

# *The Architecture of the Western Canadian Fur Trade: A Cultural-Historical Perspective*

---

**H**enry Glassie, in a classic study of Middle Virginia folk housing, wrote:  
Any artifact that can be provided with association in space and time, either by being accompanied by a document or better — as with gravestones or buildings — by being set into the land, is a valuable source of a great quantity of information.<sup>1</sup>

There is in architecture a set of complex cultural meanings, or “information.” Humans use architecture to cope with their environment and their economies, and to support their traditions and beliefs. It also influences people’s perception of their physical and social environment.

Western Canadian fur trade architecture, which forms the basis of this study, contains information about an early Canadian way of life. Its raw simplicity is a statement about the harsh conditions of the early western Canadian frontier. But fur trade architecture changed through time and space, and was linked to variable economic or social conditions in the fur trade. It is a measure of cultural change, and this truly makes it a valuable source of information about the past.

In this study I assess fur trade architecture in western Canada from about 1780 to 1900. First, the basic elements of fur trade architecture are summarized. Next, how those architectural elements are related to the economics and organization of the fur trade are reviewed. Finally, the relationship between architectural elements and the regional and corporate structure of the fur trade are explored. In particular, I examine how and why fur trade architecture is related to regional and occupational inequality.

A regional comparative approach is used in this examination of fur trade architecture. Consequently, the architecture of each individual post is not described in detail. Although the comparative approach neglects some very interesting architectural detail, it brings to light the broader connections between fur trade architecture and the elements and processes operating within the fur trade of western Canada.

Information for this study was collected from documentary records and archaeological remains of fur trade posts in the interior of western Canada, primarily Alberta. These posts were constructed in the Saskatchewan and Athabasca fur trade districts (**figure 1**).<sup>2</sup> The types of fur trade data include: 1) scattered references about architecture, which are difficult to use for comparative purposes; and 2) quantitative data from maps and the archaeological record, allowing some general comparisons between posts to be undertaken. These data are by no means exhaustive, and the conclusions drawn from them are therefore a first approximation.

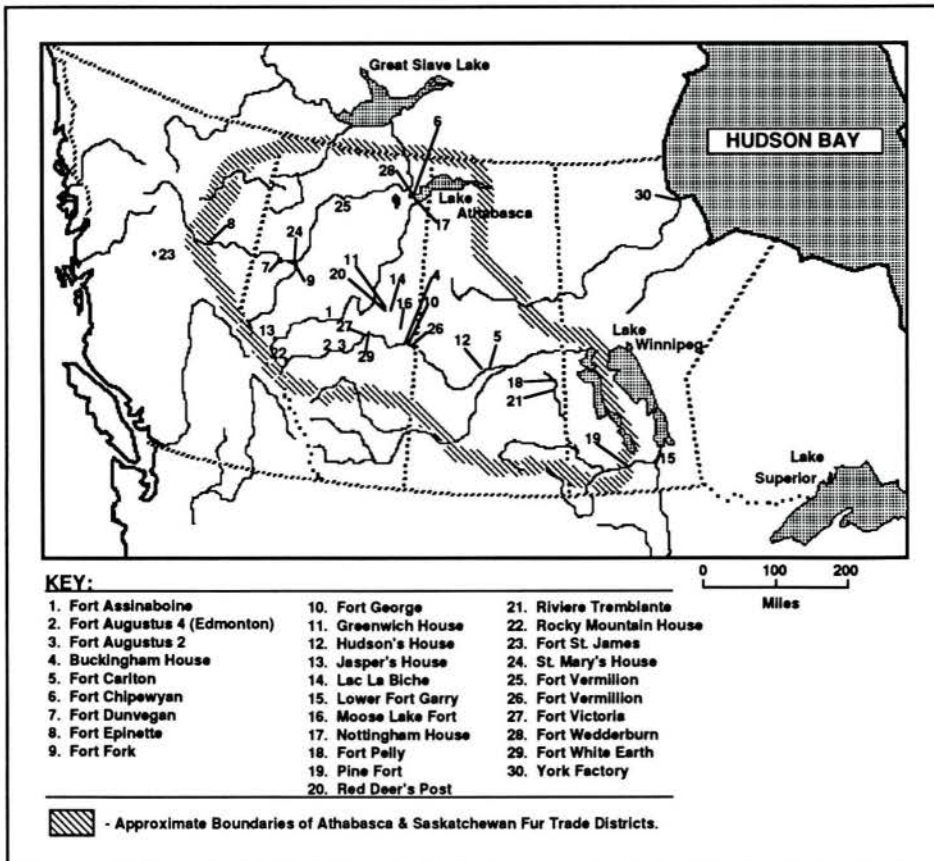
---

*By Heinz W. Pyszczyk*

1 Henry Glassie, *Folk Housing in Middle Virginia* (Knoxville: University of Tennessee Press, 1975), 12.

2 For more details regarding these fur trade districts, see Harold A. Innis, *The Fur Trade in Canada* (Toronto: University of Toronto Press, 1975), 283-341; Glyndwr Williams, “The Hudson’s Bay Company and the Fur Trade, 1670-1870,” *The Beaver*, Outfit 314:2 (autumn 1983): 25-51.

Figure 1. Location and name of the fur trade posts referred to in the text.



## FUR TRADE ORGANIZATION AND ARCHITECTURE

### History and Organization

Inland fur trade posts emerged in the early 1780s, when European traders moved along the major waterways into the interior of western Canada to trade for furs with the natives. By the end of the nineteenth century, approximately 130 fur trade posts had been constructed between Hudson Bay and Lake Winnipeg, west to the slopes of the Rocky Mountains, south of Lake Athabasca to the edge of the northern plains.<sup>3</sup> Trade in this vast region was dominated by the Hudson's Bay Company (1670-), the North West Company (1776-1821), the short-lived XY Company (1802-1805), and a few independent traders (figure 1). The architecture of the North West Company and the Hudson's Bay Company comprise the principal subject matter of this study.

Many fur trade posts consisted of little more than a few small log buildings enclosed by a wooden picket fence, or palisade. Alexander Ross's first glimpse of the Hudson's Bay Company's Fort Assiniboine in 1825 was a rude awakening to what the western Canadian experience was going to be like:

... a petty post erected on the north bank of the river, and so completely embosomed in the woods, that we did not catch a glimpse of it until we were among huts, and surrounded by howling dogs and screeching children. At this sylvan retreat there were but three rude houses ... and there was not a picket or palisade to guard them from either savage or bear. This mean abode was dignified with the name of fort.<sup>4</sup>

On the other hand, Philip Turnor, in 1791, described Fort Chipewyan as "the completest Inland House I have ever seen in the country."<sup>5</sup> In 1843, John Lefroy was less impressed with Fort Chipewyan:

Although assured by my guide beforehand that the Fort was one of the finest in the country and the most famous for the men, the dogs, and everything, I could see nothing of those honours in its first appearance. Quite the contrary, it appeared to me the poorest I had seen.<sup>6</sup>

There was considerable variability in both the architecture of these "forts" of the northwest, and the impression they made on people unaccustomed to the Canadian wilderness. Fort Chipewyan was perhaps more grand than many posts because it was a regional

3 Terry Smythe, "Thematic Study of the Fur Trade in the Canadian West, 1670-1870," Historic Sites and Monuments Board of Canada, Agenda Paper 1968-29 (unpublished manuscript, Ottawa, 1968), 53-278.

4 Alexander Ross, *The Fur Hunters of the Far West: A Narrative of Adventures in the Oregon and Rocky Mountains* (London: Smith, Elder, 1855), 2:204-5.

5 J.B. Tyrrell, ed., *Heame and Turnor Journals* (Toronto: The Champlain Society, 1934), 398.

6 J.H. Lefroy, *In Search of the Magnetic North: A Soldier-Surveyor's Letters from the North-West, 1843-1844*, ed. G.F.G. Stanley (Toronto: Macmillan, 1955), 66-67.

headquarters, but it did not meet with the approval of all outsiders.

Fur trade company posts varied in size and function. Wintering posts were small and occupied only during the winter months. They were constructed in native territory, often in very isolated areas, to acquire furs and provisions (i.e., dried meat, pemmican) from the natives. District trading posts were large and more permanent than wintering posts. They were often occupied by the senior partner and shareholders of the company. After 1821, one trading post became the headquarters for an entire region and performed many roles (e.g., fur trading, provisioning, redistributing trade goods). Decisions regarding regional trade affairs and the allocation of goods and resources were made by the officers in charge of these forts.

Fur trade employees were organized vertically and horizontally according to the roles that they performed.<sup>7</sup> Roles not only dictated what functions people undertook, but also specified how much income, power, and prestige each person received. Officers in charge of the forts had the highest income and often shared in company profits. Clerks carried out administrative duties. Craftsmen and labourers who carried out the menial tasks were paid the least, and thereby held the lowest positions in the fur trade companies. An employee's ethnic background was instrumental in determining his type of employment. Officers and clerks were almost always English or Scottish. Craftsmen and labourers came from a variety of ethnic backgrounds. Orkneymen and French Canadians made up a large part of the labouring class. Natives hunted for the companies or acted as interpreters; native women who lived with company men bore their children and carried out many domestic tasks at the post. As a result of these alliances, large numbers of mixed-blood people entered the fur trade labour force, but rarely, if ever, attained positions in the upper ranks of the companies.

#### A Summary of Fur Trade Architecture

Prior to 1821, the Hudson's Bay Company, North West Company, and XY Company competed fiercely for furs in western Canada.<sup>8</sup> Because of this intense rivalry, the fur trade rapidly expanded west and north, continually lengthening supply lines. Consequently, many fur trade posts were temporary and built quickly from readily available materials; they were abandoned after a few years and left to rot in the wilderness. This type of fur trade architecture was simple and crude, reflecting to a large degree the impermanence of the settlement system.

The roofs of buildings at many fur trade posts were covered with bark or sod and dirt.<sup>9</sup> Even clay, sand, and grass were occasionally used to build roofs.<sup>10</sup> Generally, though, whatever materials were used, the result was the same — leaking roofs which constantly needed repair. By the latter half of the nineteenth century cedar shakes were being imported from the west (e.g., Fort St. James), increasing the quality and durability of roofing. Parchment skin covered the windows of buildings (e.g., Fort Chipewyan).<sup>11</sup> Window glass was rarely used at the early posts, but its use increased during the last half of the nineteenth century.<sup>12</sup>

The frames and walls of buildings were constructed from logs. Mud, mixed with straw or sand, filled the cracks between logs, or covered entire walls of houses for warmth and comfort: "men moding the Men's Houses."<sup>13</sup> A good local clay source for mudding was as important as good timber. In fact, available mud may have had a greater effect on the location of the post than timber, which was relatively abundant. In 1789, when looking for a suitable place to build Moose Lake Post for the North West Company, Angus Shaw noted:

... I arrived at the entrance of *Rivière Original* .... I brought the goods, however, to a large point on the south-east of the lake, and wrought two or three days at felling trees for my house, but, to my great mortification, we then discovered there was no clay to be found within five leagues of us.

There was no alternative short of a removal to another and more favorable situation at the entrance of a small river on the west side of the lake ....<sup>14</sup>

Both framed and massed building wall construction techniques were used in the fur trade.<sup>15</sup> In the framed construction method a series of grooved vertical upright logs were placed at regular intervals (generally 8-12 feet) along the building wall.<sup>16</sup> Then infill logs were "tongued" on each end and slipped horizontally into the grooves in the vertical uprights. Long, straight trees were unnecessary, since the sections between the uprights were relatively short. Vertical posts were placed either in holes in the ground (post-in-ground construction) or on sills (post-on-sill construction).<sup>17</sup> Each method was a slightly different version of the Red River frame log construction technique, originally of French Canadian origin.<sup>18</sup>

In the post-in-ground construction method, vertical wall and ridge posts were set in holes in the ground four to five feet deep. This method was commonly used at many of the early (pre-1820s) North West Company and Hudson's Bay Company fur trade buildings in western Canada (e.g., Buckingham House, Fort George, Fort White Earth, Rocky Mountain

7 Jennifer S.H. Brown, *Strangers in Blood* (Vancouver: University of British Columbia Press, 1980), 23-51.

8 Innis, *The Fur Trade*, 229-62.

9 Hudson's Bay Company Archives [hereafter HBCA], PAM, B.159/a/8, fo. 11d, in Olga Klimko, *The Archaeology and History of Fort Pelly I, 1824-1856*, Pastlog 5, Manuscript Series in Archaeology and History (Regina: Saskatchewan Culture and Recreation, 1983), 86; for example, Fort Dunvegan in 1805. HBCA, B.239/k/2, August 7, 17, 18.

10 James Parker, *Emporium of the North* (Regina: Great Plains Research Center/Alberta Culture and Multiculturalism, 1987), 41.

11 Lefroy, *In Search of the Magnetic North*, 66-67.

12 Window glass was recovered at this site. See Timothy C. Losey et al., *Archaeological Investigations: Fort Victoria, 1975*, Occasional Paper No. 3, Historic Sites Service (Edmonton: Alberta Culture, 1977); Michael R.A. Forsman, *The Archaeology of Victoria Post, 1864-1897*, Manuscript Series No. 6, Archaeological Survey of Alberta (Edmonton: Alberta Culture and Multiculturalism, 1985).

13 HBCA, B.184/a/3, and HBCA, B.184/a/4.

14 Roderic[k] McKenzie, "Reminiscences," in *Les Bourgeois de la Compagnie du Nord-Ouest, récits de voyages, lettres et rapports inédits relatifs au Nord-Ouest Canadien*, ed. L.R. Masson (Quebec: A. Coté, 1889-90), 1:31.

15 For a more detailed description and background of these techniques, see Georges-Pierre Léonidoff, "L'habitat de bois en Nouvelle-France: son importance et ses techniques de construction," *Material History Bulletin* 14 (spring 1982): 19-35.

16 Thomas R. Garth Jr., "Early Architecture in the Northwest," *The Pacific Northwest Quarterly* 38 (July 1947): 221-22.

17 D.R. Babcock, "Fort George and Buckingham House: A Structural History," Historic Sites Service, Alberta Culture (unpublished manuscript, Edmonton, 1983), 9.

18 Ibid.

House, Dunvegan). The North West Company consistently placed vertical posts in the ground at the corners, along the walls, and down the centre of their buildings.<sup>19</sup> The Hudson's Bay Company placed posts in the ground along the walls and sometimes at the corners of buildings.<sup>20</sup>

Post-in-ground building construction was replaced by the post-on-sill construction technique some time after 1821. In the latter method, vertical wall and corner posts were set on sills or foundation logs which rested directly on the ground or on rocks (e.g., Fort Victoria).<sup>21</sup> The reason for abandoning the post-in-ground method is uncertain. Post-on-sill construction appeared when forts were occupied for relatively longer periods of time, in turn requiring a longer-lasting log building method. However, it is questionable whether post-on-sill building construction was structurally superior to the post-in-ground method. It has been suggested that the change in framed construction techniques was due to the strong French Canadian influence after 1821. This explanation is weak because both methods were of French Canadian origin.

