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Fire in the Beaver Hills

Introduction

Before proceeding with an historical investigation of fire and its possible historical impact upon the Beaver Hills landscape, it is necessary to outline the approach to this subject. First of all, there is a considerable body of literature by geographers, biologists and other scholars who have studied fire in relation to the grasslands and savannas of the world.¹ Nevertheless, some important questions remain. What effects have fire had on vegetation, flora, and other aspects of landscape, including man himself? What relationships have existed between fires, climate and man? Very little relevant research on such questions has been undertaken utilizing the extensive historical literature on the northern plains of Western Canada and the American West.² The only scholarly study for the pre-1870 period is a survey of the causes and effects of fire on the northern grasslands of Canada and the United States written by J.G. Nelson and R.E. England.³ It provides a broad overview of the impact of fire upon the prairie landscape.

For an assessment of the impact of fire in the Beaver Hills area the early writings of the agents of the fur trade in the Hudson's Bay Company archives must be examined. There were several fur trading posts established within a hundred-mile radius of the Beaver Hills area after 1790. Unfortunately, few records relating to the North West Company's operations have survived.⁴ For information on posts such as Fort Augustus, built at the mouth of the Sturgeon river in 1795, the historian depends primarily upon references made by servants of the Hudson's Bay Company. On the other hand, the two Hudson's Bay Company posts in the

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vicinity of Beaver Hills, Edmonton House and Buckingham House, are well documented for the period 1795-1821.⁵ All references to fire for these years are included in this report. Currently, the researcher is proceeding with a more comprehensive analysis of fire and its impact upon the fur trade and landscape for the period after 1821. When this is completed, it will be forwarded.

As fur traders penetrated the upper reaches of the Saskatchewan River district in the late eighteenth century,⁶ they were confronted from time to time by a spectacular yet potentially dangerous phenomenon; the plains fire. Whether caused by man or nature, these grass fires could sweep rapidly across the vast Plains from Cumberland House in the east to the Rocky Mountains in the west, from the Saskatchewan River in the north as far south as the banks of the Missouri. In the process, they had a profound impact on the fur trade and on the landscape. In fact, during the particularly dry years of 1812-13, the fire-scorched plains offered nothing but starvation to Indian and fur trader alike.

The fur traders were more interested in the north branch of the Saskatchewan than in the Bow river region; their name for the southern branch of the Saskatchewan.⁷ The former ran parallel to both the wooded belt where furs were more readily available and to the prairies which provided the main form of sustenance - the buffalo. The Beaver Hills area is a case in point.⁸ Situated in the Aspen parkland belt which separates the northern boreal forests from the grass plains, it was a favourite grazing ground for the bison during the harsh winter months. The forest vegetation of the Beaver Hills also supported wild game and provided an annual harvest of berries. This rich abundance made it possible for bands of Sarcee, and then Cree Indians, to dwell in the Beaver Hills before and after 1800.

The fur trade journals make frequent references to the Beaver Hills Cree.⁹ Periodically, this band travelled to Buckingham House or, after 1795, Edmonton House, where they exchanged their furs or provisions for liquor, ammunition, tobacco and other articles of trade. The Company officials at the Saskatchewan trading establishments were particularly interested in procuring dry provisions such as meat. Besides concerning themselves with the accumulation of pelts, they were responsible for the provision of staples such as pemmican to the east and westbound brigades. This role is one very important reason why Hudson's Bay Company officials were so alarmed by prairie fires. If the fires drove the

bison and other animals too far southward, the fur trade network from Cumberland House to Rocky Mountain House was deprived of its major source of provisions.

The first Hudson's Bay Company post built in the region of the Beaver Hills was Buckingham House; approximately eighty miles downstream from the area under study. William Tomison and his men constructed the post a short distance from the "Canadian" house, Fort George, in the autumn of 1792.¹⁰ The following spring and autumn Indian families arrived from the Beaver Hills to trade a few furs. On April 13, 1793, Tomison noted in the post journal that every available man was involved fighting a fire which threatened to destroy the Company's house and canoes.¹¹ Although there is no conclusive evidence, Tomison claimed this fire was set upwind purposefully by order of Angus Shaw, the trader in charge of Fort George.¹² It is well known that there was considerable tension between the rival trading companies in the Saskatchewan district. Certainly, if the fire was an intentional ploy, it illustrates how far the North West Company was willing to go to achieve supremacy in the trade. At the same time, a fire in the neighbourhood of Buckingham House also might have endangered the Canadian establishment. Regardless of the motivation or cause of the fire, a week later Tomison's men were still obliged to control the blaze.¹³

