then moving easterly from the Pacific coast.<sup>82</sup> Hector's orders called for him to travel northwesterly across the prairies along the Bow or Oldman Rivers. Once in the mountains, he was to recross them through the passes he discovered the previous year. On the western side, Hector was ordered by Palliser "to explore a route practicable for horses to the westward, as far as ever it lies in your power, proceeding by the valleys of Fraser and Thompson's Rivers, and avoiding the valley of Columbia."<sup>83</sup> All members were to rendezvous at Fort Langley, located in Washington.

Upon crossing the Rocky Mountains by the North Kootenay Pass, Palliser and Sullivan split up. Sullivan continued his trek by horse along the boundary, as Palliser travelled to Fort Colville, a Hudson's Bay Company post in American territory. Palliser purchased fresh horses and then rejoined Sullivan. Here, Palliser ordered Sullivan to return and examine the Kootenay Passes to determine if an all-British route for road travel existed. Sullivan completed his mission, noting in his diary that he believed it was possible that a road could be built through the wide

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<sup>82</sup>General Report, Spry, ed., Palliser Papers, pp. 27-28.

<sup>83</sup>Palliser Journal, August 2, 1859, Spry, ed., Palliser Papers, p. 423.



valleys.<sup>84</sup> While Sullivan explored the passes, Palliser continued westward to the Pacific to see if a communication line, entirely in British territory, was possible. Palliser accomplished his task through arduous effort. During his trek, Palliser met with members of the United States North West Boundary Survey, led by Joseph S. Harris. He ran into the American survey team near the 119° W. longitude. However, due to approaching winter weather, Palliser failed to cross the Cascade Range. He was unable to complete his assessment of the region and had to rely on the testimony of the American surveyors on the general features of the land. Palliser now returned to Fort Langley to meet with the rest of the expedition.<sup>85</sup>

After leaving the Cypress Mountains, Hector's party followed the Bow River into the Rocky Mountains. Encounters with Indians reinforced their dilemma, the plight of the buffalo. Meeting with a group of Stoney Indians, Hector asked the chiefs what was likely to become of them and other Indian tribes. Their response was that "every year we find it more difficult to keep from starving, and even the buffalo cannot be depended upon as before,....."<sup>86</sup> Erasmus supported this statement in Buffalo Days and Nights. He observed:

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<sup>84</sup>Spry, The Palliser Expedition, p. 270

<sup>85</sup>General Report, Spry, ed., Palliser Papers, pp. 28-29.

<sup>86</sup>Hector Journal, August 11, 1859, Spry, ed., Palliser Papers, p. 432.

Common sense indicated the truth of the predication of great changes that would take place when the buffalo were gone. I had only been in the country a little over two years and already there were fewer buffalo along the Saskatchewan valley. Even now the fighting tribes across the line are being forced back into areas they never used before. These herds are the means of maintaining their resistance.<sup>87</sup>

Hector continued his trek across the prairies along a northwesterly route until the Rocky Mountains were reached. Here, Hector relied on Nimrod's knowledge to cross through Howse Pass near the 52° latitude. The pass was once used by trappers of the North West Company.<sup>88</sup> Once across the mountains Hector proceeded to address his orders of locating a route to the Fraser and Thompson Rivers. However, the party found travelling westward a difficult task. An old nemesis had reappeared, fallen timber and dense forests. Movement became very slow and tedious. During one stretch, following a straight path, Hector was only able to travel 16 miles in nine days.<sup>89</sup>

By late September, Hector was forced to give up the pursuit of his objective. Turning south, he followed the valley of the Columbia, arriving at Fort Colville on October 23, 1859. Hector found Palliser and Sullivan

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<sup>87</sup>Erasmus, Buffalo Days, pp. 71-72

<sup>88</sup>Hector Journal, September 3, 1859, Spry, ed., Palliser Papers, p. 444, see n. 1.

<sup>89</sup>Hector Journal, September 16, 1859, Spry, ed., Palliser Papers, p. 453.

busily at work sending dispatches to England.<sup>90</sup>

The expedition's field work was finally finished. All that was left was to return to England for the organization of the collected material into a final report. In retrospect, Palliser recorded in 1859 that the original goals were all completed.<sup>91</sup> Though the expedition had failed to traverse to the Pacific, the overall effort had produced a prodigious amount of scientific and political data. The expedition's success was the result of organization, effective leadership, and hard work. The final result was a comprehensive report that challenged the prior views on the potential of Rupert's Land. Each member contributed to the scientific data collected and recorded by the expedition.

The significance of the Palliser expedition can only be determined by appraising the validity of the expedition's findings and recommendations. To assess the scientific observations, a comparison of the Palliser expedition's results to successive expeditions proves that the three years of work were indeed profitable. To judge the accuracy of Palliser's recommendations, an examination of political and economic developments of British North America into the twentieth century attests to the shrewd ability of the expedition's members to evaluate the potential of Rupert's Land.

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<sup>90</sup>Hector Journal, October 20, 1859, Spry, ed., Palliser Papers, p. 469.

<sup>91</sup>General Report, Spry, ed., Palliser Papers, p. 35.

## CHAPTER V

AN ASSESSMENT OF  
THE PALLISER EXPEDITION'S MAJOR ACCOMPLISHMENTS

The true value of the Palliser expedition emerged as subsequent expeditions took to the field. Armed with varying degrees of knowledge based on the findings of the Palliser expedition, these ventures judged the validity of Palliser's observations. A few of the expeditions to follow Palliser into the field were the Canadian backed Dawson-Hind expedition which was a leading critic of Palliser's expedition, the Milton-Cheadle Survey, the Boundary Commission Survey, Sanford Fleming's Railroad Survey, and Dr. John Rae's 1862 hunting excursion. Though some of the conclusions presented by Palliser and his associates were challenged, in time attempts to refute the Palliser expedition's claims ended attesting to their accuracy. In addition, the Palliser expedition's scientific organization served as a basic model for future explorations. Each successive expedition placed some emphasis on gathering scientific data. Whether it was a full-scale expedition, a party of hunters, gold seekers, or travellers through the prairies, their views of Rupert's Land corroborated the testimony expounded by Palliser.

As historian W. L. Morton observes in his work, Manitoba- A History: "The surviving accounts of their travels from Red River through the park belt and across the plains confirm the impressions made by...Palliser's report."<sup>1</sup>

Before a comparison can be made between the Palliser expedition and any subsequent expedition, a general understanding of the material encompassed in Palliser's Final Report of 1863 needs to be addressed. A variety of observations and recommendations filled the pages of the journals, letters, and summaries compiled by the official members of the Palliser expedition. The major subjects dealt within the final reports were findings on the geological-geographic composition of Rupert's Land, a detailed meteorological charting of the same region, a general assessment of the natural history, an examination of Indian ethnology and concerns, and a complex analysis of the Hudson's Bay Company's ability to govern and maintain Rupert's Land.

The geological-geographic surveys produced huge amounts of knowledge on available minerals, agricultural potential, and feasible passes through the Rocky Mountains. The mineral reports showed that there were salt springs around Lakes Manitoba and Winnipegosis. According to the Hind expedition, this area could provide enough salt for

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<sup>1</sup>Morton, Manitoba- A History, p. 99.

the entire country.<sup>2</sup> Limestone was noted along the Red River and Lake Winnipeg, while granite was observed on the eastern side of the lake. Clay was common around the Saskatchewan valley. Most important were the frequent coal deposits reported along the Souris River near the 49th parallel, by Fort Edmonton, by Rocky Mountain House, and by the Red Deer and Battle Rivers near the 52° latitude and 112° longitude.<sup>3</sup>

An important scientific result was the report on the arability of the land. First, the expedition determined that the whole expanse was divided into three distinct districts: the lakeland region east of Red River, the central prairies, and the mountain highlands. The central prairie region was deemed the most important, due to its agricultural potential. This region was sub-divided into three steppes: the Manitoba Lowland, the Saskatchewan Plain, and the Alberta Plateau. Second, the fertility of the soil was ascertained. Numerous sections had a thick vegetable mould up to three feet in depth. The best soil was found along the rivers throughout the central prairies. The only area of the central prairies viewed not acceptable

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<sup>2</sup>Henry Youle Hind, Narrative of the Canadian Red River Exploring Expedition of 1857 and of the Assiniboine and Saskatchewan Exploring Expedition of 1858, 2 vols., 1860, reprint (New York: Greenwood Press, 1969), 2:293-294.

<sup>3</sup>Blakiston Report, Papers Relative to Palliser, p. 38; General Report, Spry, ed., Palliser Papers, pp. 17, 18, 22, 42.

for farming was a triangular piece of arid land which ran along the 49th parallel from 100° to 114° W. Longitude. It reached its apex around the 52nd parallel. This tract became known as "Palliser's Triangle". Palliser believed that the lack of rainfall and natural waterways in the locality would make this region impractical for agriculture.<sup>4</sup> Adding to the desirability of the central prairies was the fact that settlers would not face the task of clearing the land. Due to the frequent prairie fires over centuries, the country was void of trees. The only trees in the prairies were found in the river valleys.<sup>5</sup> Palliser estimated that there were 65,000 square miles of arable farm land.<sup>6</sup>

To support their beliefs that farming would be profitable, observations of current agricultural production were frequently recorded. Crops considered suitable for the central prairies were entered in Bourgeau's report. Bourgeau noted that "wheat, rye, barley, oats, corn, potatoes, and numerous other crops" can be grown. He added that there was plenty of natural grasses available for livestock grazing, a point favored by Palliser.<sup>7</sup>

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<sup>4</sup>Hind, Narrative of Expedition, 1:v-vi; General Report, Spry, ed., Palliser Papers, p. 8.

<sup>5</sup>General Report, Spry, ed., Palliser Papers, p. 22.

<sup>6</sup>Palliser to Newcastle, July 8, 1860, Spry, ed., Palliser Papers, p. 538.

<sup>7</sup>Bourgeau's Final Summing Up, Spry, ed., Palliser Papers, pp. 588-589; see also General Report, p. 36.

Erasmus remarked that Palliser and Hector believed that the decline of buffalo herds could be offset by the introduction of cattle herds from Texas and other southern states. Though the buffalo herds were dwindling in size as settlers moved into the area, both men felt that the abundant grasslands would handle the influx of domestic cattle.<sup>8</sup>

The most significant result of the geological-geographic survey was the discovery of useful mountain passes wholly in British territory. The most important passes in the eyes of the expedition were Kicking Horse and Vermilion. Though the expedition failed to find a route to the Pacific, the knowledge that passes existed capable of handling roads or railroads proved to have an immense impact on the future of British North America. As mentioned before, Kicking Horse Pass became the approved site for the Canadian Pacific Railroad. With the knowledge that transportation-communication lines existed in areas that could be readily reached, British chances of holding onto their North American possessions had greatly improved.

With the possibility emerging that Rupert's Land was suitable for farming, the meteorological reports issued by Palliser's expedition created additional confirmation of the true potential of the central prairies. The concepts expounded by Blodget's 1857 report were now reaffirmed. The picture that all of Rupert's Land was a "frost kingdom" was destroyed. The weather was divided into two extremes,

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<sup>8</sup>Erasmus, Buffalo Days, p. 71.



one of intense cold and the other of excessive heat. Winters were severe but consistent. The season started in early November and continued until the middle of May. Summer began slowly with cool temperatures lasting until the middle of June. From late June through September, the days were very warm, providing a growing season suitable for sturdy crops. The reason that sturdy crops were more suited for this region was that during summer there was the constant chance of nightly frost due to plummeting temperatures. These findings confirmed Blodget's belief that agriculture was possible up to the 55th parallel.<sup>9</sup>

Specific by-products of the meteorological observations created additional insight on climate and weather conditions. The Climate Flow Chart, constructed by Blakiston, drew from regular readings taken at Fort Carlton and the Red River Settlement. Blakiston coupled these statistics with prior observations from Lake Athabasca, Fort Simpson, Great Bear Lake, and Toronto. The end result was a general temperature chart of British North America. In addition, daily journal entries informed the British government about the power of the frequent prairie thunderstorms. Precautionary steps could be taken to prepare future settlers of what to expect as the land was opened to development. Hector produced the last bit of informa-

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<sup>9</sup>Blakiston Report, Papers Relative to Palliser, p. 43; General Report, Spry, ed., Palliser Papers, p. 7; Blodget, Climatology of the United States, pp. 529-532.

tion on the climatic conditions. His winter surveys of the Alberta Plateau showed the contrasts between winters on the prairies to those at the eastern base of the Rocky Mountains.<sup>10</sup> Looking back on the results of the expedition, Palliser maintained that the meteorological findings were the greatest scientific achievement of the expedition's three years of work in the field.<sup>11</sup>

Though he may have overstated the significance of the meteorological findings, Palliser did not ignore the importance of the other scientific contributions. The expedition certainly made important contributions to natural history. Either from daily observations or from specimens collected by the frequent hunting excursions, the expedition increased understanding of both the animal and botanical variety that existed in the general area. Blakiston's love for ornithology produced a voluminous work for the Royal Zoological Society. Efforts by the botanist, Bourgeau, resulted in a monumental amount of material. Included in his botanical collection were 110 different sorts of seeds, 22 packets of dried plants, and a herbarium which contained 460 species and about 60,000 specimens.<sup>12</sup> Besides the physical evidence brought back or

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<sup>10</sup>Blakiston Report, Papers Relative to Palliser, p. 43; General Report, Spry, ed., Palliser Papers, p. 26; See Appendix C-1.

<sup>11</sup>Palliser to Duke of Newcastle, July 8, 1860, Spry, ed., Palliser Papers, p. 538.

<sup>12</sup>Spry, The Palliser Expedition, p. 117; Most of Bourgeau's botanical collection can still be seen today in the Museum of Economic Botany at Kew.

recorded in their journals, the Palliser expedition generated a number of charts, drawings, and maps.