The deficiencies present in the framed construction techniques may have led to the introduction of the elaborate, but more structurally sound, massed wall construction techniques during the last half of the nineteenth century. The walls of massed structures contained horizontal logs that were joined by various corner-notching techniques (dovetail, saddle, lap notch, trenailed/keyed).<sup>22</sup> These corner notching techniques (e.g., dovetail at Fort Dunvegan<sup>23</sup> and Fort Chipewyan<sup>24</sup>) required relatively more skilled labour and were more costly than the framed construction methods.

Fireplaces and chimneys were made from mud, sticks, and rocks. The base, made of rocks, rested on a clay pad. The firebox was made from clay, which hardened when heated.<sup>25</sup> Chimneys were framed with sticks and poles, then covered with mud: "fixed Poles to the chimney of Mr. McLeods upper Room in order to heighten it."<sup>26</sup> The men often complained when the wind blew, "which causes every chimney in the Fort to smoke, and renders our house very disagreeable."<sup>27</sup> Sometimes the mud chimneys washed away during heavy rains.<sup>28</sup>

Flooring was crude during the early fur trade period. Wooden floor boards rested on the ground, on sleepers or on ledger strips placed along building walls.<sup>29</sup> At Fort George, floor boards were pit sawn, with the bark-covered end facing down. Often the labourers' quarters contained sand or hard-packed dirt floors.<sup>30</sup> Later in the nineteenth century, sawn floor planks rested on evenly spaced joists which were placed on stones or on the ground.<sup>31</sup>

Building foundations were made primarily of wood or stone (e.g., Fort Dunvegan).<sup>32</sup> Dwellings and stores had cellars, which were often crude holes in the ground with no cribbing whatsoever (e.g., labourers' barracks, Fort George).<sup>33</sup> However, at some posts the clerk's and factor's house cellars were large and elaborately cribbed.<sup>34</sup> In the most lavish houses, such as the Big House at Fort Edmonton, large basements served as cooking facilities and servants' quarters.

### Fortifications

Fortifications at many inland trading posts were often neglected and inadequate. Wooden palisades enclosed buildings and working areas to form a square, rectangle, or quadrangle. Wooden pales, between 12 and 28 feet in length, were placed in trenches three to four feet deep to form walls.<sup>35</sup> Blockhouses or bastions were sometimes constructed at opposite corners of the palisades, or were placed along the walls near gates: "Set the Men to work on an elevated half Bastion above the Gate."<sup>36</sup> Galleries ran around the top of the palisade to provide some protection against attack.<sup>37</sup> However, because the forts were operated and constructed by civilians, defense against attack was often of secondary importance. At Rocky Mountain House the gates and bastions were "the most wretched buildings for defence."<sup>38</sup> On occasion, competing companies built their posts close together or shared a common palisade for protection against attack.<sup>39</sup> Defenses at fur trade posts were quite often simply a show of strength:

Edmonton is a well-built place ... surrounded by high pickets and bastions, which, with the battlemented gateways, the flagstuffs, etc., give it a good deal of a martial appearance.<sup>40</sup>

There was very little difference in the basic construction methods of fortifications at the western Canadian fur trade company posts, although there was considerable variability in their strength. By the last half of the nineteenth century, fortifications at many posts diminished because native/non-native hostilities were also diminishing (e.g., Dunvegan, Victoria, Chipewyan). The 'martial' appearance of these posts gave way with the devolution to a more scattered distribution of buildings, often with no palisades.

19 Archibald Norman McLeod, "Journal of the Daily Transactions at Dunvegan—Summer 1807, Winter 1807-1808," HBCA, unpublished journal, 1807-08, 9280.

20 Karlis Karklins, "Nottingham House: The Hudson's Bay Company in Athabasca 1802-1806," *Canadian Historic Sites: Occasional Papers in Archaeology and History* 69 (Ottawa: National Historic Parks and Sites Branch, Parks Canada, 1983), 25.

21 Timothy C. Losey et al., *Archaeological Investigations: Fort Victoria, 1974*, Occasional Paper No. 2, Historic Sites Service (Edmonton: Alberta Culture), 11.

22 Léonidoff, "L'habitat de bois en Nouvelle-France," 19-35.

23 Heinz W. Pyszczek and Mary Margaret Smith, "Archaeological Investigations at Fort Dunvegan (1878-1918), Dunvegan, Alberta," *Archaeological Survey of Alberta, Alberta Culture and Multiculturalism* (unpublished manuscript, Edmonton, 1985).

24 Roderick J. Heitzmann, "Fort Chipewyan III and IV: Historical Resources Inventory and Assessment, 1979," *Historic Sites Service, Alberta Culture* (unpublished manuscript, Edmonton, 1980).

25 Timothy C. Losey et al., "Fort George Project Interim Report No. 2: Archaeological Investigations, 1978," *Archaeological Survey of Alberta, Alberta Culture* (unpublished manuscript Edmonton, 1979), 36-37.

26 McLeod, "Daily Transactions at Dunvegan," 292.

27 Richard Glover, ed., *David Thompson's Narrative* (Toronto: The Champlain Society, 1962), 297.

28 Elliot Coues, ed., *New Light on the Early History of the Greater Northwest: the Manuscript Journals of Alexander Henry, Fur Trader of the North West Company, and of David Thompson, Official Geographer and Explorer of the Same Company, 1799-1814* (Minneapolis: Ross and Haines, 1897), 2:579-80.

29 Timothy Losey et al., "Fort George Project Interim Report No. 1: Archaeological Investigations, 1977," *Archaeological Survey of Alberta, Alberta Culture* (unpublished manuscript, Edmonton, 1978); Losey et al., "Fort George Project Interim Report No. 2"; and, Robert S. Kidd, *Fort George and the Early Fur Trade in Alberta*, Provincial Museum and Archives of Alberta, Publication No. 2 (Edmonton: Provincial Museum and Archives of Alberta, 1970).

30 Ibid, 35-38.

31 Construction details of the Fort Dunvegan factor's house (1877-) and the Fort Victoria clerk's quarters (1864-) were personally observed and recorded. Both buildings are still standing.

32 Pyszczek and Smith, "Archaeological Investigations at Fort Dunvegan (1878-1918)."

33 Losey et al., "Fort George Project Interim Report No. 2," 35-38.

34 See note 31.

35 Alexander McKenzie, *Voyages from Montreal, on the River St. Lawrence, through the Continent of North America, to the Frozen and Pacific Oceans; in the Years 1789 and 1793* (London, 1801), 131ff, states that palisades were 18 feet long, 7 inches in diameter at Fort Fork; Henry J. Moberly, *When Fur was King* (New York: Dutton, 1929), 35, states that the palisades at the 1854 Rocky Mountain House were 28 feet high.

36 Ibid, 28.

37 Hugh A. Dempsey, "A History of Rocky Mountain House," *Canadian Historic Sites: Occasional Papers in Archaeology and History* 6 (Ottawa: National Historic Parks and Sites Branch, Parks Canada, 1973), 32.

38 Alexander Henry talking about Rocky Mountain House in 1810, quoted in Dempsey, "A History of Rocky Mountain House," 29.

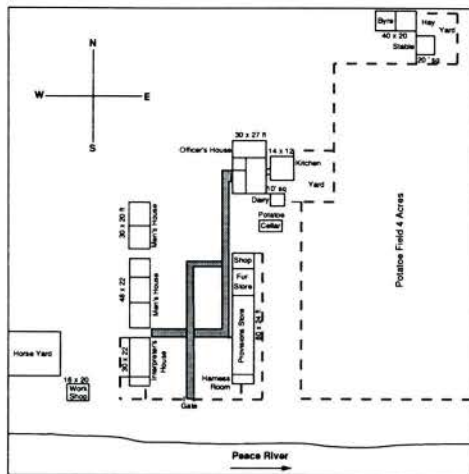


Figure 2 (above). Reproduction of an 1875 map of the Hudson's Bay Company Fort Dunvegan.

Table 1 (right). Summary data of western Canadian fur trade architecture (see appendix for sources).

Table 1. Summary Data of Western Canadian Fur Trade Architecture.

Fort	Company	Occupation Period	Region	Fort Area	Bldg. Area	No. Bldgs.	No. Activ.
St. James	H.B.	1846-	N.Cal.	-	-	8	9
St. James	H.B.	1899-	N.Cal.	-	8662	12	13
Epinette	N.W.	1806-23	Atha.	11011	3103	4	-
Dunvegan	N.W.	1805-21	Atha.	38809	-	8	-
Dunvegan	H.B.	1821-77	Atha.	38809	6945	10	11
Dunvegan	H.B.	1878-86	Atha.	-	7728	13	17
Dunvegan	H.B.	1887-1918	Atha.	-	6722	11	11
Fork	N.W.	1792-1800	Atha.	-	2470	4	-
St. Mary's	H.B.	1819-20	Atha.	19126	4068	6	6
Vermilion	H.B.	1848-	Atha.	-	18211	21	13
Nottingham H.	H.B.	1802-06	Atha.	-	1138	3	4
Wedderburn	H.B.	1815-21	Atha.	-	1033	1	3
Chipewyan	N.W.	1803-21	Atha.	-	-	8	8
Chipewyan	H.B.	1898-	Atha.	-	16500	22	16
Greenwich House	H.B.	1800-03	Atha.	-	1255	3	4
Red Deer's Post	H.B.	1819-20	Atha.	-	3050	3	4
Lac La Biche	H.B.	1875-6	Atha.	-	-	6	5
Lac La Biche	H.B.	1889-	Atha.	-	4728	9	8
Lac La Biche	H.B.	1895	Atha.	-	3070	7	6
Pine Fort	Can.	1768-94	Sask.	13833	-	4	-
Fort Pelly 1a	H.B.	1824-	Sask.	14400	4312	4	6
Fort Pelly 1b	H.B.	1831-	Sask.	32554	4956	9	8
Fort Pelly 2	H.B.	1856-	Sask.	-	-	9	-
Hudson's House	H.B.	1778-98	Sask.	12100	2074	4	4
Riviere Trem.	N.W.	1791-98	Sask.	29082	2596	7	-
Fort Carlton	H.B.	1855-80	Sask.	64349	12884	10	7
Fort George	N.W.	1792-1800	Sask.	60860	7415	9	-
Buckingham H.	H.B.	1792-1800	Sask.	17835	2961	3	-
White Earth	H.B.	1810-13	Sask.	27040	-	-	-
White Earth	N.W.	1810-13	Sask.	52728	-	-	-
Victoria	H.B.	1864-98	Sask.	29480	3859	8	9
Augustus 2	H.B.	1801-10	Sask.	24300	5625	7	11

Note: Fort Area was calculated only when forts were enclosed by palisades.

## REGIONAL VARIABILITY IN FUR TRADE POST ARCHITECTURE

The following results are derived from the fur trade post data presented in table 1.

### Fort Size

The size of fur trade posts increased as their role changed from wintering posts to district headquarters. Prior to 1821, North West Company posts were larger than Hudson's Bay Company posts, likely because they had larger populations and more diverse functions (table 2). Hudson's Bay Company posts increased substantially in size after 1821 (table 2). Furthermore, the Saskatchewan River posts were slightly, but not significantly, larger than the northern establishments.<sup>41</sup>

### Building Diversity, Size, and Frequency

Most fur trade posts contained dwellings, storage facilities, and specific work areas. A sketch of the 1875 Hudson's Bay Company Fort Dunvegan represents the layout and functional diversity of buildings necessary to conduct the inland trade (figure 2).<sup>42</sup> Imported goods, local provisions, and furs were stored in large buildings. Large storage cellars contained perishable goods. The blacksmith's and carpenter's shops were essential to the operation of the inland posts. Dwellings housed the fur trade employees. Animals were kept farther away from the fort compound.

Variability in the diversity, size, and number of fort buildings reflected primarily the individual needs of posts and districts. Furthermore, number of buildings, size, and activity areas all increased as the role and rank of the fort changed. The large district headquarters, such as Fort Edmonton and Chipewyan, performed many roles, contained many different types of buildings, and incorporated considerably more space for storage, working, and living (table 1). Prior to 1821, number of buildings, total building space, and functions were all greater at North West Company fur trade posts than at the Hudson's Bay Company posts (table 2). These differences likely reflect the considerably larger populations and greater economic output at North West Company posts than the Hudson's Bay Company. After 1821, Hudson's Bay Company posts became larger, and contained more buildings, total build-

39 For example, Fort Vermilion in 1814 (see Gabriel Franchère, *Narrative of a Voyage to the Northwest Coast of America in the Years 1811, 1812, 1813, and 1814*, trans. J. V. Huntington [New York: Redfield, 1854], 318-19), and Fort White Earth in 1810-13 (see Coues, ed., *Manuscript Journals of Alexander Henry ... and of David Thompson*, vol. 2).

40 Sir George Simpson, *Narrative of a Journey Round the World, during the Years 1841 and 1842* (London: H. Colburn, 1847), 1:101.

41 Statistical significance tests of these means, however, indicates that they are not different at a 95 percent confidence level.

42 National Archives of Canada, PA-9141, Fort Dunvegan, October 1872.

Table 2. General trends in fur trade post size.

Company/Period	Fort sq. ft.	Bldg. sq. ft.	No. Bldgs.	Activi- ties
N.W. Company <1821	38081	4423	6.1	8
H.B. Company <1821	21543	315	4.6	5.1
H.B. Company 1822-1860	39690	8261	9.8	7.7

ing space, and functional areas (table 2). The Hudson's Bay Company reduced the number of inland posts after amalgamation with the North West Company to decrease their operating costs; consequently, there were fewer, larger, and more functionally diverse forts in each region.

### Architecture as Display

Apparently, then, variability in fur trade post size, and the diversity of roles, was related to variability in fur trade economics. Occasionally, however, personal prestige and status, and sometimes competition between officers, also left its mark on fur trade architecture.<sup>43</sup> This behaviour defied rational economic principles and enraged chief Company officers. For example, George Simpson, Governor of the Hudson's Bay Company, complained about construction expenses at Fort Pelly in 1832:

... from being merely a temporary Post, it has since then gradually become one of the most expensive permanent Establishments in the Country, the different Gentlemen who have been in charge thereof exhausting their ingenuity and wasting means in embellishments and fanciful improvements.<sup>44</sup>

Fort Pelly was an unprofitable enterprise, but its officers intended to keep up with other posts in the region. It was prestige and competition between chief traders, and their attempts to visibly demonstrate equality, that were instrumental in the investment of resources in architecture.