For the most part, observers could only speculate upon how these fires were started. References are frequent enough to suggest that lightning was a common cause of fire. For example, when camped in the Highwood Valley, south of present-day Calgary, Hudson's Bay Company trader and surveyor Peter Fidler noted in his journal that "lightning in the spring and fall frequently lights the grass".¹⁴ Duncan McGillivray, a clerk at Fort George, presented another theory to explain why fire had broken out in that vicinity in the autumn of 1794;¹⁵

The Plains around us are all fire. We hear that the animals fly away in every direction to save themselves from the flames, an attempt which is often rendered abortive when the fire is cherished by a breeze of wind, which drives it along with such fury that the fleetest horse can scarcely outrun it. The Indians often make use of this method to frighten away the animals in order to enhance the value of their own provisions.

If the Indians were in fact responsible for this fire to

promote their own interests, it had the desired effect. Fire had destroyed all the available pasturage in the neighbourhood of Fort George by the end of October.¹⁶

Other students of fire have elaborated upon the employment of fire to control wildlife movements on a large scale. Sometimes fires were started early in the year to promote grass growth later in the season. Nelson and England cite an example from the journals of Lewis and Clark.¹⁷ In March, 1805, the two explorers observed that the Minnitarees or Gros Ventre Indians had set all the neighbouring grass ablaze to obtain an early "crop" for their horses and also to attract the buffalo and other wildlife to the area. The Indians in the north Saskatchewan district may have lit fires purposefully to remove the old dried grass, but there is no surviving evidence to support this possibility in the early fur trade era.

By 1795 the decimation of fur-bearing animals in the region about Buckingham House and Fort George had compelled the competing interests to push farther inland. In August, 1795, William Tomison was busy organizing the construction of Edmonton House, one mile up the Saskatchewan from the mouth of the Sturgeon river, and within twenty miles of the Beaver Hills. In fact, while travelling from Buckingham House to the new upper settlement, Tomison mentioned sighting in the distance the "great Beaver hills".¹⁸ As the North West Company's new establishment, Fort Augustus, was also nearby, the Beaver Hills Cree now traded at this more convenient location.

Shortly after the completion of Edmonton House in the spring of 1796, a large fire broke out. According to the Buckingham House post journal, this fire had swept across most of the territory between the old and the new establishments.¹⁹ Tomison was in a dire predicament. Because low water in the Saskatchewan river prevented the brigade's departure by that route, the only alternative was overland by horse. This plan, however, was rendered impossible because, "the Ground is all burnt and there is no food for flora".²⁰ Tomison was forced to delay the brigade's departure until the water reached adequate levels. This information implies that the fire may have swept across the Beaver Hills area. It must be emphasized, however, that the commentary on fires in the post journals tends to be localized and general in nature. It is therefore very difficult to ascertain their exact location, duration and impact upon the landscape.

There is no doubt that the fire in the area of Edmonton House in the spring of 1796 was particularly intense. The

Hudson's Bay Company not only lost their pine logs stored upstream, the magnitude of the fire and strong winds allowed it to jump to the north side.²¹ Unfortunately, during these early years the post journals were not always maintained for the summer months. Consequently, the ultimate impact of this particular blaze is not known.

The fire which broke out in the Edmonton area two years later illustrates how dangerous these prairie fires were to humans. In May 18, 1898, Tomison estimated that no less than eight Indians had been burned to death within the last ten days.²² During the disastrous fires of 1812, eleven Blackfoot Indians were "consumed" in the flames near Paint Creek House on the Vermilion river.²³ Some years before Peter Fidler had commented upon the danger of fires burning out of control while travelling along the Saskatchewan river.²⁴ On that occasion the campfire had spread out of control so rapidly that Fidler was forced to abandon his equipment, saddle his horse, and hasten westward within a matter of minutes. With the right combination of wind and dry conditions, grass fires could travel at incredibly fast rates. The only escape was a body of water or to out-distance the fires on horseback.

The study of fire in the North Saskatchewan district during the first decade of the nineteenth century is restricted by the loss of the Edmonton House Post journals for the seasons 1800-06. By September, 1806, the post known as Edmonton House had been moved to the present site of the city of Edmonton.²⁵ The second Edmonton House was operated there until 1810 when it was replaced by the third Edmonton House which was situated at the forks of the Saskatchewan river and White Earth Creek. This confusing situation was finally rectified in 1812-13 when the fourth and last Edmonton House was completed close to the site of the second location; i.e., the present site of Edmonton.