All of the geological and geographic observations were recorded on charts or maps. At the end of each section of exploration an astronomical chart was constructed. These charts noted the altitude, longitude, latitude, and exact date of the surveillance. Using this data, maps were drawn during the winter months. Hector was the major cartographer. However, with the exception of Bourgeau, each member of the expedition produced at least one map, showing their routes of exploration.<sup>13</sup> Blakiston's map depicted his examination of the Kootenay Passes. The map showed that the North Kootenay Pass was entirely in British territory. Sullivan's map characterized his renderings of the successful search for an all-British trail through the Rocky Mountains along the 49th parallel. Finally, Palliser recorded his explorations at the start of the expedition in a map of the White Fish River. Coupled with Hector's maps and drawings, these maps filled many of the blank spots on earlier maps of British North America. From the new material Arrowsmith started drafting a map which entailed the routes, observations, and sites of the mineral deposits. The map encompassed the efforts of all three seasons. Anxious to see the final results, the Colonial Office relieved Arrowsmith and turned the endeavor over to Edward Stanford. The map was finally

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<sup>13</sup>Charts and maps are located in Appendix B and C.

completed in 1865, two years after Palliser's Final Report was approved by Parliament.<sup>14</sup>

Though most of the scientific and geological data was analyzed by Palliser, Hector, and Sullivan back in England from 1860 through 1862, the political objectives were fulfilled through recommendations addressed by Palliser in his correspondence to the Colonial Office. Due to the concerns discussed before the Select Committee, the British government valued any material which would assist in reaching viable solutions on the fate of British North America. In accordance with the political goals, the following conclusions were made by Palliser and his assistants. The first recommendation dealt with Palliser's view on the best emigrant route to the Red River region. Palliser believed that the best line of communication was one that brought two points together as fast as possible. Thus, he deduced that a road from Lake Superior to the Red River Settlement would be too costly, inefficient, and too slow. Instead, Palliser advised using a route across the United States to reach the Red River Settlement. This point was well taken, because the Hudson's Bay Company had been using this very route rather than the traditional route through Hudson Bay since 1857. The Company favored

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<sup>14</sup> Spry, The Palliser Expedition, p. 282; see also Appendix B.

this route due to its flexibility and efficiency.<sup>15</sup>

In opposition to Palliser's recommendation, Blakiston contended that a road could be built through the Rainy Lake region, even though he had not travelled through the locale.<sup>16</sup> Oblivious to Blakiston's conclusion, Palliser also proposed the best route across Rupert's Land. From Fort Garry, Palliser suggested that without difficulty a road or railroad could be built westward following the Assiniboine and South Saskatchewan Rivers onto the headwaters located in the Rocky Mountains. Here, the passes discovered by the expedition, either Vermillion or Kicking Horse, could be used to continue the route to the Pacific.<sup>17</sup>

The next concern discussed by Palliser was the assessment of the Hudson's Bay Company's ability to govern Rupert's Land. Based on his observations, Palliser concluded that the area possessed the necessary ingredients for creation of British colonies. In his letter of March 13, 1858 to Labouchere, Palliser suggested that the Hudson's Bay Company charter should not be renewed. He based his decision on the growing unrest along the 49th parallel between the Company and free traders. Palliser cited the increased use of liquor as a basic trade weapon.

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<sup>15</sup>Rich, History of Hudson's Bay Company, 2:807; Palliser to Secretary of State for Colonies, March 13, 1858, Spry, ed., Palliser Papers, pp. 518-519.

<sup>16</sup>Blakiston Report, Papers Relative to Palliser, p. 71.

<sup>17</sup>Palliser to Secretary of State for Colonies, May 20, 1859, Papers Relative to Palliser, pp. 3-5.

Both sides were using liquor to seduce the Indians. If the present situation persisted, Palliser believed that "the same violence of the North West Company and Hudson's Bay Company feuds prior to the 1821 merger will return."<sup>18</sup> Palliser further presumed that Canada was incapable of governing the area. The major drawbacks against Canadian rule, according to Palliser, were the distance between the Canadian seat of government and British North America, the improbability of carrying on effective trade by way of Lake Superior with Canada, the huge expense of constructing a road to the Red River Settlement, and the "probability of Indian disturbances" as the buffalo continued its decline due to encroaching settlement.<sup>19</sup>

Palliser's solution for ending the Company's control of Rupert's Land called for Her Majesty's Government to buy out the current holdings of the Hudson's Bay Company and to create two colonial districts. One colony was to be established west of the Rocky Mountains with its seat of government in Victoria, Vancouver Island. The second colony consisted of the total expanse east of the Rocky Mountains to Lake Superior. Red River Settlement was to be the government seat. Because of the fears of a gold rush to the Fraser River region, the British government followed up Palliser's recommendation and created the royal colony of British Columbia in 1858. However, the

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<sup>18</sup>Palliser to Labouchere, March 13, 1858, Spry, ed., Palliser Papers, p. 516.

<sup>19</sup>Ibid., p. 515.

Colonial Office chose another course of action in dealing with Palliser's other suggestions.<sup>20</sup>

The Colonial Office's decision showed that Palliser's expertise was not totally ignored. In 1858, Her Majesty's Government renewed the Hudson's Bay Company charter with a stipulation that the British government could revoke the charter at any time. Due to Palliser's assertion that sections of Rupert's Land were suitable for farming, a provision in the charter called for British control of the Saskatchewan valley.

Creation of the second colony failed to take place because of two developments. Both developments involved political occurrences, one in England and the other in the United States. The first problem surfaced during the 1858 Parliamentary elections. The Conservative Party had gained control of the government. A direct result was the removal of Labouchere as Secretary of State for the Colonies. The new head of the Colonial Office was Conservative Sir Edward Bulwer-Lytton. Though it was Bulwer-Lytton who gave approval for Palliser's third season of exploration, the new leadership was not as concerned with the situations in British North America. British Columbia had been created by the Liberal controlled government which

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<sup>20</sup>Palliser to Labouchere, March 13, 1858, Spry, ed., Palliser Papers, pp. 516-519; Rich, History of Hudson's Bay Company, 2:802.

Labouchere represented.<sup>21</sup>

With the Conservatives in control, no action was taken to address the key provision in the new charter, creation of a British colony along the Saskatchewan valley. Though the Liberal Party returned to power in 1860, a second problem had appeared preventing a follow-up on Palliser's recommendation. Before the Colonial Office could create the second colony in Rupert's Land, the Civil War in the United States had started. Because of this, the British government became embroiled in a struggle over diplomatic considerations, deciding whether to give aid to the Confederate States or to remain neutral. With the United States preoccupied, its interest in Rupert's Land was quietly abated. Aware that American desires for the region had wavered because of the war, the British government allowed the present situation with British North America to remain in the hands of the Hudson's Bay Company. Once the Civil War was over, the British turned their concern to the move for confederation in Canada. In July of 1867, Canada became a self-ruling dominion within the British Empire. The creation of the Dominion of Canada renewed the discussion on the ownership of Rupert's Land. Aware of Canadian interest in the central prairies, the charter of the Hudson's Bay Company was transferred to the

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<sup>21</sup>Galbraith, Imperial Factor, pp. 348-349; Rich, History of the Hudson's Bay Company, 2:802.



Canadian government in 1869.<sup>22</sup>

Palliser's final recommendation dealt with the treatment of the native population. His encounters with the various Indian tribes convinced Palliser that the Indians were genuinely concerned with the disappearance of the buffalo and with the inevitable appearance of civilization. Knowing that some Indians expressed a desire to learn farming techniques, Palliser called for the creation of an Indian council which would educate the natives and protect their interests.<sup>23</sup> Palliser's views were reaffirmed in Blakiston's report. Blakiston agreed that if given the chance and proper training the Indians would quickly adapt to farming. He also issued two warnings in his report. First, the government in charge must make sure that the buying out of Indian land must be prevented or violence would follow. Second, Blakiston maintained that if conservation methods were not started soon, the buffalo's extinction was imminent.<sup>24</sup>

With the expedition's field work and computation of the geological and scientific data completed, the last step to determine the validity of the Palliser expedition's

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<sup>22</sup>Graham, Concise History of Canada, p. 137; Galbraith, Imperial Factor, pp. 348-349; Rich, Hudson's Bay Company, 2:802-803.

<sup>23</sup>Palliser to Labouchere, March 13, 1858, Spry, ed., Palliser Papers, pp. 518-519, see also General Report, p. 33.

<sup>24</sup>Blakiston Report, Papers Relative to Palliser, pp. 39-40.

findings was to compare its results with those of similar endeavors through Rupert's Land. The first expedition to attest to the value of the Palliser expedition took to the field shortly after Palliser started his exploration of the Kaministikwia River in June of 1857.

The Dawson-Hind expedition from 1857 to 1858 paralleled the endeavors of the Palliser expedition's first season. Based on their findings, the Dawson-Hind expedition came to both challenge and support conclusions made by Palliser. Following the same leads in 1857 as the British government, the Canadian government took similar steps to sort out the truth on Rupert's Land. Fully expecting the Select Committee to turn the Hudson's Bay Company lands over to them, the Canadian government organized an expedition sent into the field in early July of 1857. Aware of the scientific make-up of Palliser's expedition, the Canadians put forth a strong effort in emulating the British expedition by stressing a scientific composition for their exploratory members. The original leader of the expedition was George Gladman. His assistants were Henry Youle Hind, geologist, W. H. E. Napier, engineer, S. J. Dawson, surveyor, and one road superintendent. Each of the scientific members had at least one assistant. At the end of their first season, Gladman was removed as leader. Hind and Dawson emerged as the major forces in the Canadian expedition. For their efforts during the first season, each man was placed in

charge of separate surveys during the second season.<sup>25</sup>

Though the Palliser and Hind-Dawson expeditions both traversed the same ground, the Canadian expeditions had two advantages over Palliser. First, the Canadian government purchased all of David Thompson's maps and charts for its expedition. Since Thompson had served as astronomer-surveyor of the Rainy Lake region, this information gave the Hind-Dawson expedition a more solid foundation to compare their findings with. Second, a photographer, Humphrey L. Hime, was provided to Hind's expedition during the second season. Photographs assisted Hind in his explanation of the value and potential of the central prairies. Since Palliser lacked this luxury, it made his job of describing the expedition's findings more difficult.<sup>26</sup>

Just like Palliser's expedition, the Hind-Dawson expeditions were subject to political and scientific considerations. The first season's orders called for determining the communication route for a road from Lake Superior to the Red River Settlement. The goal was to ascertain the feasibility of maintaining an emigration route between Canada and Rupert's Land.<sup>27</sup> As the expedition's geologist, Hind was to examine the regions to determine the general character of the land, "noting as minutely as possible all

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<sup>25</sup>Hind, Narrative of Expedition, 1:3.

<sup>26</sup>Ibid., pp. xix, 79.

<sup>27</sup>Hind, Narrative of Expedition, 1:v, 4-5; Galbraith, Imperial Factor, p. 358.

leading features of topography, vegetation, and soil along your line of route."<sup>28</sup>

The second season's objectives were a direct by-product of the known results expressed by the Palliser expedition. Hind was placed in charge of an examination of the land lying between Lake Winnipeg and the Saskatchewan and Assiniboine Rivers. Cognizant of the scientific evidence being expounded by Palliser, Hind was ordered "to procure all the information in your power respecting the Geology, Natural History, Topography and Meteorology of the region, examine the salt region in Lake Manitobah and coal deposits reported along the Mouse (Souris) River, examine for navigability, and observe the character of the timber and soil."<sup>29</sup> Based on Palliser's recommendation to forgo the Lake Superior to Red River route in favor of an American one, Dawson was directed to partake in a closer inspection of the Lake Superior to Red River region. The purpose of the inspection was to determine the best route possible for emigrants.<sup>30</sup> With their efforts concluded, Hind and Dawson found some discrepancies in Palliser's recommendations.

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<sup>28</sup>T. L. Terrill to Hind, July 22, 1857, Narrative of Expedition, 1:5-6.

<sup>29</sup>T. J. J. Loranger, Secretary of Provincial Affairs to Hind, April 27, 1858, Hind, Narrative of Expedition, 1:269-271.

<sup>30</sup>Arthur G. Doughty and Adam Short, ed., Canada and Its Provinces: A History of the Canadian People and Their Institutions By One Hundred Associates, vol. 5 (Toronto: Edinburgh University Press, 1914), p. 314.

The major point of contention dealt with the emigrant route to the Red River Settlement. Since Palliser believed that a land route through the Rainy Lake region was too arduous and expensive, his experience from separate ventures to North America convinced him that the American route to the Red River Settlement was more favorable. Dawson contended that a route better than Palliser's was possible. Dawson recommended a combination land-water route through the region. His passage consisted of 131.5 miles of road and 367.5 miles of waterways. Estimated construction costs for such a route was set at £50,000.<sup>31</sup>

Response to Dawson's recommendation reflected the view held by Palliser. The Canadian parliament rejected financing a road through this section, claiming excessive costs. Critics agreed that as a line of communication the route was acceptable, but as a "route for trade, for ordinary travel, or for emigrants to go west, the Dawson road, as it now exists, is far from satisfactory."<sup>32</sup> Even Hind questioned its potential as a commercial avenue due to the "numerous shoals, rapids, and falls on the Kaministikwia River."<sup>33</sup> The fact that the Hudson's Bay Company was

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<sup>31</sup>S. J. Dawson, General Report, February 22, 1859, Report on the Expedition of Country Between Lake Superior and the Red River Settlement and Between the Latter Place and the Assiniboine and Saskatchewan, 1859, reprint (New York: Greenwood Press, 1968), Dawson did not use page numbers in his report.

<sup>32</sup>Thomas, The Prairie West to 1905, p. 325.