Events at Fort Dunvegan leave a similar impression of how architecture was used to display rank of the posts and their occupants. When Fort Dunvegan became the new headquarters of Peace River District in 1878 improvements to its buildings were undertaken.<sup>45</sup> Some buildings were rebuilt, despite the continuing decline of furs and profits. Dunvegan's new role as a district headquarters was reflected in its architecture. It carried out more roles and tasks, which is probably why some of its buildings were rebuilt and others added. The construction of a new factor's house some distance away from the servants' quarters—which were not rebuilt—also reflected the higher status of the man in charge of the new district. Evidently, architecture was used for conscious display of occupational rank at Fort Dunvegan.

### VARIABILITY IN OCCUPATIONAL RANK AND ARCHITECTURE

Major trends in fur trade architecture, when compared with occupational inequality, are summarized in table 3.

#### Living Arrangements

Living quarters at many inland fur trade posts were arranged along palisades to form a courtyard within the main compound (e.g., Fort George, Dunvegan, Buckingham House). The trader's or factor's house was usually the largest, most dominant dwelling. Other Company employees lived in long barracks or small cabins, either inside or outside the fort. Privacy, which was minimal, was attained by constructing fences between dwellings. By the late nineteenth century the posts began to resemble small settlements, their buildings scattered over a larger area (e.g., Fort Dunvegan, 1880s).

Officers and labourers at the majority of the posts lived in separate quarters (table 4). These two occupational groups more often lived under a common roof prior to 1821 than after. Furthermore, officers and labourers lived together more often at Hudson's Bay Company posts than at North West Company posts. Finally, the degree of spatial proximity of the company employees was closely related to the relative size, and consequently the rank, of the fur trade posts they inhabited. And whenever possible, as at Fort Dunvegan during the 1880s, the living quarters of the officers and labourers were separated by a great deal of space.

43 Heinz W. Pyszczuk, "Big Men – Big Houses? The Interpretation of Archaeological Architectural Remains, Dunvegan," *Archaeology in Alberta, 1985*, Occasional Paper No. 29, Archaeological Survey of Alberta, ed. John W. Ives (Edmonton: Alberta Culture and Multiculturalism, 1986), 29-50; Heinz W. Pyszczuk, "Economic and Social Factors in the Consumption of Material Goods in the Fur Trade of Western Canada" (Ph.D. diss., Dept. of Archaeology, Simon Fraser University, 1987); Heinz W. Pyszczuk, "More on Image and Material Culture in the Fur Trade," *Archaeology in Alberta, 1986*, Occasional Paper No. 31, Archaeological Survey of Alberta, ed. Martin Magne (Edmonton: Alberta Culture and Multiculturalism, 1986), 17-30; D. R. Babcock, "Fort George and Buckingham House: A Structural History," Historic Sites Service, Alberta Culture (unpublished manuscript, Edmonton, 1983), 19.

44 HBCA, PAM, D.4/99, fo.47d.

45 Pyszczuk, "Big Men – Big Houses?"

Table 3 (above). Summary of western Canadian fort dwelling data (see appendix for sources).

Table 4 (below). Spatial proximity of living quarters between Company officers and servants at western Canadian fur trade posts.

Table 3. Summary of Western Canadian Fort Dwelling Data.

Fort	Company	Occupation Period	Region	Officers' Area (sq. ft.)	Servants' Area (sq. ft.)	Officers' # Rms	Servants' # Rms	Officers'/ Servants' Proximity
St. James	H.B.	1846-	N.Cal.	-	-	2	1	sep.
St. James	H.B.	1899-	N.Cal.	1818	341	6	2	sep.
Epinette	N.W.	1806-23	Atha.	1190	294	3	1	sep.
Dunvegan	N.W.	1805-77	Atha.	978	331	4	1	sep.
Dunvegan	H.B.	1878-86	Atha.	1552	300	5	1	sep.
Dunvegan	H.B.	1887-1918	Atha.	1552	300	5	1	sep.
Fork	N.W.	1792-1800	Atha.	1050	270	1+	1	sep.
St. Mary's	H.B.	1819-20	Atha.	1772	363	5	1	sep.
Vermilion	H.B.	1848-	Atha.	2300	360	8	1-2	sep.
Nottingham	H.B.	1802-06	Atha.	134	77	1	1	att.
Wedderburn	H.B.	1815-21	Atha.	280	196	1	1	att.
Chipewyan	N.W.	1872-	Atha.	1964	531	5	1-2	sep.
Greenwich House	H.B.	1800-03	Atha.	-	-	1	1	att.
Red Deer's Post	H.B.	1819-20	Atha.	1250	333	3	1	sep.
Lac La Biche	H.B.	1889-	Atha.	975	224	-	1	sep.
Lac La Biche	H.B.	1895	Atha.	600	224	-	1	sep.
Pine Fort	Can.	1768-94	Sask.	504	248	-	1	sep.
Fort Pelly 1a	H.B.	1824-	Sask.	800	160	3	1	sep.
Fort Pelly 1b	H.B.	1831-	Sask.	1100	160	4	1	sep.
Hudson's House	H.B.	1778-9	Sask.	560	314	2	1	sep.
Riviere Trem.	N.W.	1791-98	Sask.	613	283	2+	1	sep.
Fort Carlton	H.B.	1855-80	Sask.	1120	300	2+	1	sep.
Fort George	N.W.	1792-1800	Sask.	1456	320	5	1-2	sep.
Buckingham H.	H.B.	1792-1800	Sask.	365	72	2	1	att.
Victoria	H.B.	1864-98	Sask.	1117	326	5	1-2	sep.
Augustus 2	H.B.	1801-10	Sask.	1379	348	2+	1	sep.
Augustus 2	N.W.	1801-10	Sask.	1336	389	2+	1	att.
Augustus 4	H.B.	1861-	Sask.	5293	315	9	1-2	sep.
Rocky Mt. House	N.W.	1799-1821	Sask.	1000	275	2+	1	sep.
Rocky Mt. House	H.B.	1799-1821	Sask.	1444	244	2+	1	sep.
Rocky Mt. House	H.B.	1799-1835	Sask.	216	264	2	1	att.
Jasper House	H.B.	1857-90	Sask.	968	168	2	1	sep.

Table 4. Spatial proximity of Living Quarters between Company Officers and Servants at Western Canadian Fur Trade Posts.

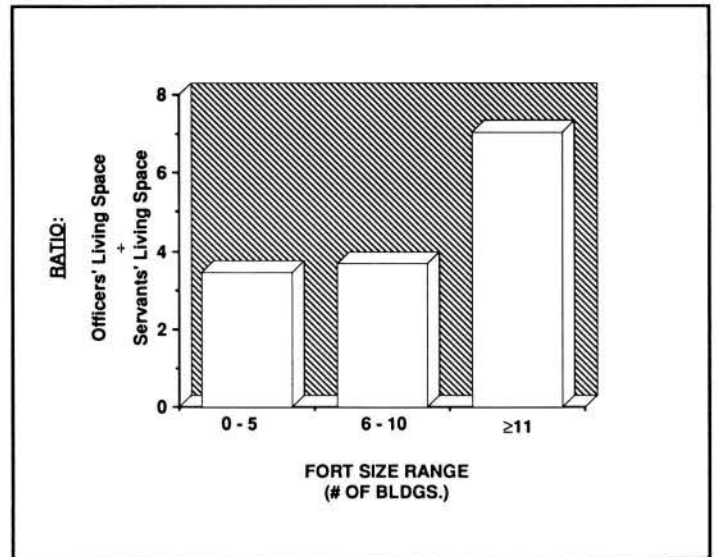
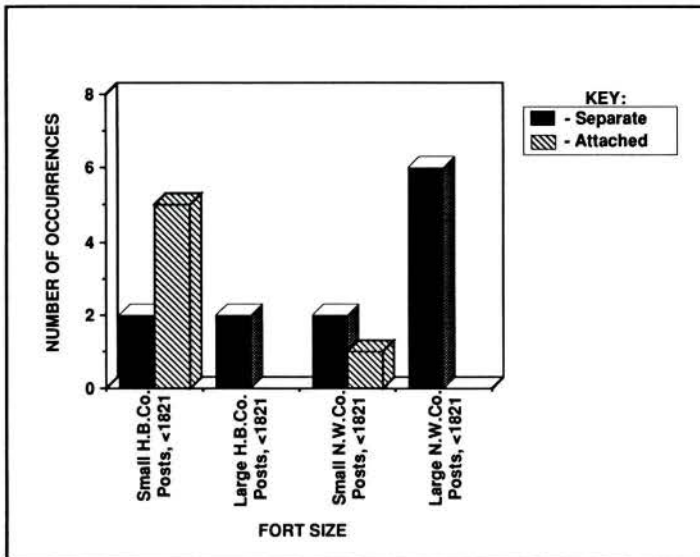
Company/Period/Size	Number of Occurrences	
	Separate Living Quarters	Attached Living Quarters
All	33	6
<1821	14	6
1821-60	5	0
>1861	8	0
H.B. Company	22	5
N.W. Company	8	1
0-5 Buildings	6	5
6-10 Buildings	19	1
>10 Buildings	6	0

What factors are responsible for these results? Historically, there was a much stronger ethnic link between the British officers and Orkney labourers of the Hudson's Bay Company than the British/Scottish officers and French Canadian labourers of the North West Company.<sup>46</sup> These closer ethnic ties may account for the often closer proximity of living quarters of the officers and their servants in the Hudson's Bay Company than in the North West Company. Evidently, habitation of the same building by Hudson's Bay Company officers and servants was preferred because this arrangement resembled the master-servant relationship in Britain during the early nineteenth century. But the present fur trade sample shows that fort size played an equally important role in the degree of proximity between Hudson's Bay Company officers and servants prior to 1821. Proximity decreased as the size of the post increased in the Hudson's Bay Company (figure 3). Therefore, habitation of the same dwelling by officers and labourers was not due to greater ethnic compatibility in one company than the other, but occurred out of economic necessity.

#### Dwelling Space and Rooms

The amount of living space and number of rooms for each occupational class is given in table 3. Living space was calculated as square feet per person. It is only a rough approximation, since often many people (especially the labourers) shared the amount of space listed in table 3.

46 Brown, *Strangers in Blood*, 46; and Pyszczky, "Economic and Social Factors in the Consumption of Material Goods," 86-99.



For example, in 1810 Alexander Henry described the occupants in ten houses at Fort Vermilion.<sup>47</sup> Each house contained between one and 18 people, with a mean of 10.8 people per house. At Fort Edmonton in 1858, the number of occupants ranged between two and 10 people in 14 separate houses, with a mean of 6.8 people.<sup>48</sup> At Fort George, approximately 12 separate compartments have been identified to house approximately 140 people, or roughly 11.6 people per compartment. Sometimes these houses or compartments were often no bigger than 200 square feet.

In order to further examine general trends in living space, officers' space was divided by servants' space and expressed as a ratio (table 5). The officers have relatively more space than the servants as this figure increases; a decrease in the ratio signifies the opposite. Clearly, the officers always had more living space than the labourers. Prior to 1821, differences in living space between the two ranks was greater in the North West Company than in the Hudson's Bay Company. Furthermore, differences in living space among the ranks were much greater after 1821 than before 1821 in the Hudson's Bay Company. Finally, the degree of difference there was in living space between the occupational ranks was related to the size of the post (table 5, figure 4). In short, the degree of inequality in living space grew larger between the occupational classes as the size of the post increased.

There is also considerable variability in the number of rooms or partitions in dwellings (table 3). One room often served many functions for the labourers (eating, sleeping, etc.). At other forts, each specific activity took place in a separate room. For example, the men's quarters at Lower Fort Garry consisted of one or two rooms, and were much smaller than the officers' quarters.<sup>49</sup> Often, however, the men lived in barracks-like quarters that contained little or no internal partitioning.<sup>50</sup>

... while the exterior is fair enough with its winter porch, protected doors, the inside was somewhat of a maze and more like a rabbit warren is supposed to be, both in excess of occupants ...<sup>51</sup>

The number of officers' to labourers' rooms was computed as a ratio, by dividing the number officers' rooms by the number of labourers' rooms (table 5). Differences between officers'/labourers' number of rooms is only slightly higher in the North West Company than in the Hudson's Bay Company, though there is a significant difference in the officers'/labourers' number of rooms before and after 1821 (table 6). Furthermore, the ratio is also significantly different when large posts are compared to small posts. Like living space, the difference in number of rooms between the officers and labourers increased as the size or rank of the fur trade post increased.

## CONCLUSIONS

Fur trade architecture is a valuable source of information about the people who first settled the Canadian west. While an understanding of basic log construction techniques in the fur trade is important, there are other architectural attributes, such as size and diversity of posts or buildings, which are equally informative about the past. These attributes are sensitive to changes that occur in the economic or social processes that operated in the fur trade. The first step in analyzing these attributes is to document the architectural variability, and then to

Figure 3 (left). The number of times officers' and servants' quarters were attached or separate at Hudson's Bay Company and North West Company posts.

Figure 4 (right). The relationship between the mean living space ratio of officers to servants and fur trade posts.

47 Coues, ed., *Manuscript Journals of Alexander Henry ... and of David Thompson*, 507-675.

48 George Heath MacDonald, *Edmonton, Fort - House - Factory* (Edmonton: Douglas Printing Co., 1959), 79.

49 Gregory Thomas, *The Men's House, Lower Fort Garry: Its Furnishings and Place within the Hudson's Bay Company Post Environment*, Manuscript Report Series No. 246 (Ottawa: National Historic Parks and Sites Branch, Parks Canada, Department of Indian Affairs, 1978), 28-50.

50 See Robert M. Ballantyne, *Hudson's Bay; or, Everyday Life in the Wilds of North America, During Six Years' Residence in the Territories of the Honourable Hudson's Bay Company* (Edinburgh and London: W. Blackwood, 1848); Isaac Cowie, *The Company of Adventurers* (Toronto: William Briggs, 1913); J.A. Hussey, "'Unpretending', but not 'Indecent', Living Quarters at Mid-19th Century Hudson's Bay Company Posts," *The Beaver*, Outfit 305:4 (1975): 12-21; G.S. McTavish, *Behind the Palisade* (Victoria: Gray's Publishing Company, 1963).

51 McTavish, *Behind the Palisade*, 114.



Table 5. Summary of living space and number of rooms of Company officers and servants.

Period/Company/Size	Officers' to Servants'	
	Mean Living Space Ratio	Mean No. of Rooms Ratio
N.W. Company	3.5	2.6
H.B. Company <1821	2.9	2.3
H.B. Company 1821-60	5.8	3.5
H.B. Company 1861- <1821	4.9	2.5
>1821	3.2	2.5
Head quarters	5.4	3.5
Other	7.8	3.8
	3.4	2.7

Note: Ratios are computed by dividing the Officers' figures by the Servants' figures.

explain it. Although there are still deficiencies in the fur trade data base, some trends are already discernible.

In the fur trade, as in many other societies, basic environmental and economic factors account for most of the variability found in architecture. The architecture of the fur trade post was designed so that furs could be acquired from the natives and its inhabitants would be protected from the elements. For the most part, readily available local building materials were used to construct these posts. Consequently, the form and function of fur trade architecture strongly reflects basic needs and availability of resources.