When Chief Factor James Bird was preparing to build the final Edmonton House in 1812, a bad fire suddenly raged out of control in the surrounding district;²⁶

The Plains are, and have been these several days past, burning in a most dreadful manner; fires are raging in all directions, and the Sun obscured with smoke, that covers the whole country, and should the remarkable dry weather which has continued so long, does not change very soon, the plains must be burnt to such an extent as to preclude all hope of our getting a large supply of provisions...

This fire was severely hindering the operations of the fur trade. Because it was so widespread "the Indians were bringing in very little and come principally to get more supplies on credit". In the process their dependence upon the fur trade companies was increased.²⁷

The evidence strongly suggests that the fires of 1812 were the most devastating since the fur trade reached the Upper Saskatchewan. The fire was so severe that Bird was forced to send men fifty miles away to fish.²⁸ He also learned from an Indian band that from Edmonton to the southern bank of the south Saskatchewan river, "there is not a bull to be seen nor a bit of dry ground unburned".²⁹ Throughout the winter of 1812-13 the repercussions of the fire were felt along the Saskatchewan. Mr. Pruden, trader in charge at Carleton House, reported starvation among local Indians and provision shortages at the company post.³⁰ When some Blackfeet straggled into Edmonton House in April, 1813, Bird heard the same account of the extreme scarcity of buffalo and general starvation among the Indians of the plains.³¹ Late that summer the buffalo were still an "unprecedented" distance from the North Saskatchewan posts.³²

To compound an already difficult situation, the plains were on fire once again in the autumn of 1813.³³ This time the fire was burning in the more heavily forested region north of the Saskatchewan river. By the time rains and snow extinguished the fires in mid-October the damage was done.³⁴ Again fur returns for the season were down and the Indians added to their debts at the company posts. James Bird summarized the situation very well in a letter to the Gentleman in charge of Swan River explaining why the Saskatchewan factory could not provide its quota of pemmican;³⁵

Trade is extremely poor. Dry provisions very scarce, and as we are quite abandoned by the buffalo our living is of course far from being enviable...The Plains for sixty miles round this place were entirely ravaged by fires last fall and the consequence has been that we have neither seen an Indian from that Quarter nor heard of a buffalo since that time.

The combination of the fires and wars between the Plains Indians had driven the Fall and Muddy River Indians as far south as the Marias River in present-day Montana, certainly too far away for them to visit Edmonton House during the winter months.³⁶

It is very difficult to estimate the long-term damage

of these immense fires upon the short grass vegetation of the prairie landscape. By the autumn of 1814 the bison had returned to the Battle river area and there was a large stock of dry provisions in the Edmonton House storeroom.³⁷ This suggests that the grasslands had recovered enough to support the return northward of the buffalo. Perhaps the bison did not migrate back in such numbers. Maybe the vegetation could not support the same population. These are questions available historical documentation does not answer. By 1815, however, there was a return to more moderate weather and the buffalo were once again in the vicinity of the North Saskatchewan river. There is no mention of fire in the Edmonton district until June, 1821 when the writer noted that what was known as the "Stone Indians Plains" was on fire.³⁸ The following spring the plains were once again ablaze, both above and below the establishment. His response to the fires was almost non-chalant. Besides noting its existence, he commented that "I suppose it will be the cause that no berries will be got this summer".³⁹ Periodic fires had become an accepted nemesis in the North Saskatchewan district.

Conclusion

During the early occupation of the Beaver Hills area, the periodic outbreak of fire presented a serious hazard to the native people, the fur traders and the natural landscape. When climatic and other factors were favourable, fires could rage rapidly over hundreds of thousands of square miles, crossing major river valleys in the process. James Bird, an experienced chief factor of the Hudson's Bay Company, considered the Saskatchewan river district's exposure to fire as one of its most serious drawbacks.⁴⁰

There has been considerable debate as to how these devastating fires got started. Lightning was certainly capable of igniting fires. Man's responsibility remains a clouded question. The Indians in some areas used fires for a variety of purposes, including the control of wildlife movements. In the Saskatchewan district the Indians were accused by fur traders of lighting fires purposefully to drive wildlife away from the trading posts. In the process, they enhanced their position within the trading relationship because prices received for provisions usually increased. At the same time, if Indians were lighting fires, they were taking extreme risks. The expansive fires of 1812-13 caused widespread starvation among certain plains tribes, and further indebted them to the fur trade interests.