<sup>33</sup>Hind, Narrative of Expedition, 2:42.

currently using the American route to transport supplies supported Palliser's opinion that a Canadian route was not feasible. By 1876, the Dawson route was abandoned as an emigrant route because of the difficulty created in transporting bulky items. As Hind deduced, the only practical time for a road through the area would be when industrialization reached the region. The consensus was that the only solution to developing an all-Canadian route was through the construction of a railway. Canadian leadership opposed any American route for fear of losing emigrants to American territories.<sup>34</sup>

The only major disagreement between Hind's recommendations and those of Palliser was over the boundaries of the proposed colony for the Saskatchewan valley. Hind approved of the western boundary, the Rocky Mountains; however, he challenged Palliser's eastern division. Palliser's boundary left the Lake of the Woods section in the hands of the Hudson's Bay Company. Hind argued that this boundary would deprive the new colony of essential raw materials. Instead, Hind's new colony incorporated an eastern boundary line "conterminous with that of Canada." When the charter was turned over to Canada in 1869, Hind's boundary became the eastern edge of the new province.<sup>35</sup>

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<sup>34</sup>Hind, Narrative of Expedition, 2:213,218; Doughty and Short, ed., Canada and Its Provinces, 5:314; Harris and Warkentin, Canada Before Confederation, p. 266; Thomas, The Prairie West to 1905, pp. 310, 325.

<sup>35</sup>Hind, Narrative of Expedition, 2:232-236.

The bulk of the information gathered and expounded by the Hind-Dawson expeditions supported the Palliser expedition's conclusions. Positive reports on agricultural potential, temperature observations, and studies on the concerns of the native population were the main points on which the Hind-Dawson expedition was in common accord with Palliser's expedition. Throughout their travels both Hind and Dawson commented on the agricultural ability of Rupert's Land. Dawson professed that the Assiniboine valley possessed a rich alluvial soil that would make the region "one of the finest wheat-growing countries in the world."<sup>36</sup> In his assessment of the same region, Hind commented with amazement on the proportional returns during harvest. While travelling along the Assiniboine, Hind observed the harvest of a Mr. Growler. Hind recorded in 1857 that the Growler farm reported a return of 700 bushels of wheat from 63 bushels of seed, 2100 bushels of potatoes from 101 bushels of seed, and 480 bushels of oats from 24 bushels of seed.<sup>37</sup> Based on his observations, Hind proclaimed the entire region north of the Great American Desert as a "Fertile Belt". All along the valleys of the Red River, Assiniboine, and North Saskatchewan he noted that the country abounded in "fertile soil, water, woods, and rich pasturage."<sup>38</sup>

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<sup>36</sup>Dawson to Honorable Provincial Secretary, July 4, 1858, Dawson, Report on the Expedition, Appendix #36.

<sup>37</sup>Hind, Narrative of Expedition, 1:152-153.

<sup>38</sup>Hind, Narrative of Expedition, 2:234.

On the agricultural potential of the area, Hind tended to exaggerate its ability while Palliser was cautious of its capability. Both men agreed on the certainty of the grasslands' ability to handle livestock. On the one section deemed incapable of being productive farm land, Hind supported Palliser on his view that the Great American Desert extended northward into "Palliser's Triangle". Hind concurred that the area was poorly suited for agriculture due to its aridity. Both men were neither right nor wrong. "Palliser's Triangle" became a rich wheat growing section at the cost of huge expenditures on irrigation.<sup>39</sup> Though this part of their respective analysis was refuted, both expeditions confirmed that the Hudson's Bay Company's policy on the agricultural feasibility of Rupert's Land was inaccurate. Even though the Hudson's Bay Company maintained control of the central prairies until 1869, the efforts of the Palliser and Hind-Dawson expeditions brought about an end to Company control and opened the prairies to settlement.

Hind further corroborated Palliser's view on the climate of Rupert's Land. Hind's observations also supported Blodget's theory that the region's climate would support settlements. The Palliser and Hind expeditions concurred that the Red River and Saskatchewan Valleys were

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<sup>39</sup>Hind, Narrative of Expedition, 2:233; Harris and Warkentin, Canada Before Confederation, p. 281; Morton, Manitoba: A History, pp. 99-100; Spry, "Palliser and Western Canada," Geographic Journal, p. 167.



both engulfed in the "northward sweep of the summer isothermal lines which made cultivation of wheat theoretically possible up to the latitude of 56° north in the Peace River Valley."<sup>40</sup>

The last subject of common accord dealt with the future of the Indians. Based on their observations, Palliser, Hind, and Dawson realized that findings produced by the expeditions would have a tremendous impact on the native population. During their excursions, Hind and Dawson noted the same dilemma that had been relayed to Palliser: Indian concerns on the dwindling buffalo herds. Several tribes along the Assiniboine and Saskatchewan Rivers addressed these fears to Hind and Dawson just as they had to Palliser.<sup>41</sup> Though the Hind-Dawson expedition observed similar distress among the Indians, their solutions to the plight of the Indian differed from the recommendations made by the Palliser expedition. Due to the hostile nature of the Plains Indians, Dawson advised that military support would be essential during a colonization period. In dealing with acquisition of Indian lands, Dawson suggested "following the American practice of annual presents and gifts as most useful in dealing with Indians."<sup>42</sup>

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<sup>40</sup>Harris and Warkentin, Canada Before Confederation, pp. 281-282; Morton, Manitoba: A History, p. 100.

<sup>41</sup>Hind, Narrative of Expedition, 2:143; Dawson to Provincial Secretary, July 4, 1858, Dawson, Report on Expedition, Appendix #36.

<sup>42</sup>General Report, February 22, 1859, Dawson, Report on Expedition.

The fear of Indian reprisal was a concern in developing a policy of reparation for seizure of their lands. Hind realized that the Indian view on ownership of land posed a quandary for future colonization. The traditional Indian philosophy held that the land was meant for everyone. Thus the concept of ownership had been forced upon native Americans by European settlers. Nevertheless, many of the Plains Indians still held on to the traditional view. Hind pointed out that there was a growing animosity toward American expansion by the Plains Indians below the 49th parallel. Due to this concern, Hind favored following a policy of equitable retribution. Hind summed up his view when he wrote: "It is also apparent that the calls of humanity, the interests of the new colony, and the claims of the Indians, imperatively demand that the natives should be paid for their lands in such a manner that the future of them may not possess the sad and hopeless aspect which has too long met the gaze of the Indian race in Canada."<sup>43</sup> The answer to whose view was correct, Palliser's, Hind's, or Dawson's on the proper course of action in dealing with the native population surfaced when the Hudson's Bay Company charter was transferred to Canada in 1869.

Shortly after the completion of the Palliser expedition two British-based excursions traversed into the

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<sup>43</sup>Hind, Narrative of Expedition, 2:177.

plains. Each one attributed evidence that either supported or challenged conclusions made by Palliser. The first effort had no official backing, since its original make-up classified the endeavor as a hunting expedition. The itinerary called for travelling from the Red River Settlement westward along the Assiniboine and Qu'Appelle Rivers, then down through the Regina Plains until the 49th parallel was reached. The item that made this outing important was the appearance of Dr. John Rae as its guide. Rae was a noted Arctic explorer and a loyal associate of the Hudson's Bay Company. He had been an employee of the Company since 1833 having served as a surgeon, explorer, guide and confidant.<sup>44</sup>

Since the conclusion of the Palliser expedition, the Company had criticized much of the expedition's findings, citing the point that their explorers like David Thompson and Peter Fidler had already traversed the areas. Though this may have been a reality, any material from explorations of the region had either been forgotten, hidden, or not imperative. The problems discussed at the Select Committee necessitated the collection of current data. With Rae's participation, the criticism leveled against the Palliser expedition by the Company was going to be tested firsthand.

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<sup>44</sup>Irene M. Spry, ed., "A Visit to Red River and the Saskatchewan, 1861, by Dr. John Rae, FRGS," The Geographic Journal, 140 (February, 1974):1-3; Spry, The Palliser Expedition, p. 282.

Based on his background, Rae was able to affix two pertinent objectives to the hunting trip. First, because of his exploration experience, he took it upon himself to add astronomical observations to the excursion. Second, due to his association with the Hudson's Bay Company, Rae was able to examine the validity of the Palliser expedition's observations of the regions to the west of the Red River Settlement. Though he initially had been critical of Palliser's expedition, Rae's examinations of the region were very supportive of Palliser's efforts. While traveling westward to the Qu'Appelle post, Rae commented that he "found the route we travelled over agreeing closely with Captain Palliser's description."<sup>45</sup>

Later, during the trek through "Palliser's Triangle", Rae credited Palliser's accuracy. He wrote: "Water was very frequently scarce and the whole country had that barren, arid appearance so well described by Captain Palliser."<sup>46</sup> Just as Palliser, Hind, and Dawson had observed, Rae concurred that buffalo population in the region was rapidly diminishing as settlements took shape. More important, contrary to Company views, he surmised that the area was indeed fit for settlement due to a "sufficiently good climate and fertile soil." Concluding his observations, Rae supported two of Palliser's recommen-

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<sup>45</sup>Spry, ed., "A Visit to Red River," Geographic Journal, p. 10.

<sup>46</sup>Ibid., p. 13.

dations. First, he agreed that eventual colonization demanded an equitable treatment of the native population, in order to prevent the current problems faced in American territories. Second, Rae believed that the best route for emigrants to the Red River Settlement was through the United States.<sup>47</sup> Because of his expertise, Rae's testimony on the Palliser expedition attested to its validity and accuracy.

The second British-based excursion was a direct response to findings made by the Palliser and Hind-Dawson expeditions. Believing that settling of British North America would take place along the "Fertile Belt" or the valleys of the Red and North Saskatchewan Rivers, the Royal Geographic Society sent two of its members into this region to locate the most practicable route for a highway to the Pacific. The two men were Viscount Milton and Dr. Walter Cheadle. Their exploration took place during 1862 and 1863. Milton and Cheadle started their exploration at Fort Garry by following much of the 1857 Palliser route to Fort Carlton. During their efforts in 1863, they continued westward following the North Saskatchewan into the Rocky Mountains. Instead of relying on the Palliser expedition's preferred routes through the mountains, Milton and Cheadle crossed the Rocky Mountains through Yellowhead Pass. They deemed it the most practical for a road due to its gradual grade which presented no major engineering

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<sup>47</sup>Ibid., pp. 14-15.

problems. In 1864, Rae followed Milton and Cheadle's highway route as he explored the locale for a proposed telegraph line. Rae's survey supported the view that development of Rupert's Land would occur along the "Fertile Belt."<sup>48</sup>

In their analysis for a possible highway, Milton and Cheadle had failed to take a key element into consideration. As Palliser had realized due to his frequent travels in the region, the existing trails from the Red River Settlement to the North Saskatchewan were adequate enough to handle emigrant travel during the early stages of settlement. More important, in determining the best route for a communication line through Rupert's Land, Palliser chose the most direct line to the Pacific as his orders had predicated. As to which route would be developed, the decision came during the surveys for a transcontinental railroad.

The greatest testimony to the accomplishments of the Palliser expedition occurred during the Canadian transcontinental railroad surveys from 1876 to 1877 and during the Boundary Commission surveys started in 1872. Just as the Lewis and Clark expedition had served as guide for subsequent exploratory travels through North America, the Palliser expedition became an equivalent signpost for British or Canadian explorations into British North America.

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<sup>48</sup>Doughty and Short, ed., Canada and Its Provinces, 5:324-328.

Though the idea for a transcontinental railway north of the 49th parallel had preceded Palliser's expedition, it was the efforts of his expedition that made the idea a reality. Once labors to build a road through the Lake of the Woods region had proved disastrous, a renewed effort for a transcontinental railroad appeared in the early 1870's. Because of this development, the Canadian government sent Sanford Fleming into the Canadian west to locate the most feasible and practical route. Since many Canadian leaders favored following the "Fertile Belt" course expounded upon by Milton and Cheadle, Fleming decided to assess all known material on the region before taking to the field. To fulfill his research, Fleming travelled to London to meet with Palliser to discuss the best possible line for a railway.<sup>49</sup>

Based on his meeting with Palliser, Fleming believed that the best route was the one noted by Palliser in his Final Report. Palliser recommended a course across the prairies along the South Saskatchewan or Bow River through Kicking Horse Pass and onto the Pacific. Though Palliser and Hector had failed to discover a route through the Gold Range Mountains west of the Columbia River, a pass named Eagle Pass was discovered in 1865 by Walter Moberly. This pass enabled the construction of a railway through the

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<sup>49</sup>Morris, Story of the Canadian Railway, p. 22; Spry, The Palliser Expedition, pp. 276-277; Spry, "Palliser and Western Canada," Geographic Journal, p. 163; Thomas, ed., Prairie West to 1905, p. 310; Goetzmann, Exploration and Empire, p. 285.

Rocky Mountains to the Pacific. Eagle Pass was in a more direct line with Kicking Horse Pass than Yellowhead Pass, the pass favored by Milton and Cheadle. During his field work Fleming always took along a copy of Palliser's report. He noted that "Mr. Palliser's report was of great use."

Based on his recommendations, the Canadian Pacific Railway followed the route first suggested by Palliser in 1859.<sup>50</sup>

(See map on following page showing location of Eagle Pass with Kicking Horse Pass.)