Even though fur trade post architecture was a direct response to immediate economic needs or available resources, it was also sensitive to larger prevailing economic and social conditions. Internal competition between company officers and their respective posts often led to improvements in architecture intended primarily for outward display and status. Under these circumstances, architecture categorizes humans and their environments. It is a means of active expression of human affiliation or differentiation, a fact often overlooked by conventional economic models. Resources, when divided unequally among posts and their inhabitants, are the means to accomplish these ends. When given the opportunity, as at the larger fur trade posts, officers invested labour and resources in architecture to differentiate themselves from the labourers.

Thus, at one end of the spectrum, when access to labour and resources were limited, there was relatively more similarity in architecture of the different ranks than when labour and materials were unlimited. This trend was evident when examining living conditions at the Hudson's Bay Company posts built before 1821. The close degree of proximity between the occupational ranks was not a consequence of closer ethnic ties that existed between the different ranks. As soon as access to labour and resources increased, as at the larger posts, greater spatial distance between the ranks occurred.<sup>52</sup> Humans use material things to fix or make concrete their social positions within society. Initially, the ability of people in the fur trade to make those distinctions with architecture was minimal, but grew as access to labour and resources increased.

To conclude, fur trade architecture impressed upon people the importance or dignity of an institution or position, whether economic, political or religious. Consider, for example, Governor George Simpson's statements of how architecture was used to impress the natives:

This fort [Edmonton], both inside and outside, is decorated with paintings and devices to suit the taste of the savages that frequent it. Over the gateway are a most fanciful variety of vanes; but the hall, of which both the ceiling and the walls present the grandest colors and most fantastic sculpture, absolutely rivets the astonished natives to the spot with wonder and admiration.<sup>53</sup>

Now, consider the following statement from the *Edmonton Bulletin*, 1906, describing the new Alberta legislative building:

While it is with a degree of pride and pleasure that we note the changed conditions from the fur traders' life to a prosperous, modern civilization, we must admit the feeling that we are, after all, aiming only to establish for our people the most important and imposing structure in the Province.

Architecture, in both cases, was used in a similar fashion: to rivet the "astonished natives" (and, in the latter case, non-natives) "to the spot with wonder and admiration."

52 The exceptions occurred at the large establishments, such as Fort Edmonton and Fort Garry, where the house servants lived in the basement of the factor's house.

53 Simpson, *Narrative of a Journey Round the World*, 1:101.

Dr. Heinz W. Pyszczuk is an archaeologist for the Archaeology and Ethnology section of the Provincial Museum of Alberta, *Alberta Culture and Multiculturalism*.

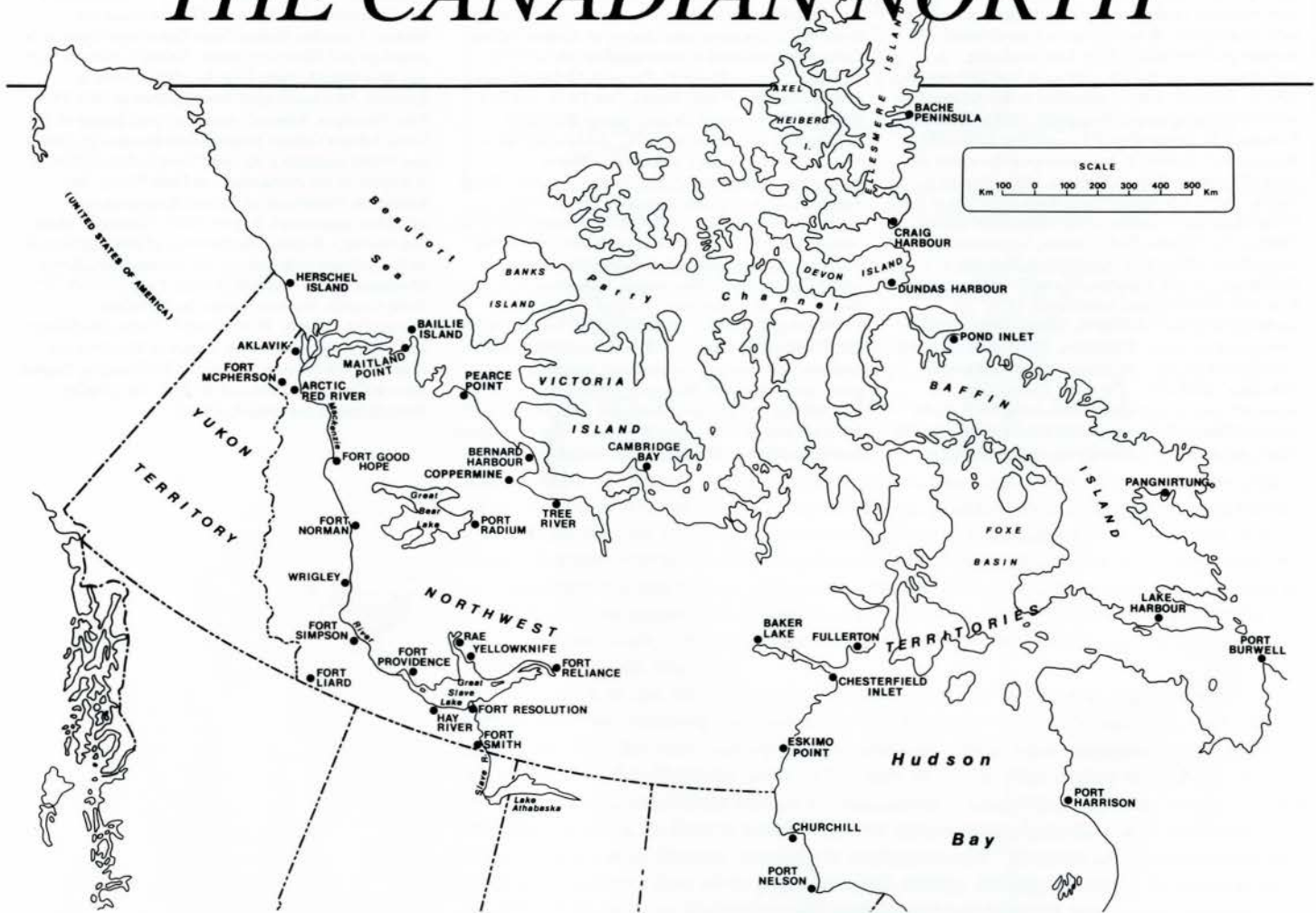
## Appendix: Sources for data presented in tables 1 and 3.

Ken Arnold, "The History and Archaeology of Fort Fork," The Provincial Museum and Archives of Alberta (unpublished manuscript, Edmonton, 1972); Douglas R. Babcock, "Fort Dunvegan: A Structural Synopsis and Archival Extracts," Historic Sites Service, Alberta Culture (unpublished manuscript, Edmonton, 1983); Dean W. Clark, "Report on Preliminary Excavations at Hudson's House," *Napao* 2 (1969), 28-33; Dean W. Clark, "Historic Resource Development, Victoria Settlement," Historic Sites Service, Alberta Culture (unpublished manuscript, Edmonton, 1971); Knut Fladmark, "A Preliminary Report on Excavations at Fort Epinette (St. John's) - HaRc27" (report submitted to the Archaeological Sites Advisory Board, Vancouver, 1976); Michael Forsman, *The Archaeology of Victoria Post 1864-1897*, Manuscript Series No. 6, Archaeological Survey of Alberta (Edmonton: Alberta Culture, 1985); Donald A. Harris, *The Archaeological Excavations at the Site of Fort St. James, British Columbia, 1972*, Manuscript Report Number 228 (Ottawa: Parks Canada, Department of Indian Affairs, 1974); HBCA, b.39/e/16; Roderick J. Heitzmann, "Fort Chipewyan III and IV: Historical Resources Inventory and Assessment, 1979," Archaeological Survey of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1980); Karlis Karklins, "Nottingham House: The Hudson's Bay Company in Athabasca, 1802-1806," *Canadian Historic Sites: Occasional Papers in History and Archaeology* 69 (Ottawa: National Historic Parks and Sites Branch, Parks Canada, 1983); Robert S. Kidd, *Fort George and the Early Fur*

*Trade in Alberta*, Provincial Museum and Archives of Alberta, Publication No. 2 (Edmonton: Provincial Museum and Archives of Alberta, 1970); Olga Klimko, *The Archaeology and History of Fort Pelly I: 1824-1856*, Pastlog No. 5, Manuscript Series in Archaeology and History (Regina: Saskatchewan Culture and Recreation, 1983); Timothy Losey, Heinz W. Pyszczyk, Lan Chan, Karie Hardie, Peter Seto, and Peter Bobrowsky, "Fort George Project Interim Report No. 1: Archaeological Investigations, 1977," Archaeological Survey of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1978); Timothy C. Losey, Heinz W. Pyszczyk, Melanie Wiber, Peter Bobrowsky, Walter Kowal, Tom Dunk, and Ken Krefting, "Fort George Project Interim Report No. 2: Archaeological Investigations, 1978," Archaeological Survey of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1979); Timothy C. Losey, Sheryl Kerpan, Jim Ciconti, and Gabriella Prager, "Fort George Project Interim Report No. 3: Archaeological Investigations, 1979," Archaeological Survey of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1980); George Heath MacDonald, *Edmonton, Fort - House - Factory* (Edmonton: Douglas Printing Co., 1959); Hugh T. Mackie, "Archaeological Excavation of Fort Riviere Tremblante (N.W.C. 1791-1798)," Department of Anthropology, University of Manitoba (unpublished manuscript, Winnipeg, 1968); Edward J. McCullough and Michael Maccagno, "The Fur Forts of Lac La Biche. A Preliminary Statement," Archaeological Survey of Alberta, Alberta Culture (unpublished

manuscript, Edmonton, 1985); Gertrude Nicks, "The Archaeology of Two Hudson's Bay Company Posts: Buckingham House (1792-1800) and Edmonton House III (1810-1813)" (M.A. thesis, Dept. of Anthropology, University of Alberta, 1969); John Nicks, "The Archaeology of Buckingham House," Historic Sites Service of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1977); William C. Noble, "The Excavation and Historical Identification of Rocky Mountain House," *Canadian Historic Sites: Occasional Papers in Archaeology and History* 6 (Ottawa: National Historic Parks and Sites Branch, Parks Canada, 1973); Heinz W. Pyszczyk, "Archaeological Investigations at 1805-1878 Fort Dunvegan, Alberta," Archaeological Survey of Alberta, Alberta Culture (unpublished manuscript, Edmonton, 1983); Anthony J. Ranere, "Fort Carlton (FfNo-1): A Report on the Archaeological Field Work," Saskatchewan Department of Natural Resources (unpublished manuscript, Regina, 1967); Donald N. Steer and Harvey J. Rogers, "Archaeological Investigations at an Early Nineteenth Century Fur Trading Fort, Rocky Mountain House National Historic Park, 1975-1977," Parks Canada, Western Region (unpublished manuscript, Calgary, 1978); Terry P. Tottle, *The History and Archaeology of Pine Fort*, Papers in Manitoba Archaeology, Preliminary Report No. 7 (Winnipeg: Department of Cultural Affairs and Historical Resources, Historic Resources Branch, 1981).

# BUILDING ON THE FRONTIER: THE MOUNTED POLICE IN THE CANADIAN NORTH



**E**stablished in 1873 as the North-West Mounted Police, and known since 1919 as the Royal Canadian Mounted Police, the Mounties are an enduring national symbol. Although film makers and writers of fiction have elevated the police to the realm of folk heroes, the force's reputation is rooted in the role it has played in the development of Canada's frontiers — the Prairies in the 1870s and 1880s, the Yukon in the 1890s, and the Arctic after the turn of the century. The Mounted Police were the federal government's primary instrument for administering these areas, for asserting authority over the population, and for demonstrating Canadian sovereignty. As the police moved into frontier regions, an ongoing concern was the provision of shelter for the rank and file, a task that often demanded as much energy as the duties related to law enforcement. The frontier activities of the force have inspired heritage-minded groups in many parts of the country to restore and, in some instances, to reconstruct historic forts and outposts as a way of establishing tangible links with the force's past accomplishments. The Canadian Parks Service, for example, manages several former police posts as national historic sites, including forts Walsh and Battleford in Saskatchewan, and Fort Herchmer at Dawson in the Yukon. Other former posts are managed by provincial and municipal authorities in western Canada and by territorial officials. It is not surprising, therefore, that the impact of the police on Canada's development is a topic of ongoing interest for historians and preservationists alike.<sup>1</sup>

BY JAMES DE JONGE

This paper examines the development of Mounted Police posts on Canada's northern frontiers, particularly above the Arctic Circle in the first half of this century, to provide a broader context for understanding the force's built heritage. Police detachment buildings in the Arctic symbolized the federal presence on the frontier and the strategy of reinforcing Canada's control through effective occupation of this vast area. In addition to their historical significance, the buildings are of interest from an architectural viewpoint for what they reveal about the organization and outlook of the police over time. The establishment of northern detachments in the opening decades of the 20th century followed an earlier pattern by the police of placing minimal emphasis on living accommodations. This attitude toward housing stemmed mainly from the force's paramilitary structure, which made it difficult to respond effectively to the demands of the environment. It also reflected the transitory nature of police work on the frontier, and the necessity of responding to shifts in settlement and to changes in the force's areas of jurisdiction. Coordinating the far-flung activities of the police and establishing secure supply lines proved to be difficult tasks.

Beyond providing an insight into the internal workings of the force, Arctic detachment buildings are relevant to a broader topic that has received little attention to date — the development of northern building technology. In the early 20th century the Mounted Police were among a relatively small number of non-native sojourners, including missionaries, whalers and fur traders, who constructed shelters in Canada's Arctic regions. Prior to 1940 the police established about 14 outposts in the Eastern Arctic and about 24 in the Mackenzie Valley and along the Arctic Coast (figure 1). They established an additional 40 to 50 detachments in the Yukon Territory, mainly before 1910. The police serve as a useful focus for examining the process of Arctic construction, the problems encountered, and the gradual evolution of improvements in building design.

Probably the most interesting aspect of the force's northern work was the extension of its activities to the Arctic archipelago in the 1920s. While the decade marked the beginning of a period of sustained occupation of the high Arctic, it was also the culmination of decades of work in the Yukon, the Mackenzie River Valley, and along the shores of Hudson Bay. It is, therefore, useful to begin with a discussion of police work in these locations before 1920, as this was a period of initiation and adjustment to the North. In the decades before 1920, the police confronted many problems in establishing supply lines and in securing living quarters, and they overcame several challenges imposed by the environment, albeit after much trial and error. An examination of northern detachment buildings after 1920 suggests that the force's imbedded traditions, its bureaucratic structure, and the shifting nature of police work all inhibited efforts to build upon past achievements.