The most difficult questions surrounding fire relate to their ecological impact upon the prairie landscape. The fires appear to have been most frequent in spring and fall, but did occur occasionally during the winter. One would think that the fires contributed to the extension of the grassland environment. The rapid recovery of the fur trade in 1815, however, and the return of the buffalo to the Saskatchewan district suggests that the grassland ecology was tremendously resilient. Within a year of fires which covered the majority of the country between the two branches of the Saskatchewan, the ecological balance had recovered sufficiently to support the buffalo and other wildlife.

The nature of the historical evidence makes it difficult to gain a precise picture of fire frequency through the years. It appears to be intricately interwoven with the climatic and cultural cause of fire. During the period under study there was a period of frequent fires during the 1790s and then a period of little activity until the dry years of 1812-13 sparked the very severe and widespread fires throughout the Canadian plains. As other researchers have discovered, fires appear to have increased in frequency as more and more settlers of European origin came into the grasslands, introducing new causes of fire such as the railroad, and also changing attitudes toward fire control.⁴¹ Further research on this subject will centre upon whether or not the Hudson's Bay Company had a defined policy regarding fire control. After 1821 there is evidence that they were more careful about fire prevention. The servants of the Company carried forward annual spring programmes to clean up around the posts. Furthermore, when more ambitious farming ventures were introduced, the company employees were ordered to burn around haystacks to protect them from possible fires.

Although the historical records do not provide irrefutable evidence, it seems highly probable that the Beaver Hills region was affected by these fires. To what degree the fires influenced the movements of wildlife and the native population is very difficult to estimate. Further research on the post-1821 period may shed new light on the impact this phenomena exerted upon the ecological and cultural development of the Beaver Hills.

Endnotes

- ¹ See, for example, O.C. Stewart, "Burning and Natural Vegetation in the United States", Supplemental Review, 41, 2, (1951) pp. 317-20. H.H. Barlett, "Fire Primitive Agriculture and Grazing in the Tropics",

- Man's Role in Changing the Face of the Earth, ed. W.L. Thomas (Chicago, 1956) pp. 692-720. J.G. Nelson, The Last Refuge, (Montreal: Harvest House, 1973).
- 2 See J. Warkentin, ed., The Western Interior of Canada, (Toronto: McClelland, 1964).
 - 3 See J.G. Nelson and R.E. England, "Some Comments on the Causes and Effects of Fire in the Northern Grasslands Area of Canada and the Nearby United States", CA. 1750-1900, The Canadian Geographer, Vol. XV, (September, 1971) pp. 295-306.
 - 4 Alice M. Johnson, ed., Saskatchewan Journal and Correspondence: Edmonton House 1795-1800, Chesterfield House, 1800-1802, (London: The Hudson's Bay Record Society, 1967). This study includes an excellent introduction by Alice Johnson which analyses the penetration and establishment of the fur trade in the Saskatchewan district.
 - 5 The quotations and references to Hudson's Bay Company post journals and correspondence appear courtesy of the Hudson's Bay Company Archives, Winnipeg, Manitoba. The Buckingham House journal from 1792 to 1799, series, B.24/a/1 to B.24/a/6. The Edmonton House journals are complete for the period 1795-1821 except for a gap between 1801-06. See B.60/a/1 to B.60/a/20.
 - 6 Arthur S. Morton, A History of the Canadian West to 1870-71, Second Edition, Edited by Lewis G. Thomas, (Toronto: University of Toronto Press, 1973) pp. 139-43.
 - 7 Arthur S. Morton, The Journal of Duncan M. Gillivray of the North-West Company at Fort George on the Saskatchewan, 1794-95, (Toronto: 1939) p. iv.
 - 8 See Scace & Associates Ltd., "Elk Island National Park, A Cultural History", (A report prepared for Parks Canada Department of Indian & Northern Affairs, 1976) p. 21.
 - 9 See, for example, Hudson's Bay Company Archives, Series B.24/a/1, Buckingham Post Journal, April 8, 1793, fo. 26; B.24/a/2, fo. 21; B.24/a/2, fo. 39.
 - 10 H.B.C.A., B.24/a/1, fo. 9, October 12, 1792.