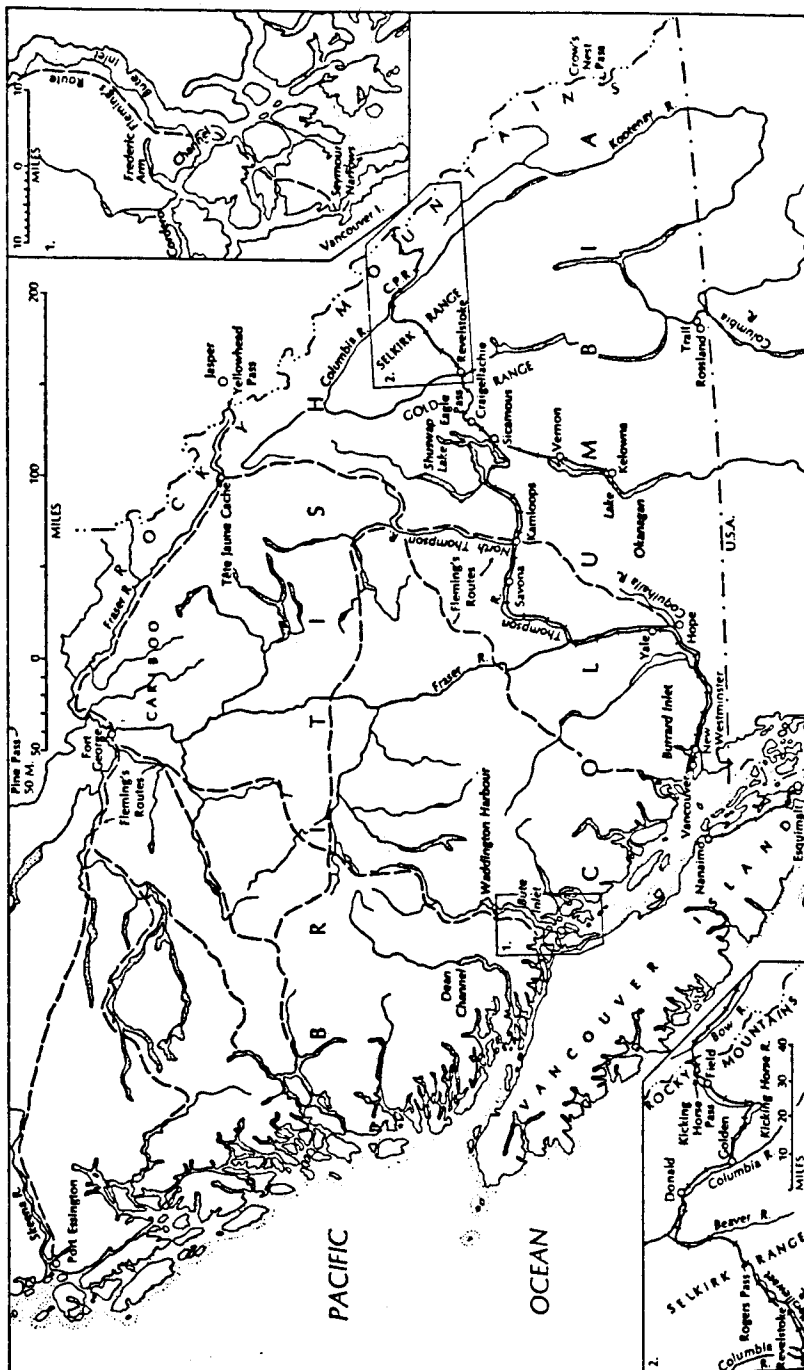
The British Boundary Commission surveys confirmed the contributions of the Palliser expedition in furthering scientific exploration by the British. The surveys also recognized the accuracy of Palliser's boundary observations near Pembina. When Palliser started his expedition in 1857, the United States was far more advanced in its exploratory techniques. Prior to 1857, spurred by its own imperial desires, the American government had sent at least nine major expeditions or surveys into the field. Besides the Lewis and Clark expedition and the four Pacific Railroad Surveys, other United States endeavors included key efforts by Zebulon Pike, Stephen Long, Captain B. L. E. Bonneville, and John C. Frémont. Whether it was to determine the best routes for communication, to strengthen a hold on disputed territory, or to provide a better understanding of western

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<sup>50</sup>Brebner, Canada: A Modern History, p. 309; Morris, Story of the Canadian Railway, pp. 22-25; Spry, "Palliser and Western Canada," Geographic Journal, p. 163; Spry, The Palliser Expedition, pp. 276-277.



ARDUOUS DESTINY: CANADA 1874-1896



(Note Insert 2.)

Canadian Pacific Railway Routes, 1872-1886

lands, these American ventures had promoted a more astute perception on the gathering and assessing of scientific observations. Even though the Hudson's Bay Company had collected data on its lands, none of the efforts were the result of well-organized scientific expeditions. The appearance of the Palliser expedition became the catalyst for rapid advancement in British exploratory techniques.<sup>51</sup>

The formation of the Boundary Commission exhibited the successful impetus started by Palliser's expedition. The British Boundary Commission was led by Captain Donald Cameron of the Royal Artillery. He was assisted by three astronomers. Captain Samuel Anderson of the Royal Engineers was the chief astronomer and his assistants were Captain Albany Featherstonhaugh and Lieutenant William Galwey. Cameron had a contingent of 44 non-commissioned officers and men of the Royal Engineers to aid in the surveying of the boundary. In addition nine Canadians were added to the survey team to assist in the collection of data on topography, natural history, and geology. The American party consisted of five scientific members who were supported by two cavalry units and several infantry units.<sup>52</sup>

Upon meeting with the American Boundary Commission in September of 1872 near North Pembina (today Dufferin),

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<sup>51</sup>Goetzmann, Exploration and Empire, pp. 3-32.

<sup>52</sup>Thomson, "The 49th Parallel," Geographic Journal, pp. 210-212.

Cameron and Archibald Campbell, the American Commissioner, decided on affixing the location of the 49th parallel along the western bank of the Red River. Their marking of the boundary at Pembina "confirmed the observations that had been previously taken by Captain Palliser, Mr. Sullivan, and Mr. Iddings."<sup>53</sup> In observing the British survey teams in the field, Campbell noted in his report to Washington, D. C.: "The British have come out fully prepared to keep two observing parties in the field.... The British... are in every respect better provided.... Their instruments are new and of the best quality.... Their detachment of sappers alone gives them a great advantage over us by having a disciplined body of men regularly trained... to fulfill the subordinate duties of the commission."<sup>54</sup> Based on these comments, it is apparent that British exploratory techniques had come a long way in a short time.

In 1859 at the end of his field work, Palliser met with the American members of the Boundary Commission. They were determining the boundary line from the Pacific coast to the Rocky Mountains. From this meeting Palliser noted that the Americans were using "the zenith telescope for laying down the boundary line." The zenith telescope was

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<sup>53</sup>Thomson, "The 49th Parallel", Geographic Journal, p. 211; Spry, "Palliser and Western Canada," Geographic Journal, p. 163.

<sup>54</sup>Thomson, "The 49th Parallel," Geographic Journal, pp. 211-212.

used to observe two pairs of stars, one north and one south of the zenith but in the same declination. A far more accurate reading could be taken, making the instrument more reliable than the transit instruments used by Palliser. Based on his test of the zenith telescope Palliser commented that he was greatly pleased with the instrument. However, he noted that it was not, to his knowledge, being used by the British. Thirteen years later, the British Boundary Commission was using the zenith telescope, giving testimony to the Palliser expedition for pointing out the need to upgrade existing modes, means, and equipment for exploration.<sup>55</sup> In a tribute to the endeavors of the Palliser expedition, Captain S. Anderson in charge of the topographic observations of the Boundary Commission remarked in an address to the Royal Geographic Society in 1876 that "...the extensive explorations of these gentlemen in 1857 and the two following years formed the basis of all subsequent surveying operations in the northwest territory."<sup>56</sup>

The efforts of the Palliser expedition had indeed been fruitful. The subsequent expeditions into western Canada verified the scientific, geographic, and geological confirmations made by Palliser, Hector, Bourgeau, Blakiston, and Sullivan. A direct by-product of the expedition's

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<sup>55</sup>Palliser Journal, October 11, 1859, Spry, ed., Palliser Papers, pp. 492-493; see also n. 1, p. 492.

<sup>56</sup>Spry, "Palliser and Western Canada," Geographic Journal, p. 163.

success was the trend by the British government to conduct organized, efficient, scientific expeditions in her domains. The Palliser expedition's labors solidified the British hold on western Canada at a crucial time. Moreover, the expedition's achievements not only had an impact on future exploratory endeavors, but its recommendations and findings had a significant impact on coming developments in Rupert's Land. Though none of the expedition's leaders was involved in any direct way with later events in western Canada, their work shaped the destiny of Canada West.

## CHAPTER VI

THE PALLISER EXPEDITION'S IMPACT ON WESTERN CANADA  
AND BRITISH EXPLORATION HISTORY

By 1870 the accuracy of Palliser's recommendations started to surface. Just as the geological-scientific assessments of the expedition came to be verified, many of Palliser's recommendations attested to the expedition's perceptive ability. Well into the twentieth century, the efforts of the Palliser expedition produced a series of developments that culminated in both positive and negative consequences for Canadian history. The positive events were evidenced in the agricultural and industrial transformation of Rupert's Land. The negative incidents confirmed the fears expounded by Palliser and Blakiston. Failure to develop a conservation policy resulted in the near extinction of the buffalo. The transfer of the Hudson's Bay Company charter to Canada bore out Palliser's prediction that problems with the native population would follow. Palliser feared that Canada could not effectively govern all of Rupert's Land. Though early conditions supported this claim, as time passed the Canadian government realized the value of the recommendations offered by the Palliser expedition. As settling of the prairies became a

reality, even the Canadian government followed Palliser's advice. Therefore, the expedition's value to exploration history cannot be overlooked. The efforts of the Palliser expedition aided by the organizational influence of the Exploration Committee, marked the start of a new era in British exploration policies. Though Palliser's career as an explorer ended with the completion of the controversial Final Report in 1863, Blakiston, Hector, and Sullivan continued to pursue the new exploratory trends developed by the Palliser expedition.

Contrary to his recommendation of creating a crown colony out of Rupert's Land, the British government revoked the charter of the Hudson's Bay Company in 1869 and transferred the title of the land to the Canadian government. As mentioned before, Palliser believed that the distance between Canada and the Red River region made effective Canadian rule impossible at this time. Instead he felt that a transition period was needed before settlements should be developed. Managing Indian affairs posed a challenge. Based on his field experiences, Palliser believed that if given time the native population (both Indian and métis) was capable of adapting to civilized ways. Aware of Indian concerns for their future and of their willingness to adopt farming methods, Palliser favored the creation of an Indian council which would protect Indian interests and oversee Indian education. In place of his recommendation the British government placed

the fate of the native population into the hands of the Canadian government. Before the province of Manitoba was created in 1870, problems with the native population had already started.<sup>1</sup>

Faced with uncertainty and fearing the loss of their way of life, métis population around the Red River Settlement reacted violently to the sudden transfer of Rupert's Land to Canada. The métis around Red River Settlement were used to a life of movement, evidenced either in their annual buffalo hunts in the prairies or in their employment by the Hudson's Bay Company as voyageurs. Faced with the division of the prairies into farmlands, something foreign to their way of life, the métis were confronted with an abrupt change without the luxury of any preparation. In late 1869 the métis prepared to resist the changes which awaited them. The leader of the resistance was Louis Riel. Riel was a métis who had been educated in Montreal. The rebellion was centered around the Red River region. Though the resistance was put down, the question of what to do with the native population still existed. The Canadian answer was the signing of a series of treaties with the Indians while the métis were generally ignored.<sup>2</sup>

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<sup>1</sup>Palliser to Labouchere, March 13, 1858, Spry, ed., Palliser Papers, pp. 517-519; Graham, Concise History of Canada, pp. 137, 143; Canada One Hundred, pp. 65-66.

<sup>2</sup>Canada One Hundred, p. 66; Harris and Warkentin, Canada Before Confederation, pp. 280, 284.



Between 1871 and 1877 the Canadian government negotiated seven treaties with the Indians of Rupert's Land. In most cases the Indians gave up their claims to the lands from Lake Superior to the Rocky Mountains. The Plains Indians ended up on reservations. The treaties did declare that the reserved lands could not be relinquished without the consent of the Indians. In 1876, the Canadian government passed the Indian Act which provided specific regulations for the Indians. A basic form of self-government was recognized. Though the mechanics for Indian relations were not ready at the transferral of the chartered lands, the government of Canada quickly adopted effective measures when the warnings of Palliser surfaced in the first Riel Rebellion. As a result, steps were taken to provide Indians with instruction on agricultural techniques and to ease the transition to a new way of life. Unlike the problems faced by the government of the United States, Canada did not have any Indian wars in Rupert's Land. Adhering to the recommendation made by Dawson, the Canadian government coupled the enactment of Indian legislation with the creation of the North West Mounted Police. Thus, before any settling of Rupert's Land occurred, law and order had preceded it.<sup>3</sup>

The only other problem to besiege the area came as a direct result of the construction of the Canadian trans-

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<sup>3</sup>Canada One Hundred, pp. 65-67; General Report, February 22, 1859, Dawson, Report on Expedition.

continental railroad. Once tensions had eased after the transfer of Rupert's Land to Canada, the native fear of rapid settlement in the plains failed to materialize. Ignoring the recommendation of Palliser once again, the Canadian government went ahead with the construction of a road to the Red River Settlement via Dawson's route. Built in 1869, the road proved to be impractical for use as either a commercial or emigration route. Though it found Palliser's appraisal of the impracticality of building a road through the Rainy Lake region true, the Canadian government refused to use the American route favored by Palliser. Instead, in 1871 the Macdonald government pushed for the construction of a transcontinental railroad.<sup>4</sup> Initially, the Canadian government viewed the route along the "Fertile Belt" and across the Rocky Mountains through Yellowhead Pass as the best line for the railroad. However, after Fleming completed his surveys, the Canadian Pacific Railway approved the southerly route preferred by Palliser. The reason for choosing this route was one based on economics. The southerly route across the prairies was simpler, less expensive, and it placed the Canadians in direct competition with the United States. By 1880 the railway had reached modern day Calgary. Hector's Kicking Horse Pass was crossed in June of 1883.

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<sup>4</sup>Sir John A. Macdonald was the first prime minister elected to head the Dominion of Canada. He took office in 1867 and established a coalition government, joining Conservatives and Liberals.

The entire line was completed on November 7, 1885. The efforts of the Palliser expedition had once again proved their worth.<sup>5</sup>

The construction of the Canadian Pacific Railroad hastened the end to the open prairies. It also marked the demise of the buffalo. Calls for conservation measures had gone unanswered. Though both Palliser and Blakiston had urged quick action, neither the British nor the Canadian governments legislated any quotas on the number of buffalo allowed for annual killings. More important, the building of the railroad reinforced the inevitable, the end of the native population's way of life.