#### **BUILDING BELOW THE TREE-LINE: THE MOUNTED POLICE IN THE YUKON**

The Mounted Police were deployed to the Yukon in the mid-1890s in response to the growth in speculative mining, primarily by Americans — a situation that raised unsettling questions about Canada's claim to the territory. Moreover, the Canadian government was concerned that the maintenance of law and order in the scattered communities of the Yukon had come to be based upon the self-governing system of the "miners meeting." This informal institution was considered contrary to the Canadian tradition of centralized, paternalistic control that had been well demonstrated by the Mounties in the opening of the Canadian West.<sup>2</sup> In the Yukon the police were introduced to the rigors of a more northerly climate, but the experience they acquired there proved of limited value for their subsequent work above the Arctic Circle. Indeed, the Mounties were compelled to make relatively few changes in the methods used to secure supplies and shelter.

In the Yukon, supplies of timber were usually available in the vicinity of proposed detachments, and this prompted the force to rely upon the initiative of the rank and file to construct traditional log buildings wherever possible. This approach was a continuation of the practice followed by the police in the Canadian West. On the Prairies the Mounties often relocated detachments and divisional headquarters in response to shifting settlement patterns and to changes in police duties. As a consequence, the force's senior officers had become hesitant to invest money in the construction of new posts. They were pleased whenever the men in the field could use local timber to build adequate, but inexpensive quarters. The force's experience on the Prairies had also demonstrated the importance of the scattered resident population on the frontier, especially the American traders. Until the completion of the Canadian Pacific Railway in the 1880s, the Mounties drew heavily upon the services of American entrepreneurs and their main bases of supply in Montana. This reliance upon those who were supposed to be the focus of police work was evident in the Yukon as well, and it reinforced the tendency of venturing into new regions without giving serious attention to planning.

Figure 1 (opposite page). Map showing Mounted Police posts in the Northwest Territories and Hudson Bay, 1900-1940. (Michel Benoît, Architectural History Branch, Canadian Parks Service)

I would like to thank Marc de Caraffe, Susan Buggey, Philip Goldring, and Julie Harris of the Canadian Parks Service, National Historic Sites Directorate, for their helpful comments on an earlier draft of this paper.

- 1 In past decades the Canadian Parks Service has undertaken considerable research on the police posts under its jurisdiction. The Parks Service has also researched a number of Mounted Police buildings to assist the Historic Sites and Monuments Board of Canada in assessing their national significance. In recent years the Architectural History Branch of the Canadian Parks Service has also prepared several evaluation reports of Mounted Police facilities for the Federal Heritage Buildings Review Office (FHBRO).
- 2 William R. Morrison, *Showing the Flag: The Mounted Police and Canadian Sovereignty in the North, 1894-1925* (Vancouver: University of British Columbia Press, 1985), 11-13.



Figure 2 (top). Fort Constantine, Yukon Territory, c. 1895-96, showing men on wood fatigue in front of the fort. Fort Constantine was the first Yukon outpost constructed by the force. (Glenbow-Alberta Institute)

Figure 3 (top right). Tagish Post, c. 1898-1900. Tagish, built in 1897-98, was the Mounted Police headquarters for the southern Yukon until 1900, when the divisional headquarters was moved to Whitehorse on the arrival of the railway. (RCMP Photo Archives)

Figure 4 (above). Mounted Police detachment at Dominion Creek, Yukon Territory, c. 1905. In terms of its scale, appearance, and construction materials, the detachment was typical of the numerous police outposts established in the Yukon around the turn of the century. (RCMP Photo Archives)

The construction of Fort Constantine, the first major police post in the Yukon, was typical of the approach taken by the force in the northern territory. It was built in 1895 by a group of 20 Mounties, led by Inspector Constantine, near the mining community of Forty Mile along the Yukon River. Having made no prior arrangements for accommodation, the men were left to their own resources and to the good will of others. Fortunately for the police, the American-based North American Trading and Transportation Company provided temporary shelter in miners shacks and offered the use of its portable sawmill. For two months the police were preoccupied with the construction of the post, which proved to be an arduous task because of a scarcity of suitable timber in the vicinity.<sup>3</sup> From locations upstream, hundreds of logs were floated to the site for use in erecting buildings and an imposing palisade to enclose the police property (figure 2). The force's lack of preparation provided an opportunity for the men to demonstrate their resourcefulness. Sergeant Hayne, one of the officers, later boasted in his memoirs: "All this work was done by our twenty selves, with no outward help of any kind or description. The mounted police in these parts of the British Empire have to be able to do most things from dentistry to engineering on a large scale, with a little navigation thrown in."<sup>4</sup>

The log buildings of Fort Constantine were the first of many erected by the force throughout the Yukon. Headquarters posts came to be established at Dawson and at Whitehorse, each responsible for 10 to 15 outlying detachments. Officers who had been in the region for several years recognized the importance of having adequate food supplies, tools, and building hardware on hand, but this was a point not always appreciated by senior administrators. The senior officer of the force, the Commissioner, was stationed in Regina but he reported to the Comptroller, a civilian bureaucrat stationed in Ottawa who advised the government about police activities and conveyed government policy back to the Commissioner. Not surprisingly, problems resulted from the bureaucratic chain of command and from the geographical separation of these two administrators. Matters were compounded by the conservative outlook of Frederick White, who occupied the position of Comptroller from 1880 to 1913. His overriding concerns for limiting capital expenditures and his reluctance to expand operations in the Yukon did not augur well for the efforts of lower ranking officers to improve supply lines and living conditions on the frontier.<sup>5</sup>

As at Fort Constantine, the men in the field continued to shoulder the burden of constructing the outposts. In 1897, for example, Inspector Constantine lamented the failure of senior officials to supply a portable sawmill and horses for the construction of the new headquarters post at Dawson. His men spent days hauling heavy logs hundreds of yards to the building site and then hewing them by hand on three sides.<sup>6</sup> When the Tagish post was built in 1898, the men were particularly hampered by the lack of equipment (figure 3). The commanding officer there reported: "We had very few tools with us and neither dogs nor horses and we consequently found the green timber very hard to handle. I managed to buy a few axes, shovels and picks from the passers-by but of course they charged exorbitant prices."<sup>7</sup> Yet, the experiences of the men at Tagish and Dawson typified the force's predilection for leaving the officer-on-the-spot to his own devices for procuring materials and determining the final design of frontier posts.

Despite uncertainties in the supply of materials, and the frequent need to relocate detachments as new areas were opened to mining, the police succeeded in constructing many buildings of a respectable character (figure 4). A Mountie's adeptness at handling an axe proved to be indispensable in a region where the task of securing food and shelter could be as time-consuming as the duties associated with law enforcement. The preoccupation with buildings is evident in the annual police reports from the Yukon, which are replete with accounts of construction work, including detailed information on the dimensions of buildings and their

3 Report of the Commissioner of the North-West Mounted Police, 1895 (Ottawa: Queen's Printer, 1896), 7-10 (hereafter cited as *NWMP*, *RNWMP* or *RCMP Annual Report*, as appropriate).

4 M.H.E. Hayne and H.W. Taylor, *The Pioneers of the Klondyke* (London: Sampson, Low, Marston, 1897), 62-63.

5 Terrance F. Kelly, "Comptroller Fred White and the Arctic Presence of the RNWMP, 1903-11," M.A. thesis, University of Alberta, 1985, 44-52.

6 *NWMP Annual Report*, 1897, 308, 310.

7 *NWMP Annual Report*, 1898, 81.

component parts.<sup>8</sup> As Dawson and Whitehorse became settled in the opening years of this century, the police adopted standard frame construction techniques for several of their headquarters' buildings, in keeping with the overall trends in these communities. They were also able to devote less time to construction work and to rely more on outside expertise. The four surviving buildings from the Dawson post, now managed by the Canadian Parks Service, are indicative of this evolution. The oldest two — the Married Officers' Quarters and the Hospital — are log buildings dating from 1898, and are testimony to what could be accomplished with minimal resources. By contrast, the Commanding Officer's Residence and the Stable are frame buildings constructed in 1902 and 1903 respectively. The former was based on a common residential plan and the latter was the work of a local builder.<sup>9</sup>

But as in the West, police requirements in the Yukon changed abruptly, just as commercial construction firms were able to offset some of the burden of securing living accommodations. Mining activity declined in the opening years of this century, prompting a reduction in the size of the police contingent in the territory, from some 300 men in 1903 to 228 by 1905, and eventually to a mere 45 by 1918.<sup>10</sup> Little new construction occurred after 1905, and the force tended to make do with existing buildings. The log hospital building at the Dawson headquarters, for example, was renovated in 1910 to serve as a jail.<sup>11</sup> In all, the rapidly changing policing requirements in the Yukon reinforced the tendency by senior police administrators to place little priority on living quarters. They recognized that many detachment buildings were occupied for only a brief period, and that the men on site could, after some difficulty, look after their own building requirements.

#### THE WESTERN ARCTIC AND HUDSON BAY, 1903-1920

While the police presence in the Yukon declined in the opening decades of this century, the force extended its work further north to the coast of the Western Arctic and to the shores of Hudson Bay. The underlying purpose of most of these posts was to assert sovereignty over a region acquired from Britain (1870-1880), but given attention by Canada only when other countries showed an interest in exploiting its potential. The police posts were the federal government's primary way of demonstrating Canada's claim to the Arctic — a point reinforced by the Mounties who were instructed to sell permits and collect customs duties from foreign whaling vessels operating in northern waters. The police also monitored the Indian and Inuit populations, although the lack of funds and the absence of a clear government policy on the treatment of Canada's native peoples limited the force's ability to ameliorate the difficulties they were encountering.<sup>12</sup>

In contrast to their smooth transition from the Prairies to the Yukon, the Mounted Police found the extension of their work into the Arctic to be an arduous adjustment. Their problems stemmed primarily from the absence of local building materials and supplies. Above the tree-line almost all food and equipment, including the living quarters for the men, had to be shipped in, and the detachments were resupplied only once a year. The success of police operations and the very survival of the men depended upon careful planning. Efforts were focused on the short summer season, when the construction of living quarters was possible and when the ice had cleared sufficiently to permit the arrival of the supply ship. Moreover, the region above the tree-line contained only a sparse and transitory non-native population, consisting mainly of whalers, fur traders, and missionaries, who had limited supplies and living accommodations to offer the police. The officers assigned to northern duty also faced the continuing problem of the Comptroller's ambivalence to extending the force's role to the Arctic.<sup>13</sup>

The difficulty of adjusting to the Arctic was well illustrated by the establishment of the police posts in 1903 at Herschel Island in the Western Arctic and at Fullerton in Hudson Bay, the principal wintering sites for whaling vessels. In both cases the organizational ability of the Mounted Police was found wanting. Herschel Island, located in the Beaufort Sea about 100 kilometres northwest of the mouth of the Mackenzie River, was a desolate place where an American whaling company and an Anglican mission had erected a handful of frame buildings using imported lumber. A small party of Mounties, led by Inspector Constantine, travelled up the Mackenzie River in 1903 and imposed upon the Hudson's Bay Company at Fort McPherson to rent them a log building. Two officers ventured on to Herschel Island without making arrangements for food or shelter. Upon their arrival, the best they could do was to rent from the resident missionary a rudimentary sod hut of the type used by the native population on the island. These shelters were made of boards, driftwood or staves, covered with sod, and lined with canvas on the interior. A hole in the roof provided ventilation and served as a window. The dark, damp structure was considered by the men to be unsuitable in every way for carrying out police work.<sup>14</sup> Living conditions did not improve until 1906, when the men rented a frame building from the whaling company, which they subsequently purchased and renovated to serve as the detachment (figure 5).<sup>15</sup> Additional time passed before



Figure 5. Herschel Island detachment in the Western Arctic, c. 1924-25. The police purchased the building from the Pacific Steam Whaling Company. (RCMP Photo Archives)

8 See, for example, *NWMP Annual Report*, 1899, 2:15-16.

9 Bryan Dewalt, "NWMP Married Officers' Quarters, NWMP Hospital/Jail, NWMP Stables, Dawson, Yukon Territory," Federal Heritage Buildings Review Office, Building Reports 87-68, 87-69, and 87-72, Vol. 30, p. 202; Joan Mattie, "Nineteen Dawson Buildings, Dawson, Yukon," Federal Heritage Buildings Review Office, Building Report 88-12, Vol. 37, pp. 200-202.

10 Morrison, *Showing the Flag*, 70.

11 *RNWMP Annual Report*, 1910, 216.

12 Morrison, *Showing the Flag*, 72-73.

13 Kelly, "Comptroller Fred White and the Arctic Presence of the RNWMP," 165-74.

14 *RNWMP Annual Report*, 1905, 126.

15 *RNWMP Annual Report*, 1906, 4; *RNWMP Annual Report*, 1907, 112.



Figure 6. Mounted Police detachment at Fullerton Harbour, Hudson Bay, 1904. (Glenbow-Alberta Institute)

the detachment established its own supply lines, thus reducing the dependency on the whalers for coal and for some of their food. Success had depended upon the good will or the opportunism of fur traders, missionaries and whalers, rather than upon the planning efforts of the force.

The 1903 expedition to Fullerton on the west coast of Hudson Bay was better prepared in that the Mounted Police brought in more supplies, including lumber for a detachment quarters, but the men still suffered from ad hoc planning. Superintendent Moodie, the leader of the four-man detachment, was an officer of proven experience in the Yukon, but from the outset he found life above the tree-line difficult to endure. Many of his initial assumptions about the needs of the detachment did not hold true. Moodie prepared rough plans for modest gable-roofed frame buildings to house the detachment members and their provisions, but he underestimated the amount of storage space required for the two years' stock of goods they had brought to Fullerton. The task of supplying the lumber was contracted out to a private architect who estimated only the gross board measurement, forgetting to calculate the wastage when the various pieces were cut for assembly at Fullerton. The stock was further reduced by two other requirements. Some lumber was needed to construct a temporary winter shelter, known as a deck house, for the supply ship *Neptune*, and much of this wood was unusable in the spring. It also became necessary to build a make-shift guard room to confine the ship's surgeon, who became insane shortly after the ship arrived at Fullerton.<sup>16</sup> For these reasons the Mounties found themselves short of lumber even for the small buildings planned by Moodie, and they were compelled to endure the winter in cramped, unfinished quarters (figure 6).