- 11 H.B.C.A., B.24/a/1, fo. 27, April 13, 1793.
- 12 H.B.C.A., B.24/a/1, fo. 27, April 13, 1793. Tomison held a low opinion of Angus Shaw and his men. He described their actions as the "Insults of lawless rabble".
- 13 H.B.C.A., B.24/a/1, fo. 28, April 21, 1793.
- 14 H.B.C.A., Peter Fidler, Journal of a Journey Overland from Buckingham House to the Rocky Mountain in 1792-93, E.2/2, fo. 26.
- 15 Arthur S. Morton, editor, The Journal of Duncan McGillivray of the North-West Company at Fort George on the Saskatchewan, 1794-95, October 10, 1795, p. 30. Op. cit.
- 16 Ibid., p. 36.
- 17 J.G. Nelson and R.E. England, "Some comments on the Causes and Effects of Fire on the Northern Grasslands Area of Canada and the Nearby United States, Ca. 1750-1900, The Canadian Geographer, Vol. XV, (September, 1971) p. 297.
- 18 H.B.C.A., B.60/a/1, fo. 28, October 4, 1795.
- 19 H.B.C.A., B.24/a/1, fo. 14, May 6, 1796. "Weather occasioned by the smoke as the ground is on fire most of the way between this and the Upper settlements".
- 20 H.B.C.A., B.60/a/1, fo. 16, William Tomison to James Swain, May 2, 1796.
- 21 H.B.C.A., B.60/a/1, fo. 56, May 15, 1796.
- 22 H.B.C.A., B.60/a/3, fo. 27, May 18, 1798. "The country all round on fire, no less than eight Indians have been burned to death within the last ten days".
- 23 H.B.C.A., B.60/a/11, fo. 3, November 4, 1812. "The fires in the plains have extended beyond Paint Creek downwards and southwards to the South Branch River. Eleven Blackfeet have been consumed in the flames near Paint Creek House, and all types of provisions are gone".

- 24 H.B.C.A., E.3/2, fo. 39, April 6, 1793.
- 25 See Alice M. Johnson, editor, Saskatchewan Journals and Correspondence, (London: The Hudson's Bay Record Society, 1967) p. lxxvii.
- 26 H.B.C.A., B.60/a/11, fo. 3, October 16, 1812.
- 27 H.B.C.A., B.60/a/11, fo. 3, October 16, 1812.
- 28 H.B.C.A., B.60/a/11, fo. 3, October 17, 1812. "I have been forced to resort to the expedient by the dreadful fires which have so long raged without interruption through the Plains, and a consequent dread of being unable to procure sufficient meat to subsist on during winter".
- 29 H.B.C.A., B.60/a/11, fo. 3, November 10, 1812.
- 30 H.B.C.A., B.27/a/4, fo. 20, May 13, 1815. "The country all around in one blaze [sic] for a considerable distance which does great damage to all the woods. The tracks of five Indians was discovered on the burnt ground, about 3 miles from the House and we suppose it to be them that set the ground on fire..."
- 31 H.B.C.A., B.60/a/11, fo. 7, April 16, 1813.
- 32 H.B.C.A., B.60/a/12, fo. 2, August 25, 1813.
- 33 H.B.C.A., B.60/a/12, fo. 2, September 28, 1813; fo. 2, October 1, 1813; fo. 2, October 3, 1813. "The Plains are already burnt between the Red Deer River and the river from the Beaver Lake to the Rocky Mountain..."
- 34 H.B.C.A., fo. 3, October 8, 1813.
- 35 H.B.C.A., B.60/a/12, fo. 9, James Bird to Gentleman in charge of Upper Swan River, February 8, 1814.
- 36 H.B.C.A., B.60/a/12, fo. 10, February 19, 25, 28, 1814.
- 37 H.B.C.A., B.60/a/13, fo. 2, September 28, 1814.
- 38 H.B.C.A., B.60/a/20, fo. 4, June 3, 1821.
- 39 H.B.C.A., B.60/a/21, fo. 46, May 6, 1822. "The Plains appear to be all on fire, both above and below the

establishment which I suppose will be the cause that no berries will be got this summer".

- 40 H.B.C.A., B.60/a/1, Edmonton District Report, 1815, James Bird, p. 3. "One of the greatest disadvantages to which this part of the country is subject, its exposure to fire which so frequently savage the plains, cause a scarcity of food, and necessarily affect the trade".
- 41 See S. Raby, "Prairie Fires in the North-West", Vol. XIX (Saskatchewan History, Autumn, 1966, Number 3) pp. 81-100.

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Parks Canada, Winnipeg