The disappearance of the buffalo doomed the nomadic life of the Plains Indians and threatened the annual hunts of the métis. Since no visible measures had been taken to improve their lot, the métis turned once again to rebellion in 1885. To lead the rebellion, the métis sought out Louis Riel who had been living in Montana. With Riel in charge, groups of métis and small bands of disenchanted Indians ravaged the lands around the Saskatchewan Rivers. Using the new railroad, the Canadian government quickly transported troops to the area. The rebellion was destroyed and Riel was captured. Found guilty of treason, Riel was executed in November, 1885. The last threat to settling

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<sup>5</sup>Brebner, Canada: A Modern History, pp. 308-310; Graham, Concise History of Canada, p. 137; Thomas, ed., Prairie West to 1905, p. 310.

the prairies had ended. For a second time, problems associated with warnings of Palliser on failing to deal with native concerns had occurred. With impending settlement of the prairies facing them, the Canadian government directed its attention to handling properly the concerns of its native population. A positive result of the Second Riel Rebellion was that the government showed a willingness to meet with the métis to settle their disputes.<sup>6</sup>

Indirectly, the Second Riel Rebellion served as an inspiration to western settlement. As Peter Erasmus noted in Buffalo Days and Nights: "The Rebellion of 1885 brought out many young easterners in the volunteer army who saw the country and vast area of open farm land. Some of them stayed and those who went back told of their experiences and fired the imagination of others who became prospects for the treeless prairie that was just waiting for the plough to turn it into fertile grain fields."<sup>7</sup> The shattering of the "frost kingdom" image accomplished by Palliser opened up to plains to their real potential. Though subsequent expeditions supported the views of Palliser and his associates, all observations were on hold until settlers in large numbers proved that the land was capable of agricultural productivity.

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<sup>6</sup>Canada One Hundred, p. 68; Harris and Warkentin, Canada Before Confederation, p. 284; Palliser Journal, October 6, 1857, Spry, ed., Palliser Papers, p. 158, n. 2.

<sup>7</sup>Erasmus, Buffalo Days, p. 301

With the opening of the frontier in 1901 to free homesteads, Rupert's Land quickly developed into a bustling agrarian kingdom. By 1911 the population of the prairies reached 1,300,000, a tremendous jump from 400,000 in 1901. During this period of rapid growth, the provinces of Alberta and Saskatchewan were created in 1905. As metropolitan centers emerged, the mineral reports established by Hector were confirmed by additional geological surveys. Using this data, industrial plants and mining operations followed the agricultural growth. The once sheltered region, held by the monopoly of the Hudson's Bay Company for close to 200 years, was now an integral part of the Dominion of Canada. As the expedition's members prepared their final report, they could not have envisioned the catalyst that their expedition would be for subsequent explorations and for future developments of Rupert's Land.<sup>8</sup>

In England, Palliser, Hector, and Sullivan commenced with their final task, constructing a final report. Faced with criticism on the financial expenditures and with rumors that the expedition was nothing more than a grandiose hunting excursion, the group spent hours gathering and organizing their materials. Palliser had exceeded his budget. £7,500 had been appropriated for the three seasons, but the final costs had reached £13,000. Hoping to support the point that the money had been well spent, a comprehensive study of Rupert's Land was produced after two years of

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<sup>8</sup>Graham, Concise History of Canada, pp. 143-145.

diligent analyses. On May 19, 1863, Palliser presented to Parliament the "Blue Book Report on the Palliser Expedition of British North America." Included in the report were journals, astronomical observations, assessments of the scientific findings, recommendations, and in 1865 a detailed map which traced the travels of the entire expedition. The report was acclaimed a success! Even its critics marvelled at the report's diversity. Though officials of the Hudson's Bay Company still claimed that much of the expedition's efforts were nothing more than an emulation of prior endeavors, the report forced the Company to cancel its traditional policy of keeping valuable data concealed. Accolades were awarded to the expedition even before it had completed the field work in British North America. Aware of the scientific accomplishments already noted by the Palliser expedition, the Royal Geographic Society awarded Palliser the Patron's Gold Medal in 1859.<sup>9</sup>

The Palliser expedition personified the new stage of British exploration. Instead of being content to claim land for God and King, the British government shifted its goals and objectives from economics to political and scientific expeditions. The age of relying on monopolistic companies to maintain both exploration and governing of British lands was brought to an end by the Palliser

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<sup>9</sup>Spry, ed., Palliser Papers, pp. cxxviii-cxxxi; Spry, "Palliser and Western Canada," Geographic Journal, pp. 162-163.

expedition. With the formation of the Palliser expedition, the exploration format of the British had completed a structural swing. The impetus was now placed on determining how imperial lands could best serve the nation. Whether it was for determining the best sites for settlements or for solidifying the control of claimed lands, the Palliser expedition became the standard for future British explorations. The subsequent careers of Blakiston, Sullivan, and especially Hector epitomized this trend started by the Palliser expedition.

Blakiston was the first member of the Palliser expedition to continue his exploratory career. After his resignation from the Palliser expedition, he returned to England and quickly followed his regiment to China. Filled with a desire to travel and explore, Blakiston took it upon himself to put his recently acquired skills to work. Since determining a region's value was now a definite goal associated with exploring, Blakiston embarked on an examination of the Yangste River. He recorded his observations in a book that received critical acclaim from the Royal Geographic Society. For his efforts, Blakiston was awarded the Patron's Medal by the Royal Geographic Society. Following his adventures in China, Blakiston spent time in the northernmost island of Japan. Here, he pursued a study of the island's birds. Because of his efforts, Blakiston was proclaimed to be one of the leading ornithologists on Japanese birds. Before he retired from an

active exploratory life, Blakiston travelled across Siberia by dog sled and visited the islands of Australia and New Zealand. Blakiston spent his last years living in the United States. He occupied much of his time by frequenting the Smithsonian Institution, a place that was knowledgeable of his expertise in ornithology.<sup>10</sup>

With the final reports completed, Hector was placed in charge of a geological survey of the province of Otago, New Zealand. Murchinson realized that Hector was an excellent geologist and he used his influence to award Hector with his own survey. In New Zealand, Hector put his experience quickly to work. Just like Blakiston, Hector noted the value of the land and pursued the collection of data that would assist in finding a better communication route across the island. His exploits included the discovery of a new, shorter route through the Southern Alps in Otago and the location of gold and coal deposits. For his efforts, Hector became the first director of the Geological Survey of New Zealand. During his field efforts in Otago, Hector was assisted by Sullivan who was serving as a reporter for the Otago Daily Times. Hector valued the aid of Sullivan. From this point, the career of Sullivan is questionable. Nevertheless, like Blakiston and Hector, Sullivan's attempt to continue on with an exploration career attested to the significance of the

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<sup>10</sup>Spry, ed., Palliser Papers, p. lxxxv.



Palliser expedition.<sup>11</sup>

Palliser's life as an explorer ended with the expedition. Now head of the family estate due to his father's death in 1862, Palliser dedicated most of his time to being the country squire. He rarely left the region around Comeragh House. His only return to North America came during the Civil War as a blockade runner for Confederate forces. Yet, his role as the leader of the Palliser expedition provides him a place in the annals of western exploration history. His expertise in dealing with the native population was a valuable asset. During the expedition's three years in the field, there was not any loss of lives or horses to the Indians.<sup>12</sup> His leadership promoted effective performance of duties, successful handling of crises, organized reports, and fulfillment of predetermined goals or objectives. Remarking on the qualities of Palliser, Peter Erasmus noted: "The men all respected the captain's authority, not because he was their boss, but due to his sincere concern for their welfare. The character of the man himself and his attitudes of friendly equality aroused a loyalty that was greater than mere respect. Every man was stirred to give his best to any task assigned to him."<sup>13</sup>

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<sup>11</sup>Ibid., pp. cxxxiii-cxxxiv.

<sup>12</sup>Ibid., p. cxxxv.

<sup>13</sup>Erasmus, Buffalo Days, p. 70.

The only scientific member to return to the sites of the Palliser expedition was Hector. In 1903 he visited the western provinces of Canada. Hector had a chance to see how accurate the expedition's findings had been. He revelled at the advancements produced by the efforts of the Palliser expedition and by the subsequent surveys that followed and supported their observations. His visit brought him to the plains in the midst of the great land rush. The agricultural and industrial growth of the region served as lasting testimony to the true value of the Palliser expedition. Hector's only disappointment during his travels through western Canada came when his son died unexpectedly from an appendicitis attack. Hector was forced to return home before he had a chance to travel by rail through the pass where the kicking horse had so nearly killed him almost fifty years before.<sup>14</sup> Though he never had the chance to see Kicking Horse Pass or any of the other familiar features of the Rocky Mountains, the monuments of the Palliser expedition were and are still evident in the geographic features identified by the expedition. In viewing a map of western Canada, the names Kicking Horse Pass, Kananaskis Pass, Mount Ball, Mount Hector, Mount Bourgeau, Mount Blakiston, Mount Sullivan, Palliser River, and "Palliser's Triangle" testify to the exploration legacy credited to the Palliser expedition.

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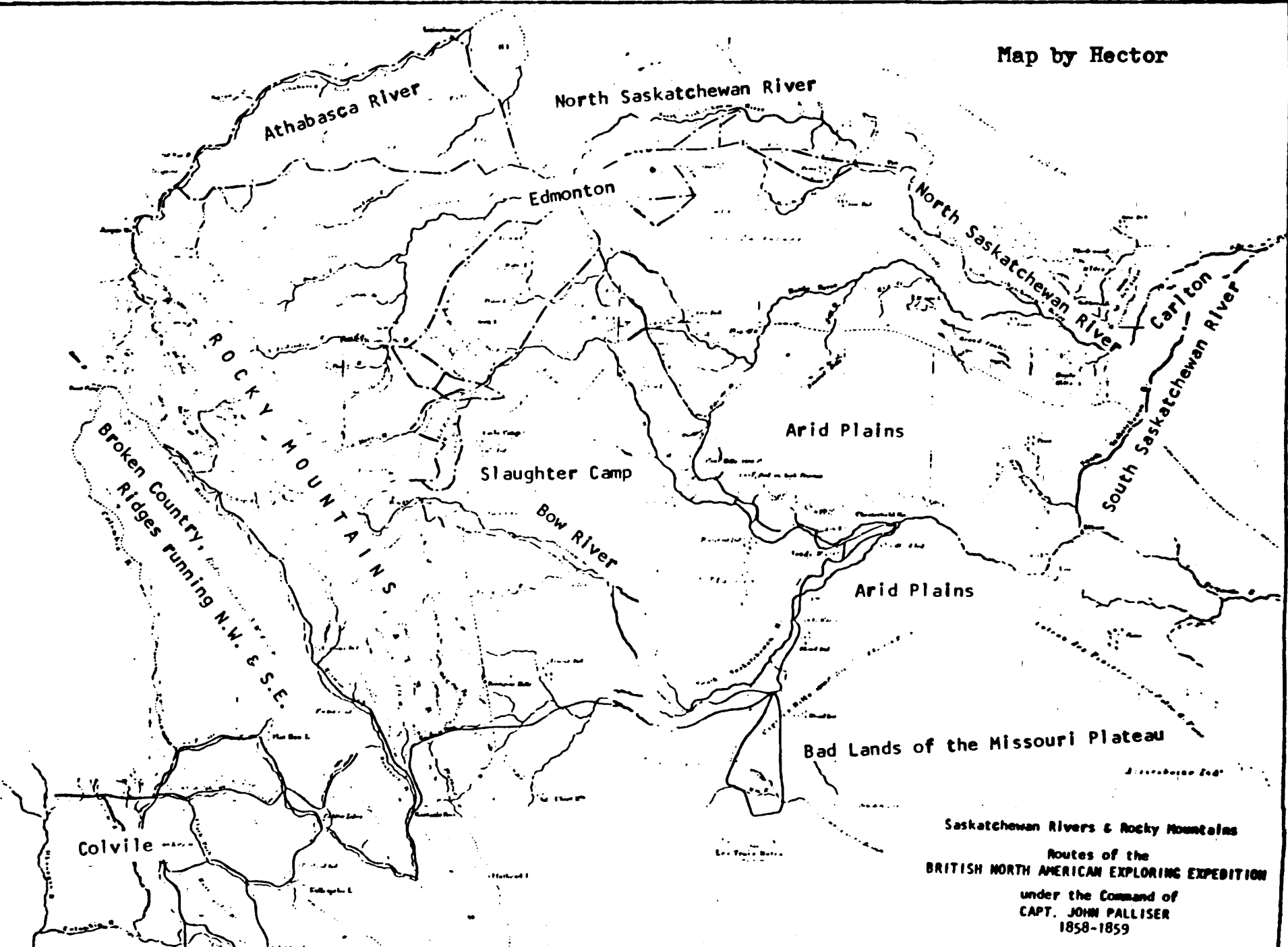
<sup>14</sup>Spry, ed., Palliser Papers, p. cxxxiv.

Though Palliser had envisioned a second solitary ramble in 1857, his proposed plan prompted a sophisticated expedition which resulted in a successful imperial response by the British government. The growing fear that events similar to the Oregon boundary dispute would occur along the rest of the 49th parallel convinced the British government that a time had come to respond to American expansionism. To offset its uncertainties, the simple plan of John Palliser blossomed into a complex scientific expedition, accompanied by clear, precise objectives. Reflecting trends established by American exploration, the Palliser expedition took to the field in 1857 to complete a three year examination of British North America, to overcome United States advantages in exploration, and to collect a variety of scientific data. The expedition's efforts proved fruitful. This imperial response by the British government produced a series of positive results: Rupert's Land remained in the British empire; an effective scientific expedition to emulate was molded; the Hudson's Bay Company's monopolistic dominance of a bountiful land was terminated; and the way for western settlement of Canada was instituted.