Fortunately for the detachment, the captain of the *Era*, the only American whaling vessel to winter at Fullerton, sold the Mounties the lumber from his deck shelter when it was dismantled in the spring, and he permitted his ship's carpenter to assist the police in building a storehouse. As at Herschel Island, the outcome of events at Fullerton was paradoxical in that the force depended so heavily upon the resources and good will of those who were the focus of police work. But as one historian of the Mounted Police has noted, the relationship between the police and the whaling and missionary groups was a symbiotic one. The police were usually welcome company in these desolate places, and they curbed unruly behaviour by crews of whaling vessels. Moreover, the collection of duties was done on an ad hoc basis and provoked no opposition as a token gesture of Canada's title to the northern regions.<sup>17</sup>

The assistance from whalers and missionaries helped mitigate some of the difficulties encountered by the police, but it clearly underlined the force's unfamiliarity with northern conditions. When planning for the Fullerton buildings, Moodie gave no consideration to the prefabricated system of construction known as knocked-down or k-d housing in which most of the framing members were pre-cut to permit speedy construction of the dwelling. Since the 1860s this method had been familiar to the whalers, who had learned quickly that favourable building conditions in the Arctic existed for only a few weeks of the year. The overall design of the buildings was no different from the frame buildings erected by the force in the Yukon or in the West. The Mounties followed the accepted technique of placing a double layer of boards on the outside and on the inside of buildings, with building paper placed between each of the two layers. Insulation was provided by the dead air space between the studs and by banking the outside of the buildings with snow, another traditional measure long employed by the whalers and adopted at the outset by the police. At Fullerton, the police lined the interior with oiled canvas, but this proved ineffective in keeping out the frost.<sup>18</sup> Ultimately, it was only by burning large quantities of coal that any degree of comfort could be attained. Like the missionaries and other scattered sojourners in these Arctic regions, the police burned upwards of ten tons of coal annually to heat a single building, all of it imported by supply ships.

Herschel Island remained the focus of Mounted Police work in the Mackenzie Delta area, but Fullerton soon became a secondary outpost in favour of Churchill, established in 1905 some 500 kilometres to the south. Churchill served as the headquarters for police work in Hudson Bay until 1914, when the headquarters was moved to Port Nelson — the intended terminus of a railway designed to transport Prairie grain to Hudson Bay. The police moved to Churchill because of the isolated location of Fullerton and because of its discontinuance as a wintering place for whalers. Churchill was the site of a Hudson's Bay Company store and it was also an ideal place to monitor the Indians and the Inuit, as both races congregated there. Police administrators welcomed the southerly locations of Churchill and Port Nelson. Construction timber was available and they could establish overland supply routes with the Prairies. The situation was reminiscent of the Yukon in that the police had to haul in logs from many miles distant. Both posts tended to be the product of ad hoc planning efforts. They consisted of a mixture of log and frame buildings, the former being used for storehouses and for residences for the native helpers employed by the Mounties.<sup>19</sup> The living

16 *RNWMP Annual Report*, 1905, 10; National Archives of Canada (hereafter cited as NA), RG 18, Vol. 281, File 716, pt. 1, Moodie to Comptroller, 3 September 1904.

17 Morrison, *Showing the Flag*, 82. The generally amicable relations between the police and whalers at Fullerton in 1903-04 is recorded in the journal of the whaling captain there. See W. Gillies Ross, ed., *An Arctic Whaling Diary: The Journal of Captain George Comer in Hudson Bay, 1903-1905* (Toronto: University of Toronto Press, 1984).

18 NA, RG 18, Vol. 281, File 716, pt. 1, Moodie to Comptroller, 3 September 1904.

19 NA, RG 18, Vol. 354, File 155, Moodie to Commissioner, 1 July 1908.

quarters for the police were of standard frame construction, using lumber imported by steamers and erected with the assistance of a carpenter brought in for the task. The buildings at each location housed about 15 men and were heated primarily by imported coal, although the economy-minded Commissioner in Regina was keen on having the men burn firewood to reduce their dependence on coal, despite the fact that the nearest supply at Churchill was some eight miles from the post.<sup>20</sup>

Although the Churchill post met the basic needs of the men, the frame buildings delivered to Port Nelson in 1914 revealed an underlying inattention to design by the Comptroller in Ottawa, who did not appreciate the severity of the northern climate. The incident revealed how the force's bureaucratic structure could prevent officers at northern posts from improving their living conditions even after years of experience. Responsibility for providing the buildings was shuffled back and forth between the Commissioner and the Comptroller until the latter finally agreed to supply them.<sup>21</sup> The buildings' interconnecting prefabricated panels were warped by heavy machinery that had been placed on top of them in the supply vessel. The situation was compounded by the failure of the hired carpenter to arrive in Port Nelson and by the fact that the different buildings had not been packed separately, requiring much time to be spent in sorting the various components. These problems were minor, however, in comparison to the basic shortcomings in design. The walls of the portable buildings consisted of a single layer of boards on the outside only. The superintendent in charge at Port Nelson likened them to "the usual sort of houses erected at summer resorts," and noted that "however suitable they may be for that purpose, they certainly are not satisfactory as dwelling houses in this climate, where the winter season is long and severe, accompanied by very high winds."<sup>22</sup>

One of these portable buildings was used to establish a new outpost at Baker Lake, located several hundred kilometres north of Port Nelson, inland from Fullerton (figure 7). The discontent among the men there was great. The officer in charge commented in 1915 that "despite all efforts to improve its defects, we have not been able to secure anything that may be termed real comfort. When the thaw set in we were constantly deluged with melting ice from the roof interior, the ice had to be frequently chopped down with a spade, then the rain and sleet came, leaked through the roof, and ran down the walls inside the quarters, wetting almost everything..."<sup>23</sup> The portable buildings were made habitable only by employing the traditional method of banking them with snow and by importing lumber in subsequent years to line their interiors.<sup>24</sup>

Apart from the experimentation with prefabricated buildings, the designs for northern detachments were based on rough sketches and general recommendations made by senior officers. In neither instance did the police give much attention to incorporating the expertise of architects or housing contractors. Superintendent Moodie, for example, drew up plans for the Fullerton buildings and made detailed recommendations on the design of other proposed posts, despite his own admission to having no architectural training.<sup>25</sup> This approach was in keeping with the force's past practice of relying upon the instincts of the men in the field and upon their familiarity with the climate and geography. In Hudson Bay the police escaped the worst effects of the climate by concentrating operations in the southern part of the bay. As the police moved farther north during this period, however, the limitations of the men to look after their own needs had become self evident.

Herschel Island remained the most northerly detachment until the early 1920s, and it made the police aware of the need for self sufficiency and for secure supply lines. The original frame detachment building that the force purchased from the whalers at Herschel Island has survived, and now forms part of the Yukon's first Territorial Park. It stands as a reminder of the tentative forays made by the force in the far North in the first two decades of this century. From the viewpoint of architecture, the force devoted relatively little attention to the design of buildings during these years. When police operations were extended further north in the 1920s, the Mounties grew to appreciate the desirability of pre-cutting the framing members of buildings and ensuring that structures be sheathed with lumber on the inside and outside, so that they were at least comparable to those in the south.

#### THE FINAL FRONTIER: PENETRATING THE HIGH ARCTIC AFTER 1920

In the early 1920s the Mounted Police maintained a presence in the Yukon and Hudson Bay, residing in somewhat makeshift dwellings that were kept warm by burning large quantities of imported coal. The focus of their work, however, gradually shifted to the high Arctic, and the principal task again was to assert Canadian sovereignty over a region that was being visited by Norwegian, Danish, and American explorers. Between 1922 and 1927 the police established seven new posts in the Eastern Arctic, situated on Baffin Island, Devon Island, Ellesmere Island, and on both sides of Hudson Strait. The decade marked the beginning of a period of

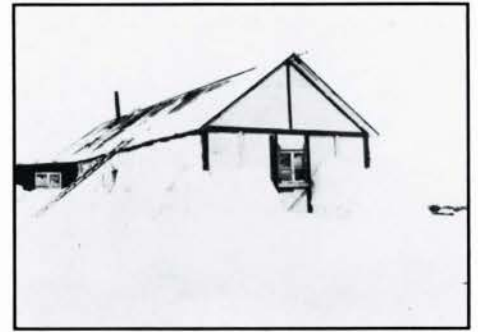


Figure 7. Mounted Police detachment at Baker Lake, N.W.T., c. 1916-18. (RCMP Photo Archives)

20 NA, RG 18, Vol. 385, File 125, Starnes to Commissioner, 27 February 1910.

21 NA, RG 18, Vol. 2163, pt. 33, various correspondence between Commissioner and Comptroller, April-May 1914.

22 NA, RG 18, Vol. 480, No. 67, Superintendent Howard to Commissioner, 4 December 1914.

23 *RCMP Annual Report*, 1915, 265.

24 NA, RG 18, Vol. 511, File 281-16, Superintendent Howard to Commissioner, 29 March 1916.

25 NA, RG 18, Vol. 281, File 716, pt. 1, Moodie to Comptroller, 3 September 1904; Vol. 298, File 415-05, Moodie to Comptroller, 12 December 1903.



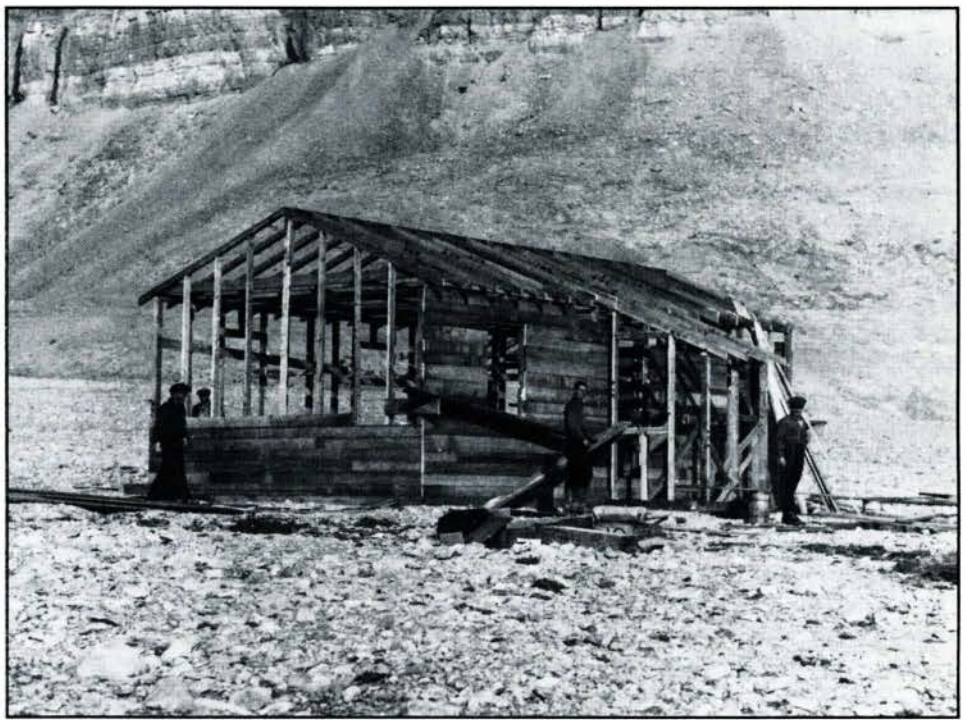


Figure 8 (top). Mounted Police detachment at Coppermine, N.W.T., 1930s. The building was one of the standardized 'A, B, C,' types devised in the 1920s for the Western Arctic. (RCMP "G" Division/N.W.T. Archives)

Figure 9 (right). Bache Peninsula Detachment, Ellesmere Island, N.W.T., under construction in 1926. The main framing members were pre-cut and marked for speedy assembly in the Arctic. (National Archives of Canada, PA 176641)

Figure 10 (above). Police detachment at Pangnirtung, Baffin Island, under construction in 1923. The supply vessel, C.G.S. Arctic, is anchored off shore at the far right. (National Archives of Canada, PA 101849)

sustained occupation by the force of Canada's most northerly regions, in contrast to their limited, tentative forays into Hudson Bay of previous decades.<sup>26</sup> In the following decades, the police established additional posts throughout the Arctic regions, occupying several of these for a period of only a few years.

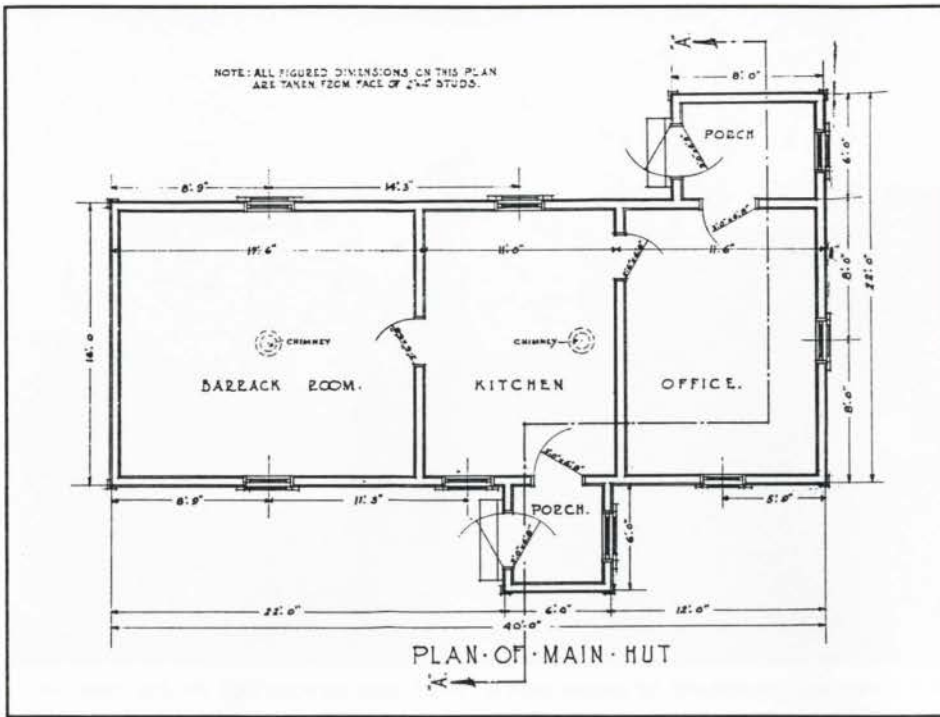
Even more so than before, the success of the Arctic expeditions depended upon careful planning. In the Eastern Arctic, the Mounties were generally better prepared in the 1920s, following the establishment of a new administrative arm of the federal government, the Northwest Territories and Yukon Branch of the Department of Interior. In 1922 the new branch inaugurated the Eastern Arctic Patrol — an annual government-sponsored expedition to assist the work of various departments and agencies. A major part of its work was the establishment and supply of new police posts in the high Arctic.<sup>27</sup> The planning of these expeditions was made easier by the reorganization of the Mounties as a national police force in 1919 — the Royal Canadian Mounted Police. The transfer of the force's headquarters from Regina to Ottawa in 1920 and the abolition of the position of Comptroller permitted greater, more centralized control and coordination of police work in the Arctic, especially between the Mounted Police and other government departments who assisted in the northern expeditions. Still, unanticipated problems arose occasionally, an example being the first expedition of the Eastern Arctic Patrol in 1922 when only two of the three proposed Arctic posts were established because the police realized just prior to their departure at Quebec that the supply ship C.G.S. Arctic was not large enough to hold the buildings for the last detachment.<sup>28</sup>

The improvement in planning for the northern posts was evident in the provision of living quarters. For most buildings in the Eastern Arctic after 1920, the Mounties relied on the federal Department of Public Works, which prepared standard plans for living quarters and storehouses, and arranged for their manufacture and delivery to the annual supply vessel. When railway lines were completed to Churchill on Hudson Bay, the police had the alternative of shipping their buildings overland to Churchill, where they were taken by the supply vessel to their final destinations farther north. In the Mackenzie Valley and the Arctic Coast, where police operations were administered out of the force's divisional headquarters in Edmonton, a different group of standardized building types was developed by an officer of the force experienced in northern service (figure 8). Using these plans, commercial firms in Edmonton furnished the necessary materials. The designs were traditional knocked-down or k-d houses in which the framing members were pre-cut and marked to facilitate their transportation down the Mackenzie River system, and their subsequent assembly in the Western Arctic. Detachments at Fort Providence, Rae, and Fort Good Hope, erected in the early 1920s, were among the first in the Mackenzie Valley to be constructed along these standardized lines. For detachments constructed along the Arctic Coast, the force had the option of having the building components fabricated by firms such as Mill Cut Homes of Vancouver, and then shipped up

26 Police posts were opened in 1922 at Pond Inlet on Baffin Island and at Craig Harbour on Devon Island; in 1923 posts were established at Pangnirtung Fiord on Baffin Island and at Dundas Harbour on southern Ellesmere Island; the most northerly post at Bache Peninsula on northern Ellesmere Island was established in 1926; another post was established at Lake Harbour on southern Baffin Island in 1927.

27 For an overview of government administration of the Arctic in this period, see Morris Zaslow, "Administering the Arctic Islands 1880-1940: Policemen, Missionaries, Fur Traders," in Morris Zaslow, ed., *A Century of Canada's Arctic Islands 1880-1980* (Ottawa: Royal Society of Canada, 1981), 62-78.

28 RCMP Archives Unit, Ottawa, GSI316-9, D1942, Pangnirtung Detachment Buildings, Starnes to Director, NWT Branch, 7 March 1923; NA, RG 18, Vol. 3757, pt. 2, Commissioner to Minister, 9 May 1923.



through the Bering Strait to the Arctic Ocean. Regardless of the option chosen, freight charges accounted for a large proportion of the total cost, often in excess of the cost of fabrication.<sup>29</sup>

The designs continued to rely for insulation on the air space between the studs and on a double layer of boards on the inner and outer walls, between which was placed building paper. This was the standard practice followed by commercial firms specializing in prefabricated dwellings in the early 1920s. Banking the houses with loose snow or with a wall of snow blocks continued to be the principal form of insulation. In the first of the high Arctic expeditions in 1922, Joseph Bernier — the veteran captain of the *Arctic* — gave the Mounties detailed instructions on the methods of constructing snow walls.<sup>30</sup> The timing of a northern expedition was important because Arctic waters were open to navigation for only a few weeks of the year, usually during the month of August. When establishing a post, the Mounties found that a group of five or six men, working 12 hour days with an experienced carpenter, could erect a detachment building and storehouse in approximately two weeks (figures 9, 10). The daily journals and the published memoirs of detachment members capture the sense of urgency felt by those involved in constructing the outposts. Expedition members closely monitored changes in the weather, especially sudden shifts in the wind that could push pack ice close to shore and threaten the departure of the supply ship. In his published reminiscences of establishing the Craig Harbour detachment in 1922, Herbert Lee noted:

The ship dropped anchor half a mile off shore and the unloading of coal, lumber and supplies commenced. For six days we toiled without a let-up. The ship could not stay long. It was now the 21st of August and already the ice masses pouring down the Sound from the west menaced the ship. It was a relief to get the 125 tons of sacked coal ashore. Then, while a party headed by the ship's carpenter worked erecting the buildings, the rest of us toiled frantically to load the boats and get the supplies on shore. Everything depended on speed.... Each day the buildings of the new detachment took more shape, and by the morning of the sixth day the last boat-load of stores was landed. The "Arctic's" crew worked heroically. Not one of them could have slept for more than four hours a night throughout that hectic week. The Captain anxiously eyed the weather and the great pack which hovered threateningly on the western horizon. Late on the 28th of August the line of floes crept down on the ship and forced the Captain to raise anchor and keep the vessel moving to evade being crushed.<sup>31</sup>

Initially the doors and windows of the detachments were crated up whole when transported north, but in subsequent years they were often broken down into their component parts to save space, so long as their reassembly in the Arctic did not require too much time.<sup>32</sup> The storehouse at each Arctic detachment had to be capable of holding two years' supply of basic provisions in the event that the supply vessel was unable to reach the post in any year (figure 11). The packing crates and spare lumber generally were used to make huts for the Inuit who were hired as "special" constables to perform tasks essential to the survival



Figure 11 (top). Unloading supplies and erecting the detachment buildings at Lake Harbour, Baffin Island, in 1927. (National Archives of Canada, PA 176648)

Figure 12 (above). Dwellings for RCMP special Inuit constables, Pond Inlet, circa 1938. (RCMP "G" Division/N.W.T. Archives)

Figure 13 (left). Plan of detachment quarters for Pond Inlet, Baffin Island, prepared by the Department of Public Works, 1942. The design was similar to the former 1922 detachment at Pond Inlet, attesting to the slow pace of innovation in building design by the force. (National Archives of Canada)

29 RCMP Archives Unit, Ottawa, Files S1316-18, D1940, Providence NWT Buildings, and S1316-19, D1940, Good Hope Buildings. The standardized designs included a Type "A" warehouse (18 feet by 22 feet), a Type "B" detachment quarters (18 feet by 22 feet) for two single men, and a Type "C" detachment quarters (22 feet by 28 feet) suitable for a married NCO and one constable, with accommodation for a portable steel cell. Commercial firms in Edmonton which supplied buildings to the western Arctic included Rendall Ltd., H. Cushing Bros. Ltd., and the Hayward Lumber Co. Ltd.

30 NA, RG 85, Vol. 349, File 203, Diary of J.D. Craig, Eastern Arctic Patrol, 31 July 1922.

31 Herbert Patrick Lee, *Policing the Top of the World* (Toronto: McClelland and Stewart, 1928), 34-35.

32 NA, RG 18, Vol. 3757, File G516-37, pt. 3, J.D. Craig, Memo to File, 27 November 1923.

Figure 14. View of Lake Harbour detachment, Baffin Island, in 1938. (National Archives of Canada, PA 176644)



of the men, such as assisting on lengthy patrols and hunting game to feed the dog teams. In the 1920s there was much debate within the force as to whether the special constables should be provided with wooden houses as a means of assimilation, or whether they should be encouraged to live in traditional shelters — igloos in winter and the skin-covered tupiks in summer.<sup>33</sup> By the 1930s, however, wooden houses for special constables had become the norm (figure 12). In addition to the main detachment building, the storehouse, the residences for special constables, and a latrine, the northern outpost had a building for dog food, referred to as the blubber shed because of the large quantities of walrus and seal meat stored there. Arctic detachments situated near native settlements were often equipped with portable steel cells installed in the adjacent storehouse or in a separate building.

The main detachment building was a utilitarian structure. Those in the Eastern Arctic measured about 16 feet by 40 feet and were designed to house three men. Each contained three rooms — a kitchen and general living area for the men, a room for the officer in charge, and another bedroom shared by the two constables (figure 13). Initially the kitchen and dining area was intended to be located in one of the outer rooms, but later was moved to the middle room to obtain optimum heat distribution from the coal-fired cooking stove.<sup>34</sup> Two smaller stoves were installed in the outer rooms, although these tended to be used only in the coldest weather. Enclosed porches at the front and rear entrances, although not designed for the original buildings, were subsequently added by the officers at the Arctic posts to reduce heat loss. A common problem at the northern posts was shrinkage of the lumber as a consequence of the use of unseasoned wood by building contractors, who were often compelled to fabricate building components on short notice. The lumber also became swollen if exposed to the elements during the lengthy journey north.

Although the detachment buildings were plain in appearance and lacked distinctive design elements, they were identifiable as police posts by virtue of their prominent flag staffs and standardized paint colour schemes. Other agencies in the Arctic also developed their own distinct colour schemes for buildings. In the mid-1930s the police used pale grey with dark grey trim in the Eastern Arctic, and white with grey trim in the Mackenzie River and along the Arctic Coast. Bright red roofs also helped to distinguish the police buildings in the Western Arctic.<sup>35</sup> Equally important were the grounds of the police detachments, which were noted for their clean, orderly appearance. The police property usually featured pathways bordered with white-painted stones that had the practical value of helping to define the path at night and during the dark period. The contrast between the barren landscape and the well-kept, manicured character of the buildings and adjacent grounds could be quite striking, as in the case of the Lake Harbour post on Baffin Island, nestled on the side of a hill (figure 14). The landscaping imposed a sense of order and permanence on the frontier and reinforced the federal presence.

The routine of the post was broken by the lengthy patrols by dog sled during the winter months, when the police covered hundreds of kilometres to visit Inuit camps and to

33 RCMP Archives Unit, Ottawa, File GS1316-9, D1942, Pangnirtung Buildings, report by J.E. Wight, Pangnirtung, 30 June 1926; report by O.G. Petty, 31 August 1928.

34 NA, RG 18, Vol. 3757, File G516-37, pt. 3, Inspector Wilcox to Commissioner, 29 October 1924.

35 Northwest Territories Archives, Yellowknife, Arctic Red River Detachment files, G-79-043, log book of General Orders, 14 May 1938, painting of RCMP buildings.



Figure 15 (above). Interior of main detachment quarters at Eskimo Point in Hudson Bay, c. 1937. The detachment library and the radio helped the men to pass the long winter months. (RCMP "G" Division/ N.W.T. Archives).

Figure 16 (left). Residence of Dr. L. Livingstone under construction at Pangnirtung, Baffin Island, in 1928. The insulating material "Insulex" is shown being mixed and poured into the walls of the building. (National Archives of Canada, PA 176647)

strengthen Canada's claims to sovereignty. Despite the barren landscape, the rigorous climate, and months of continual darkness, there was no shortage of volunteers for Arctic service, especially among young recruits who valued the relative independence offered by the northern lifestyle in comparison to the more regimented character of southern service.<sup>36</sup> Still, living in such close quarters placed a high premium on cordial relations among the men. The officer in charge of the most northerly post at Bache Peninsula must have been concerned in 1929 when an argument between his men turned into a full blown fist fight, although he reported that the incident was soon resolved.<sup>37</sup> When indoors, the men generally passed their spare time reading books and magazines from the extensive libraries kept at the posts (figure 15). Contact with the outside world was improved in the late 1920s when radios capable of receiving shortwave broadcasts were introduced to the northern posts.

The police made a few design adjustments to the buildings when circumstances warranted. In 1923, for example, an overheated chimney pipe at the Craig Harbour detachment on southern Ellesmere Island was believed responsible for starting a fire during a raging storm when the temperature was minus 50 degrees Fahrenheit. The blaze engulfed the detachment in a matter of minutes, compelling the men to retreat to the blubber shed where they spent the remainder of the winter in less than ideal conditions.<sup>38</sup> The incident emphasized the need to ensure that chimney pipes were of the best possible design and of a strong gauge. It also underlined the necessity of spacing outpost buildings sufficiently apart to prevent the spread of fire.

Such modifications were of a minor nature, however. In all, the design of northern detachments changed little during the 1920s and 1930s, and in fact lagged behind technical improvements that were being introduced in southern construction. The slow pace of adaptation was especially evident in the crucial area of thermal insulation. Already by the mid-1920s various insulating materials were being developed in North America for residential and commercial buildings. For the Mounted Police the adoption of these advances was not a high priority. In the Eastern Arctic, apparently the first recorded improvement came in 1931, when the Commissioner of the force agreed to the use of a thicker building paper known as "Houseline," produced by the Johns Manville Company, for the construction of a cell room at Port Burwell in Hudson Strait.<sup>39</sup> At the same time in the Western Arctic, detachments built along the Arctic Coast were made warmer only by nailing a third layer of boards on the exterior walls, a measure that also helped to brace the buildings against the force of the winds.<sup>40</sup>

At first glance this slow pace of adaptation may appear surprising, especially in view of the harsh northern climate and the adeptness of the police at learning traditional Arctic survival skills practised by the special Eskimo constables — skills which proved invaluable on the lengthy winter patrols. The force's inattention to housing construction was, however, consistent with the attitude of the Hudson's Bay Company and of the various missionary groups, whose efforts in this area before the Second World War were not innovative.<sup>41</sup> It is important to consider this broader context. When design innovation in Arctic construction appeared, it

36 Douglas S. Robertson, *To the Arctic with the Mounties* (Toronto: The Macmillan Company of Canada, 1934), 111-12.

37 RCMP Archives Unit, Ottawa, File GS1316-160, D1940, Bache Peninsula Detachment, Inspector Joy to Commissioner, 13 August 1930.

38 A vivid account of the near-disaster at Craig Harbour is found in Lee, *Policing the Top of the World*, 190-98.

39 RCMP Archives Unit, Ottawa, File GS1316-155, D1945, Port Burwell, Assistant Commissioner Duffus to NCO in charge of Port Burwell, 5 July 1930.

40 RCMP Archives Unit, Ottawa, File GS1316-20, D1940, Cambridge Bay Detachment, Superintendent Acland to Superintendent Newsom, 28 January 1931.

41 For an account of the poor housing conditions at the Hudson's Bay Company post at Cape Wolstenholme in the 1940s, see Bruce D. Campbell, *Where the High Winds Blow* (New York: Charles Scribner's Sons, 1946), 41-43. In a discussion about the merits of building cold storage plants in the Arctic, D.L. McKeand, an official of the Department of Mines and Resources, remarked, "The Hudson's Bay Company and the Royal Canadian Mounted Police were antagonistic towards insulated residences and so were Messrs. Finnie, Mackenzie and Burwash [officials of the Northwest Territories and Yukon Branch], for that matter. Insulation is now universal. Refrigeration will follow as a natural consequence." NA, RG 85, Vol. 924, File 11675, Refrigeration, Cold Storage, Pangnirtung, McKeand to Gibson, 26 February 1941.

tended to be the product of personal initiative, rather than a conscious policy pursued by an organization, be it the police, the fur traders, or the missionaries. Perhaps the best example was the initiative shown by Dr. Leslie Livingstone, the federal government's senior medical health officer for the Arctic in the 1920s and 1930s. At Pangnirtung on Baffin Island, where Livingstone oversaw the construction of a medical office/residence in 1928, he took a keen interest in the design, incorporating a product known as "Insulex," which had been commercially available for only a few years (figure 16).<sup>42</sup> Insulex was a gypsum-based powder which, when mixed with water and poured in between the studs, hardened into a solid mass containing numerous air bubbles, thereby forming an effective thermal barrier that was fire resistant as well. The use of the product in Livingstone's house received a fair amount of publicity as it reduced the yearly consumption of coal by one half.<sup>43</sup>

Despite its apparent success at Pangnirtung, Insulex was not widely used elsewhere in the Arctic, perhaps because of the initial cost of installation and the work involved in shipping the bulky material north. The next dwelling built by Livingstone in 1929, at Chesterfield Inlet on Hudson Bay, was not as successful because of the inability to obtain Insulex, combined with a shortage of lumber and the lack of skilled labour to assist in the building's construction. Used as a substitute for Insulex was a thin felt paper called "Salamander," which proved of limited use in keeping out the cold.<sup>44</sup> Although Livingstone's experimentation was praised by certain officials of his department and was copied by a departmental scientist at Lake Harbour, he was probably considered as much an eccentric as a pioneer in the context of his time, when little concern was given to improving the thermal qualities of Arctic buildings.