## APPENDIX

- A-1 Hector's Map of British North America
- A-2 Hector Map
- A-3 Palliser Map of White Fish River
- A-4 Sullivan Map of Kootenay Passes
- A-5 Blakiston Map of Kootenay Passes
- A-6 Section of Final Map of Expedition completed by Edward Stanford in 1865
- B-1 Sample of Hector's Sketches
- B-2 Hector's Illustrations of the Roche Percee
- C-1 Sample of Hector's Profile Map
- C-2 Examples of Charted Astronomical Observations

Map by Hector

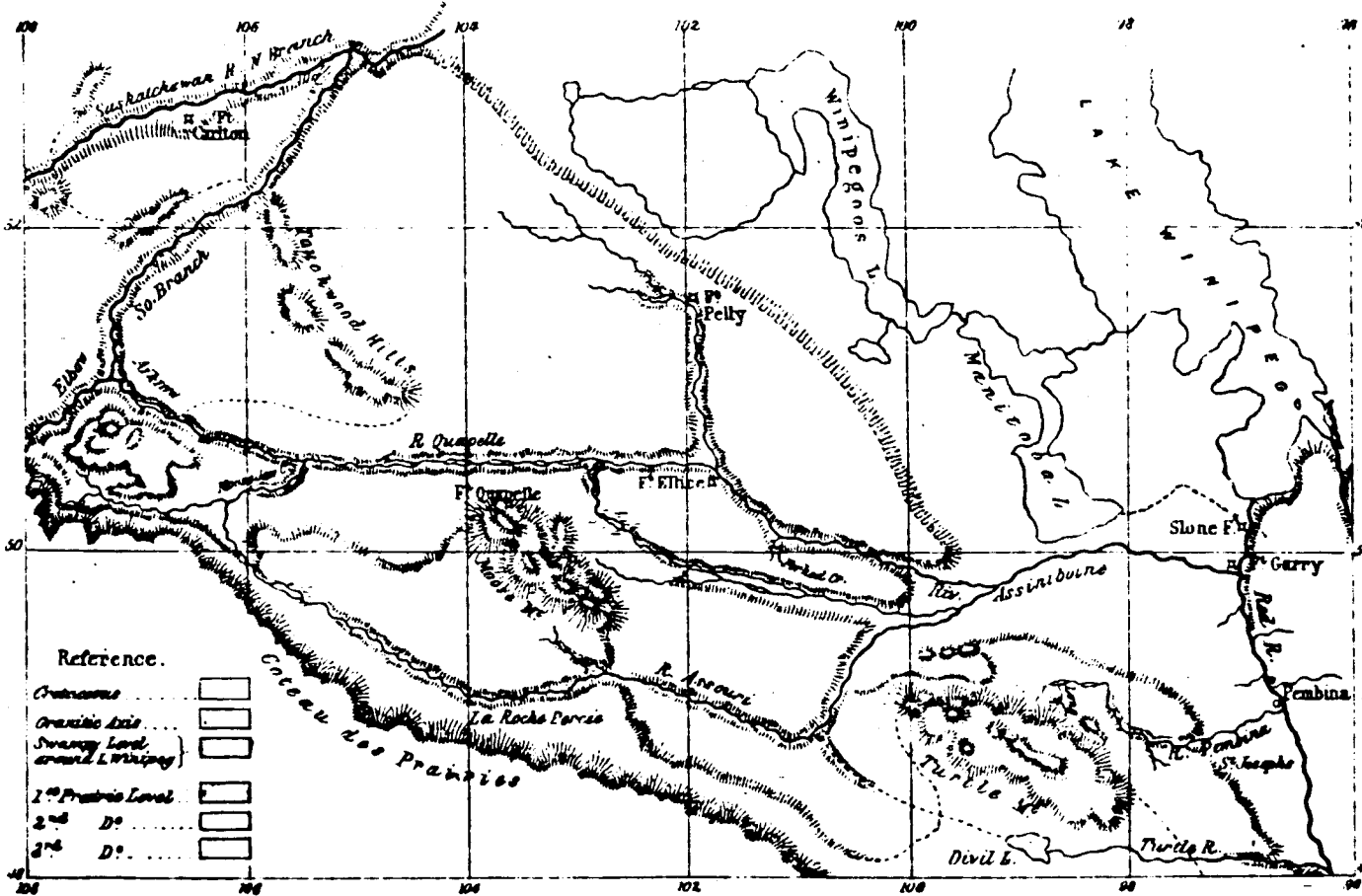


Saskatchewan Rivers & Rocky Mountains  
 Routes of the  
 BRITISH NORTH AMERICAN EXPLORING EXPEDITION  
 under the Command of  
 CAPT. JOHN PALLISER  
 1858-1859

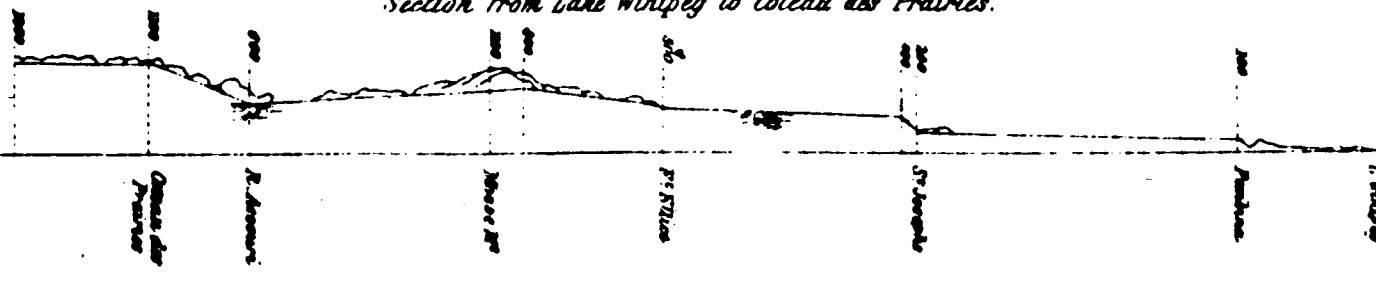
Sh. 8

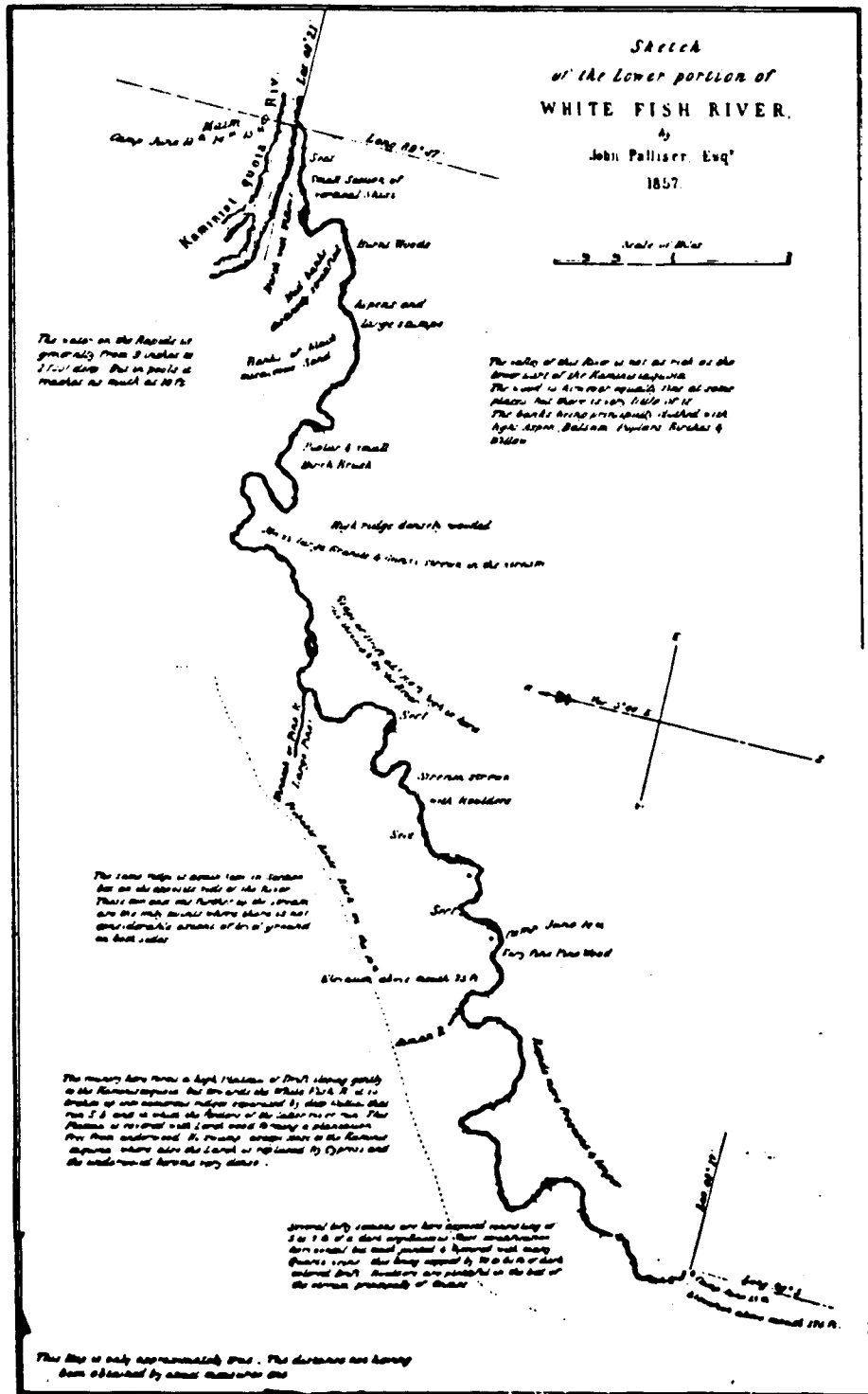
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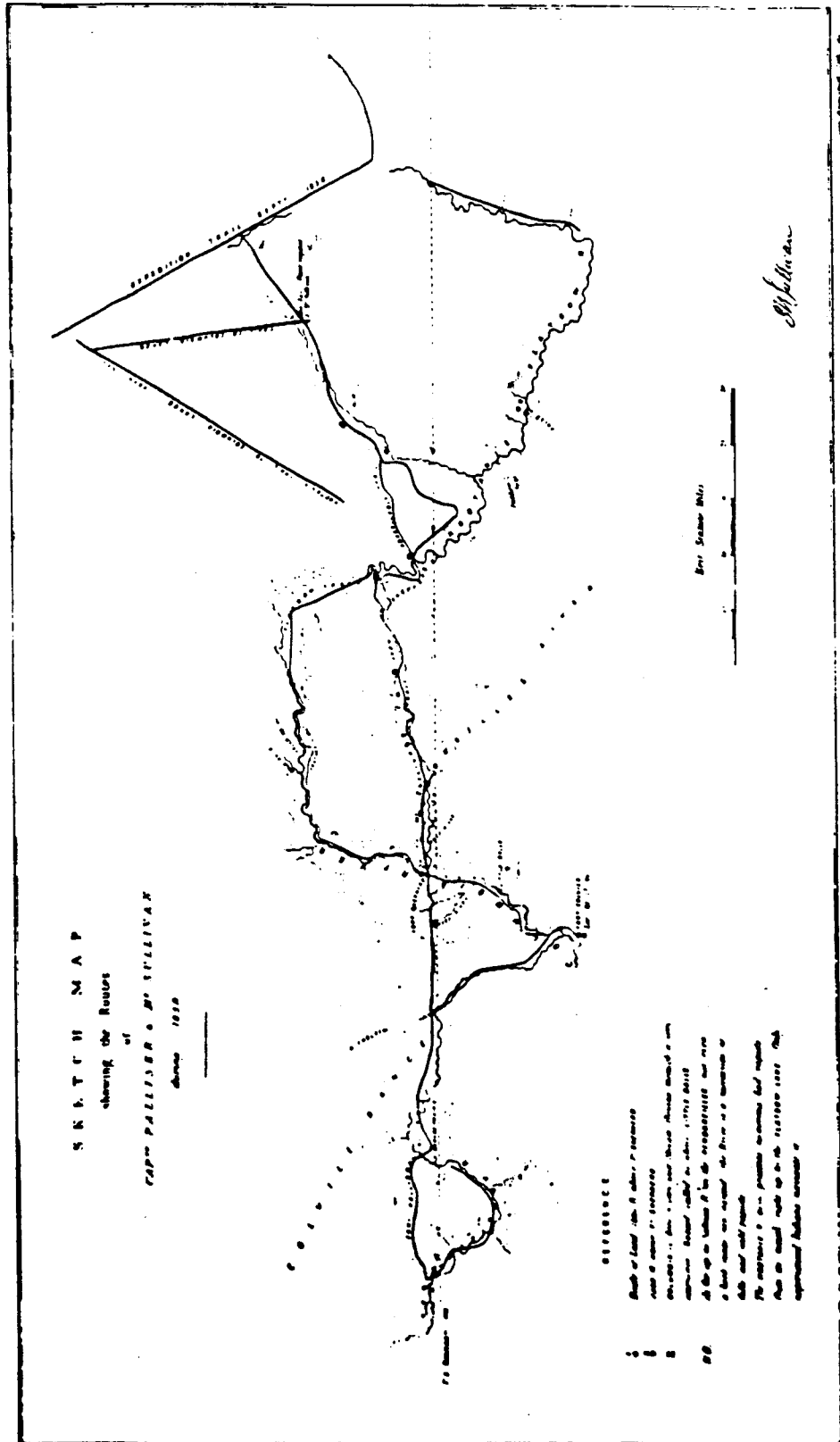
Map of Winnipeg Lake Basin. Showing the distribution of the Superficial deposits.



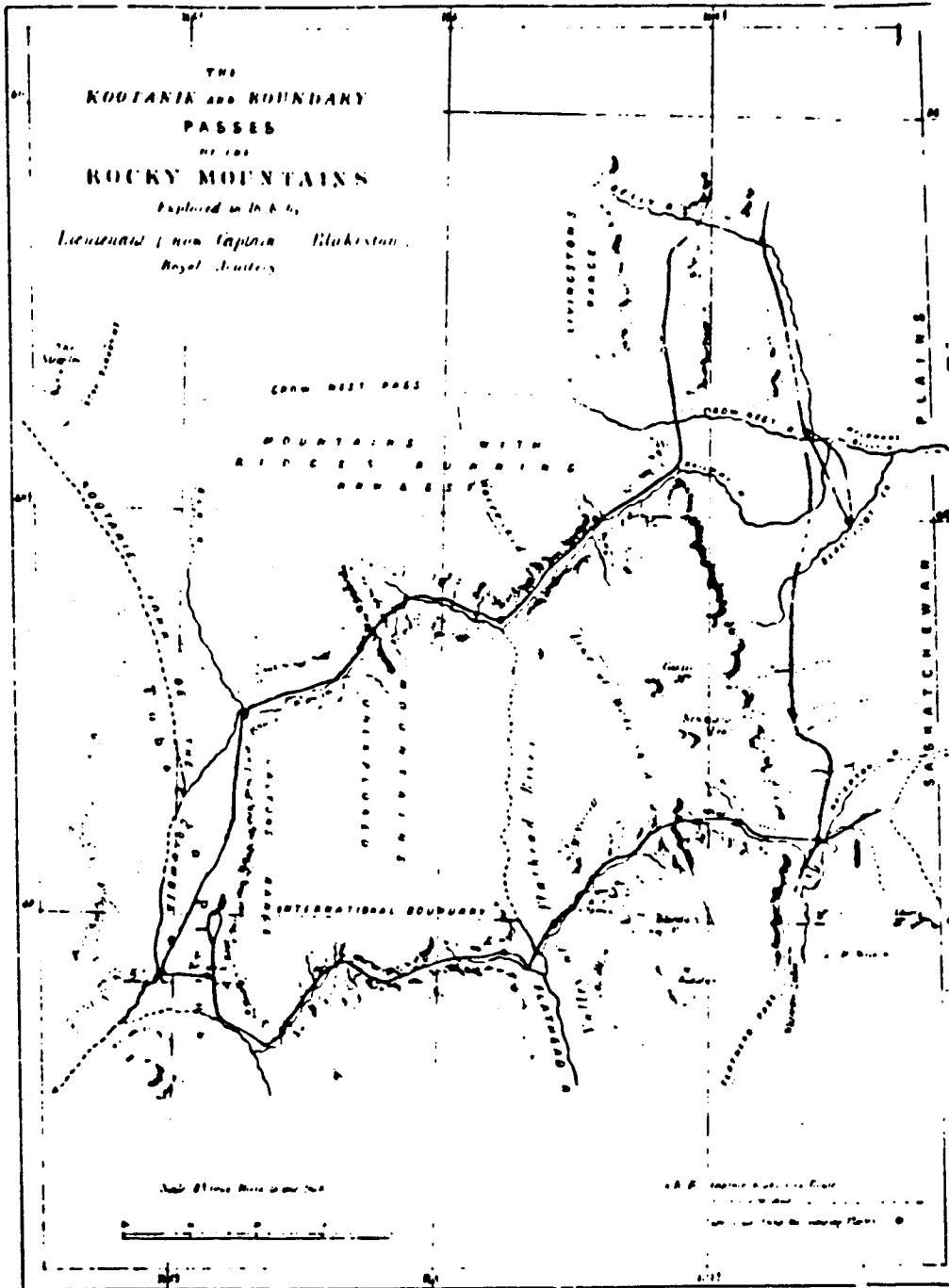
Section from Lake Winnipeg to Coleau des Prairies.



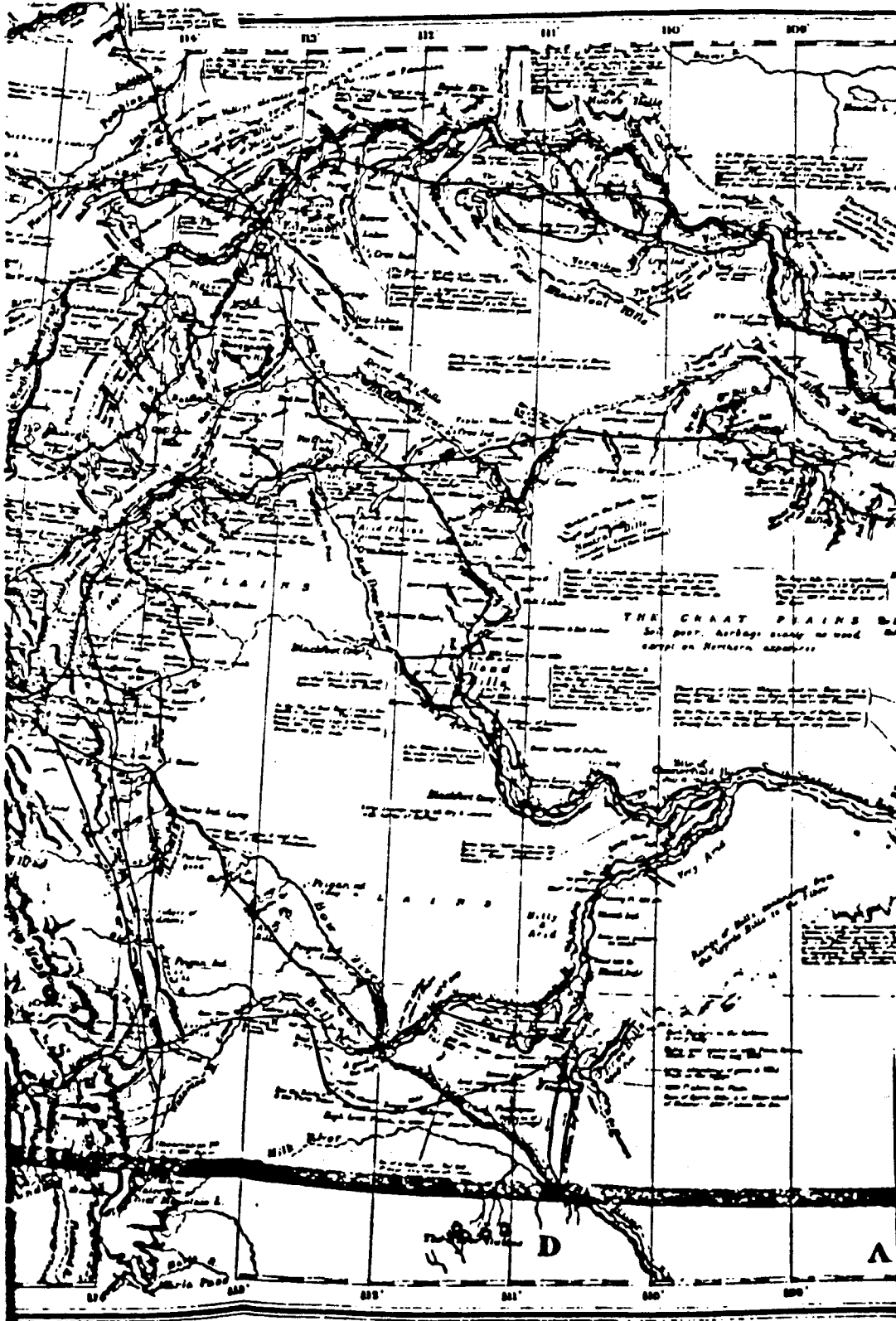




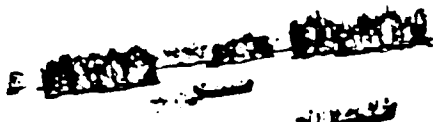




Section of Final Map of Expedition completed by Edward Stanford in 1865



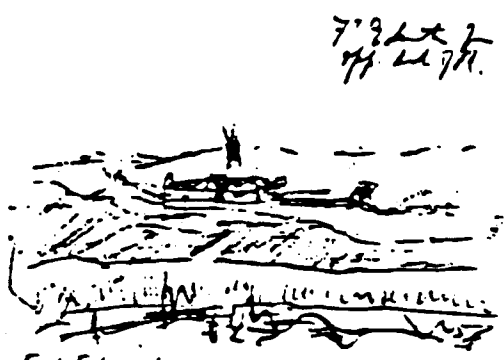
Sample of Hector's Sketches



*On the Canoe Route West from Lake Superior*



*The Elbow of the South Saskatchewan*



*Fort Edmonton*



*A Buffalo*



*A Winter Camp*



*Simpson Pass December 1858*

SKETCHES FROM HECTOR'S NOTEBOOKS

*The Hocken Library, University of Otago*

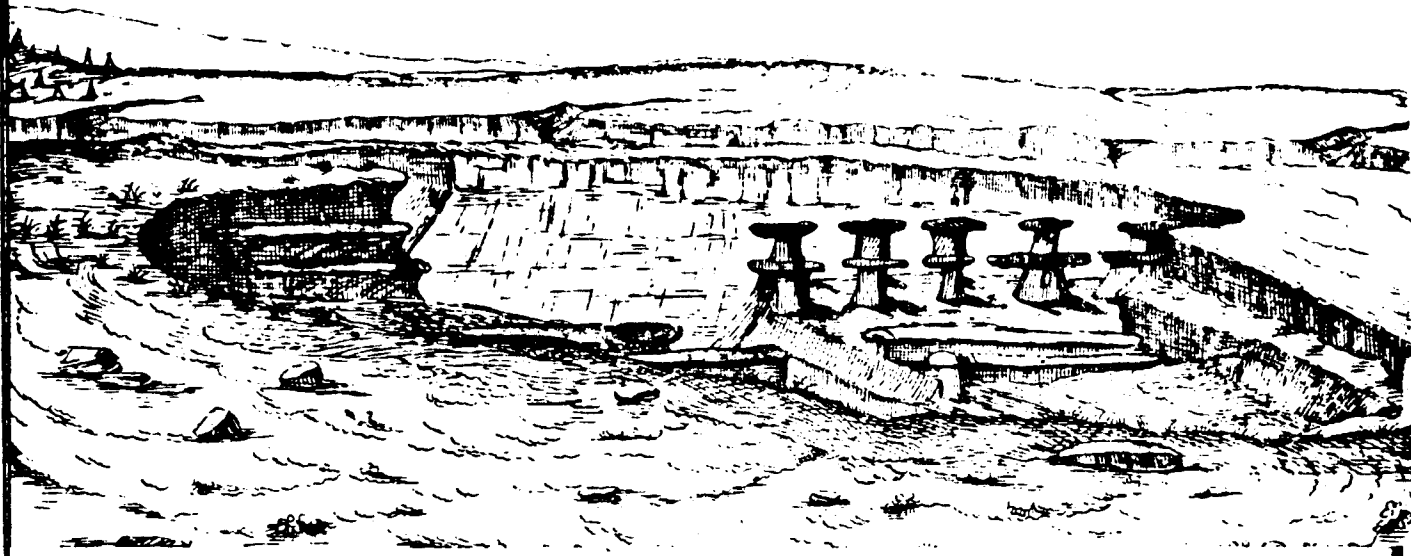
Hector's Illustrations of the Roche Percee

Sh. 7

Sh. 7

*Sandstone Concretions.  
Creek on Assouri R. (Roche Percée.)*

*J. Hector, 1858.*



Sh. 6

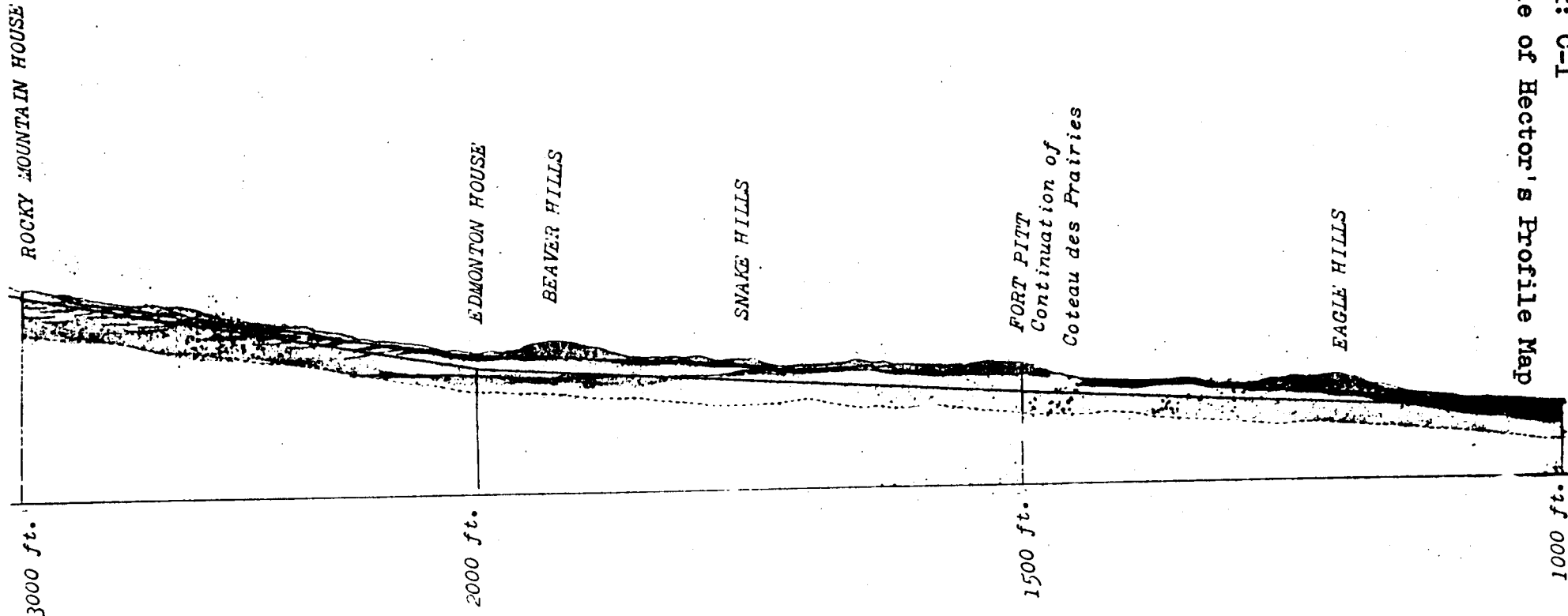
Sh. 6

*Section of the Valley of the Assouri R. at "La Roche Percée."*

*J. Hector, 1858*



SECTION - SASKATCHEWAN RIVER. NORTH BRANCH. FORT CARLTON TO MOUNTAIN HOUSE



DRIFT. Coarse Land, Shingle &c with Boulders, consisting of large angular and rounded fragments of Magnesian Limestone and Azoic rocks.

Beds of Clay, Shale, Sandstone and Limestone with seams of Coal.  
Upper Sandstones, greenish-grey. Lower Sandstones, red.

CHALK, of Nicollet. Calcareous and sandy Clays with Septaria which contain Fossils, viz: Bacutites, Inoceramus, Cuculea, Lucina &c.

These beds vary from Ash Grey to a purple brown.

*J. Hector. 1858*

Examples of Charted Astronomical Observations

Enclosure 4 in No. 9.

RECORD of ASTRONOMICAL OBSERVATIONS during Seasons 1857-58.

LONGITUDES OBTAINED BY OBSERVATION.

Locality.	Latitude by Observation or by Account.	Approximate M. T. P.	Mean of Chronometer Times corrected for E. on G.M.T.				Mean of Observation Altitudes, corrected for.	Longitude.
			D.	H.	M.	S.		
	N.	1857.					W.	
Fort William, H.B.C.	48 24 5	June 13, 8 A.M.	13	1	43	39	68 44 7	89 24 50
Trembling Portage	48 30 0	" 21, 9 A.M.	21	2	47	35	88 45 41	89 58 48
Dog Portage (w. end)	48 45 0	" 22, 9 A.M.	22	2	31	59	83 39 51	89 53 45
Dog River (r. bank)	48 55 0	" 23, 8 A.M.	23	2	16	59	78 30 39	89 53 48
Savannah Portage	48 53 0	" 25, 8 A.M.	25	2	7	17	74 43 35	90 13 46
Barrier Portage	48 45 0	" 26, 5 P.M.	26	10	34	15	61 2 23	90 50 24
French Portage	48 40 0	" 27, 10 A.M.	27	4	4	33	109 19 37	91 11 32
Camp Portage	48 25 0	" 29, 7 P.M.	29	13	24	48	11 48 20	92 27 28
	48 27 0	" 30, 7 A.M.	30	1	13	58	53 12 49	92 30 4
Fort Frances, H.B.C.	48 36 15	July 1, 6 P.M.	1	1	55	8	40 59 27	93 33 33
Rainy River	48 50 0	" 3, 9 A.M.	3	3	43	36	99 13 31	94 14 19
Portage de Bois	49 26 0	" 4, 9 A.M.	4	2	42	42	75 36 39	94 48 7
Winnipeg River	49 55 0	" 5, 8 A.M.	5	3	2	4	84 34 31	94 45 30
Ditto	50 15 0	" 6, 8 A.M.	6	2	55	52	81 31 54	95 17 19
*Winnipeg Lake	50 33 48	" *	*	*	*	*	*	96 33 56
Ditto	50 23 0	" 11, 8 A.M.	11	2	35	26	72 21 2	96 30 25
Upper Fort Garry	49 52 6	" 16, 8 A.M.	16	2	47	47	74 49 20	96 52 27
Post on boundary line, near Pembina	48 59 12	" 25, 3 P.M.	25	10	15	1	73 43 58	96 46 13
Prairie	48 52 0	" 28, 3 P.M.	28	10	39	34	65 34 4	97 17 29
St. Joseph Prairie	49 10 0	See separate paper.						
Ditto	49 8 0	July 31, 4 1/2 P.M.	31	11	5	27	56 51 56	98 10 39
Ditto	49 8 0	Aug. 2, 4 P.M.	2	10	3	51	76 28 2	98 33 45
Ditto	49 8 0	" 3, 5 P.M.	3	11	6	37	56 18 32	98 47 15
Ditto	49 8 0	" 4, 8 A.M.	4	1	43	38	45 42 32	98 48 24
Ditto	49 0 32	" 5, 4 P.M.	4	10	31	20	67 37 43	99 1 25
Turtle Mount, E. Elk.	49 0 0	" 5, 5 P.M.	5	11	46	16	43 6 52	99 16 50
Ditto	49 6 0	" 7, 5 P.M.	7	11	21	48	50 23 27	99 21 43
Fort Ellice, H.B.C.		See separate paper.						
& Saskatchewan elbow of S. branch		See separate paper, pp. 52, 53, 54						
Qui'Appelle Lakes, 12 miles S. of	50 20 0	Sept. 13, 3 P.M.	13	10	26	33	49 31 28	103 45 45
Saskatchewan, S. branch of Red Deer Lakes, 6 miles N. of	50 52 48	" 27, 3 P.M.	27	11	32	31	25 19 17	107 41 7
Prairie	51 20 0	Oct. 3, 9 A.M.	3	3	43	15	20 27 9	107 32 15
Ditto	51 40 0	" 4, 9 A.M.	4	1	14	59	26 13 30	107 37 51
Ditto	52 5 0	" 5, 2 P.M.	5	9	28	40	24 18 40	107 21 0
Ditto	52 12 0	" 6, 2 P.M.	6	9	43	4	22 11 31	106 51 0
1858.								
Eagle Hills	52 18 0	June 21, 7 A.M.	21	2	9	22	26 52 32	107 28 15
Ditto, 3 miles S. of Lizard Lake		" 21, 4 P.M.	21	11	30	33.5	33 23 19	107 28 16
Eagle Hills, at Stoney Lake	52 14 0	" 22, 3 P.M.	22	9	46	39	48 40 29	107 35 4
Prairie	52 14 0	" 23, 9 A.M.	23	3	15	19.4	42 22 11	108 11 33
Ditto	52 16 0	" 24, 7 A.M.	24	2	8	16.4	25 59 17	108 27 27
Ditto	52 21 0	" 25, 7 A.M.	25	2	30	14.6	29 7 5	108 44 25
Wiquatinow, Valley of	52 28 39	" 26, 8 A.M.	26	3	49	47	40 54 2	108 51 39
Ditto ditto	52 28 39	" 27, 8 A.M.	27	3	50	43	41 1 6	108 52 36
Prairie	52 30 0	July 2, 4 P.M.	2	11	20	15	35 53 22	109 2 30
& Ditto	52 31 25	" 4, 8 A.M.	4	3	28	5	36 46 25	109 23 45
Ditto	52 36 0	" 8, 7 A.M.	8	2	32	13.5	27 27 4	110 23 45
Battle River, 1st crossing of	52 35 39	" 7, 9 A.M.	7	4	12	41.7	42 9 5	110 50 7
Ditto 2d crossing of	52 28 23	" 10, 7 A.M.	10	2	55	48.6	30 4 31	111 29 45
& Dried Mount Camp	52 24 29	" 14, 4 P.M.	14	11	47	15.6	32 59 22	112 14 35

## Enclosure 2 in No. 9.

## OBSERVATIONS for LATITUDE made by Dr. HECTOR when detached from the Expedition.

Date.	Place.	Obs. Mer. Alt. corrected for I.E.	Longitude by Account.			Latitude.						
			°	'	"	W.	N.	°	'	"		
1857:												
December	14	Four miles E. of Redberry Lake	* Polaris	108	20	0	106	56	0	52	42	0
"	19	English Creek	☉	26	13	0	108	56	0	53	16	0
"	19	E. angle of Red Deer Hill	* Polaris	110	53	0	109	3	0	53	28	0
"	20	Fort Pitt	* "	110	4	30	109	18	0	53	35	0
"	20	"	* Jupiter	97	46	0	-	-	-	53	34	0
"	22	"	☉	26	32	0	-	-	-	53	34	0
1858:												
March	29	"	☉	79	20	30	-	-	-	53	34	0
January	5	Fort Edmonton	☉	28	26	0	113	49	0	53	29	0
"	5	"	* Polaris	109	50	0	-	-	-	53	30	0
"	8	"	☉	28	0	0	-	-	-	53	32	0
February	10	"	☉	44	2	0	-	-	-	53	30	0
"	11	"	☉	44	42	0	-	-	-	53	30	0
"	20	"	☉	50	51	30	-	-	-	53	31	0
March	4	"	☉	59	51	0	-	-	-	53	31	0
"	6	"	☉	61	26	30	-	-	-	53	30	0
"	7	"	☉	62	9	30	-	-	-	53	31	0
January	11	Crossing Place, Battle River, on Mountain Ho. Track.	* Jupiter	99	34	0	114	6	0	52	41	0
"	14	Rocky Mountain Fort	* Polaris	107	53	0	115	30	0	52	29	0
July	9	Elbow of Battle River	☉	119	37	0	111	5	0	52	19	0
August	12	Rocky Mountains, Bow River, First Lakes	☉	107	19	30	115	16	0	51	1	44
"	14	Rocky Mountains, Bow River, The Nick	☉	105	59	0	115	30	0	51	2	26
"	15	Rocky Mountains, Bow River, Cascade Mount	☉	105	10	0	115	40	0	51	9	18
"	18	Rocky Mountains, Bow River, Castle Mount	☉	103	10	0	116	0	0	51	10	42
"	21	Rocky Mountains, Vermillion River, The angle	☉	101	20	0	116	26	0	51	6	0
"	22	Rocky Mountains, Vermillion River, Snow Creek, S. from Mount Ball	☉	100	49	0	116	19	0	51	2	45
"	24	Rocky Mountains, Kootanie River, N. of Forks	☉	99	48	0	116	26	0	50	52	0
"	26	Rocky Mountains, Kootanie River, its source	☉	98	11	0	116	40	0	51	0	37
"	28	Rocky Mountains, Bearfort River	☉	96	28	30	116	52	0	51	9	30
"	30	Rocky Mountains, Kicking Horse River Falls	☉	95	0	0	116	55	0	51	10	0
September	1	Rocky Mountains, Kicking Horse River Falls	☉	93	18	0	116	57	0	51	16	30
"	3	Rocky Mountains, Bow River, Noore's Creek	☉	91	38	0	116	38	0	51	22	40
"	8	Rocky Mountains, Bow River, Noore's Creek	☉	87	44	0	116	43	0	51	28	0
"	9	Rocky Mountains, Bow River, its source	☉	86	34	0	117	0	0	51	40	0
"	11	Rocky Mountains, N.B. Saskatchewan, E. end of Glacier Lake	☉	86	36	0	117	30	0	51	54	0
"	12	Rocky Mountains, N.B. Saskatchewan, W. end of Glacier Lake	☉	83	54	0	117	39	0	51	52	16
"	14	Rocky Mountains, N.B. Saskatchewan, 4 miles above mouth of Little Fork	☉	82	16	0	117	22	0	51	56	30
"	18	Rocky Mountains, N.B. Saskatchewan, 4 miles below Wapattuk River	☉	78	45	30	116	46	0	52	18	0
"	20	Rocky Mountains, N.B. Saskatchewan, Sheep River	☉	76	41	0	116	40	0	52	24	0
"	23	Rocky Mountains, N.B. Saskatchewan, Sheep River	☉	74	21	0	-	-	-	52	23	30
"	28	Saskatchewan River, N.B. Miry Creek	☉	70	14	0	116	10	0	52	30	0
"	29	N. branch Saskatchewan	☉	69	35	30	116	0	0	52	26	0
October	1	S.E. of Mountain, in woods	☉	67	20	30	115	25	0	52	23	30
"	5	Bad Beaver Dam	☉	42	50	30	113	58	0	53	5	0
November	29	Battle River, Bear Hill	☉	30	55	0	113	55	0	52	46	26

## Record of Astronomical Observations during 1859 - continued.

Date.	Place.	Obs. Mer. Alt. Cor. for I. E.			Longitude by Account or Observation.		Latitude.		
		°	'	"	°	'	°	'	"
1859. August 1	Cypree's Mounts, west flank, Small stream.	57	24	45	111	0	49	55	21
" 8	Belly River - - - -	56	6	50	112	52	49	47	4
" 9	One mile south-west of tributary to Belly River.	55	52	5	-	-	49	44	55
" 10	Hills near tributary to Belly River -	55	42	30	113	50	49	36	44
" 18	*Kootanie Valley - - - -	53	51	10	115	12	49	0	3
" 22	Kootanie River - - - -	53	0	17	115	0	48	32	0
" 24	Kootanie River (R. B.) - - - -	52	27	5	115	10	48	23	51
" 26	" " - - - -	51	43	0	115	30	48	26	29
" 27	" " - - - -	51	9	17	115	45	48	38	33
" 28	" " (Paddler's Lake) -	50	45	40	116	0	48	41	41
" 30	Kootanie River - - - -	49	17	22	-	-	48	57	20
" 31	" " 20 miles from Paddler's Ware.	49	7	32	116	36	49	15	33
September 1	Large Lake, north shore, 5 miles east of west extremity.	48	24	57	-	-	49	36	25
" 2	Portage, west extremity of second lake -	48	9	10	-	-	49	29	50
" 3	Kootanie River - - - -	47	58	37	-	-	49	18	48
" 4	Mouth of Pendoreille's River - -	47	54	17	118	0	49	0	31
" 8	Fort Colvile - - - -	46	18	2	118	12	48	37	48
" 17	Fort Shepherd - - - -	42	58	17	118	0	49	1	7
" 18	Observation Mount - - - -	42	35	17	-	-	49	0	15
" 22	West of Fort Shepherd - - - -	40	59	13	-	-	49	3	10
" 23	" " - - - -	40	56	33	-	-	49	2	44
" 24	" " - - - -	40	40	43	-	-	49	5	19

N.B. ☉ indicates lunar distances observed.



## SOURCES USED FOR APPENDIX

APPENDIX A-1; A-2; A-3; A-4; A-5; B-2; C-1; C-2;  
Exploration-British North America: Papers Relative  
to the Exploration by Captain Palliser of That  
Portion of British North America Which Lies Between  
the Northern Branch of the River Saskatchewan and  
the Frontier of the United States and Between the  
Red River and the Rocky Mts. 1859 and 1860.  
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APPENDIX A-6; B-1.  
Irene M. Spry, ed. The Papers of the Palliser  
Expedition: 1857-1860 (Toronto: The Champlain  
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