Insulex and Salamander were two of many insulation products that were marketed for use by building contractors in the late 1920s. By the early 1930s, wall fillers, insulating wall boards, and improved insulating papers were becoming commonplace in North American building construction. One of the most popular materials was mineral wool, composed of fine fibres of mineral silicates. It was commonly made by melting limestone or slag at high temperatures, and blowing it into wool-like threads by means of steam or compressed air.<sup>45</sup> Gradually, the product was introduced to the Arctic. In 1935 the Department of the Interior imported a quantity of rock wool insulation produced by the Johns Manville Company for the medical health officer's residence at Chesterfield Inlet. The product was lighter than Insulex, cheaper to transport north, and its thermal qualities were superior to the hair-lined building papers, such as Salamander or Houseline. In 1936 the Hudson's Bay Company and an Anglican missionary group incorporated rock wool in the construction of two northern buildings.<sup>46</sup> That same year the Mounted Police used the product in the construction of a new post at Eskimo Point on the western shore of Hudson Bay.<sup>47</sup> Widespread application of the product to new and existing police buildings was not, however, immediately endorsed by senior officials of the force. When an officer stationed at Aklavik in the Mackenzie Delta inquired in 1936 about installing rock wool insulation in a new building there, he was encouraged by police officials in Ottawa to use sawdust from a local mill instead. The concern appears to have been the additional \$55 for the rock wool — a fraction of the annual heating costs incurred by the detachment.<sup>48</sup>

By 1940 rock wool insulation was being used for new construction throughout the Arctic. The decade also marked the beginning of concerted efforts to improve the designs of northern buildings, due in large part to the outbreak of the Second World War. The skyrocketing price of coal and the disruption of previously secure supply lines during the war were probably the salient factors behind the improvement in building design. With the price of coal rising above \$200 per ton in the early 1940s, the police, like other agencies operating in the North, found themselves spending upwards of \$2000 a year to heat each Arctic detachment,<sup>49</sup> a sum comparable to the cost of erecting the building. Research undertaken to date indicates that the lead in new building design for the North was taken by the Fur Trading Department of the Hudson's Bay Company. In 1939 the department began to experiment with new materials and assembly techniques in an effort to save operational costs and to improve living standards for its employees in the Arctic. The Hudson's Bay Company developed lightweight structures made of plywood, insulated with rock wool and equipped with double-glazed windows. The buildings were based on the "stressed skin" principle, in which the outer and inner walls of plywood assumed most of the building load, thereby reducing the need for heavy framing members. In addition to being lightweight, the buildings were designed to be quickly erected in sections on site. This saved time, freight costs, and wastage in cutting, and the houses could be easily disassembled and re-erected elsewhere.<sup>50</sup>

The Mounted Police, by contrast, did not develop new building designs, nor were they quick to draw upon the advances made by others. When the price of coal rose sharply in the early 1940s, the police decided to replace the 1922 detachment building at Pond Inlet on

42 Insulex was apparently first used in 1925 in a Chicago residence owned by H.S. Ashenurst, of the Universal Gypsum Company. Its benefits and those of other home insulation products were publicized in technical journals of the period. For example, see: H.S. Ashenurst, "An Experiment in Insulating a Home," *Journal of American Society of Heating and Ventilating Engineers* 32 (May 1926): 325-30; E.C. Lloyd, "The Relation of House Insulation to Residence Heating," *Gas Age-Record* 57 (April 1926): 513-14; Charles D. Haven, "Insulation in Home Building," *Refrigeration Engineering* 20 (December 1930): 370, 410; "Insulating Materials and Fuel Savings," *American Gas Journal* 132, pt. 2 (February 1930): 42-45; G.D. Mallory, "Selection of Insulating Materials," *Contract Record and Engineering Review* 44 (November 1930): 1455-58.

43 NA, RG 85, Vol. 816, File 6968, Medical Health Officer's Residence, Pangnirtung; "Gypsum Products from Canada Go to the Tropics," *Hamilton Spectator*, 10 January 1930. For more on Livingstone, see Dudley Copland, *Livingstone of the Arctic* (Ottawa: Campbell Reproductions Ltd., 1967).

44 NA, RG 85, Vol. 816, File 6969, Medical Health Officer's Residence, Chesterfield; RG 85, Vol. 195, File 554/170, pt. 1, Saint Luke's Hospital, Pangnirtung, Finnie to Parry, 18 December 1929.

45 G. D. Mallory, "Insulation for New and Old Buildings — Part 3," *Engineering and Contract Record* 47 (October 1933): 983-87.

46 Rock wool was used by the Hudson's Bay Company for a new post at Arctic Bay in 1936, and by the Anglican Mission at Aklavik, apparently in the same year. NA, RG 85, Vol. 816, File 6969, MHO Residence, Chesterfield Inlet, McKeand to Gibson, 28 February 1945; RCMP Archives Unit, Ottawa, File GS1316-7, Aklavik Buildings, Covell to Aklavik Sub-division, 1 December 1936. Rock wool was used in all new HBC buildings thereafter. NA, RG 85, Vol. 826, File 7231, pt. 2, Departmental House, Lake Harbour, McKeand to Gibson, 13 February 1940.

47 RCMP Archives Unit, Ottawa, File GS1316-47, Eskimo Point, Bill of Material for revised "C" Type dwelling, June 1936; Superintendent, "G" Division, to Manager, Empress Lumber Company, 2 June 1936.

48 RCMP Archives Unit, Ottawa, File GS1316-7, Aklavik Buildings, Inspector Curleigh to Officer Commanding "G" Division, Ottawa, 5 December 1936.

49 RCMP Archives Unit, Ottawa, File GS1316-11, DI1966, Pond Inlet, NWT, Inspector Bowmen, "G" Division, to Inspecting Officer, RCMP, Eastern Arctic Patrol, 29 July 1942.

50 John Watson, "Plywood Goes North," *The Beaver*, Outfit 272 (June 1941): 32-35; *Polar Record* 3 (January 1942): 517; NA, RG 85, Vol. 816, File 6969, McKeand to Gibson, 28 February 1945, and Wright to Gibson, 15 October 1945.

Baffin Island, as it had proven abnormally difficult to heat. The new structure, however, was virtually identical to the original building, the main difference being the use of rock wool insulation in the walls. The Mounties simply re-used the 1920s Public Works plan that was based on conventional framing and double layers of boards on the inner and outer walls (figure 13).<sup>51</sup> Gradually, however, the force benefitted from the growing expertise of others. By the late 1940s the police were making use of the building services offered by the Hudson's Bay Company and by firms that began to specialize in Arctic construction. The Tower Construction Company, based in Montreal, and its affiliate, Prefabricated Homes of Lachute, Quebec, received a great deal of business from the force during the late 1940s and the early 1950s, when many Arctic posts were renewed and new ones established. Buildings offered by the Tower Company in the 1950s consisted of prefabricated plywood panels for the walls and floors, triple-glazed windows and aluminum roofing. Commodious entrance porches were a prominent component of the designs.

In the 1950s, the issue of housing design was a topic of ongoing interest for the force. Police correspondence for this period, especially in the Western Arctic, is replete with discussions about the relative merits of buildings designed by the Hudson's Bay Company versus those offered by other commercial firms.<sup>52</sup> This certainly was a marked change from previous decades when the police, like other agencies operating in the Arctic, had given little attention to building design. The new focus on design was particularly evident in the force's most northerly detachment buildings for the post at Alexandra Fiord on Ellesmere Island in 1953. Consisting of interlocking, prefabricated plywood panels, they were quickly erected with little difficulty (figure 17 and cover). The design provided a stark contrast with the 1926 Bache Peninsula post, situated a short distance away and long since abandoned.

#### THE MOUNTED POLICE: CONTINUITY AND CHANGE IN NORTHERN DESIGN

The Mounted Police are a useful focus for examining the broader evolution of building practices among non-native peoples in the Arctic. They typified a general inattention to the technical aspects of Arctic design in the first four decades of this century. The force's continued reliance on traditional frame construction until the early 1940s and its hesitation to incorporate insulation into building designs were the result of many factors, the most important probably being the relatively small number of frame dwellings scattered throughout the Arctic during this period and the affordable cost of coal. The supply vessels for the Arctic were also not fuel-efficient, and thus provided little impetus for improving the design of northern buildings. The Hudson's Bay Company vessel, *Nascopie*, for example, reportedly burned two thousand tons of coal on a return voyage.<sup>53</sup> The Second World War undermined long-held assumptions about the ease and the cost of northern supply systems, and it also prompted an expansion in northern settlement, especially by Canadian and American military forces. This in turn focused attention on the issue of building design and led to a new emphasis on energy efficient construction, a concern that gained momentum in the post-war era.

The Mounted Police serve as a barometer of this change, but when compared to other groups operating in the Arctic in the early 20th century, they were perhaps the least receptive to new building designs. At first glance this is surprising, given that the police were penetrating the northernmost frontiers of settlement. But the experience of the force in the Arctic was in keeping with their tradition of making do with substandard living conditions. On the Prairie frontier and in the Yukon, the police had become accustomed to leaving arrangements for accommodations in the hands of the officers on site. The Arctic compelled the Mounties to devote more attention to the problems of supply and housing, but they remained uncommitted to a systematic construction program. The shifting nature of the force's work in the rest of Canada, especially during the 1920s and 1930s, made the police hesitant to invest heavily in detachment buildings, often to find them obsolete within a few years because of changes in settlement patterns or in the police's legal jurisdiction. In the Arctic the police were often frustrated by the costs of closing and relocating outposts to better monitor the activities of northern residents.

Aside from the frontier nature of police work, another reason for the slow response to advances in construction technology was the bureaucratic, paramilitary make-up of the force. The provision of portable buildings at Port Nelson in 1914 was an extreme example of bureaucratic bungling, but it demonstrated how a break in the chain of command could bring disastrous results. In a paramilitary organization like the Mounted Police, an officer of limited rank in the field had few opportunities to impress his opinions upon the senior members of the force. For example, when the police post at Dundas Harbour was reopened in 1945, after having been closed for several years, an officer stationed there was shocked to find not a trace of insulation in the walls or ceiling of this, the most northerly detachment at the time. A



Figure 17. Mounted Police detachment building under construction at Alexandra Fiord, Ellesmere Island, 1953. Consisting of lightweight, prefabricated plywood components, the building could be quickly erected with little difficulty. (National Archives of Canada, PA 176634)

51 NA, RG 85, Vol. 1029, File 19365C, Plans of RCMP Hut, Pond Inlet, 1942; NA, RG 11, Accession 83-84/065, Vol. 83, File 7809.

52 RCMP Archives Unit, Ottawa, File GS1316-43, Tuktoyaktuk Harbour, N.W.T.

53 Roland Wild, *Arctic Command: The Story of Smellie of the Nascopie* (Toronto: The Ryerson Press, 1955), 88.

senior official in Ottawa merely remarked that the need to insulate the building would be addressed "in due course."<sup>54</sup> In this case, the postponement of improvements was perhaps justified with the benefit of hind-sight when the post was abandoned a few years later as part of a reorganization of Arctic detachments.<sup>55</sup> When obtaining buildings for the Eastern Arctic, the police also had to contend with the federal Department of Public Works, which was not noted for producing innovative designs during this period. As well, Public Works produced a relatively small number of buildings for the Arctic prior to the Second World War, and thus had little reason to concentrate its design expertise in this area.

One should also bear in mind that the police who lived in the buildings during the twenties and thirties appear to have been generally pleased with them. In the Arctic the constables were accustomed to less than ideal conditions. No doubt after spending weeks at a time on patrol and living in snow houses, the men must have found the detachment building to be a noted improvement. Moreover, the limited insulation in the buildings could be offset by keeping the coal stove well-stoked. And the low cost of coal and the large quantities burned seem to have been taken for granted. Although a layer of ice gradually built up on the ceiling and interior walls of the detachment over the winter months, the task of scraping this off during the spring melt was viewed as an accepted part of the yearly routine, as normal as burning tons of coal to heat each building or banking the outside with snow.

DESPITE THEIR UNASSUMING APPEARANCE, the force's Arctic detachments served as important symbols of the federal presence on the northern frontier. The buildings conveyed an official image that depended largely on such things as the ordered appearance of the landscaping around the detachments, the colour schemes used on the buildings, and the presence of a prominent flag staff nearby. Parallels can be drawn between the Arctic posts and those in the Yukon and in the West. In all frontier regions the police rarely concentrated on architectural form, preferring instead to use the materials at hand to their best advantage. The palisade at Fort Constantine, like the character of its log buildings, was in keeping with this tradition of projecting the best image possible with limited financial resources. Several Mounted Police detachments in Canada's northern regions survive as reminders of the force's work during the first half of this century. In addition to those at the former Dawson headquarters of Fort Herchmer and at Herschel Island, these include buildings at Alexandra Fiord, and storehouses from various Arctic locations.

Their historical associations aside, Mounted Police buildings are one component of the evolution of northern architecture. The findings presented here suggest that further research on the emergence of distinct building designs for the Arctic should focus on factors associated with the Second World War and the experiences of other agencies in the North, in particular the Hudson's Bay Company and the transformation of its attitude to the demands imposed by the environment. The police buildings on the northern frontier illustrate somewhat divergent aspects of the force. On the one hand they evoke an image of the pioneering nature of police work in the Arctic, notably the isolated, solitary lifestyle and the lengthy winter patrols, which were directed at the noble task of asserting Canadian sovereignty. But when examining the design of the buildings for the rank and file who endured the rigours of the frontier to show the flag for Canada, the Mounted Police can best be described as followers, rather than leaders.

54 RCMP Archives Unit, Ottawa, File GS1316-166, D1956, Dundas Harbour, Superintendent Martin, "G" Division, to Commissioner, RCMP, 14 November 1945.

55 The quality of the materials used in the construction of the Port Harrison detachment on Quebec's northern shore was also criticized. An officer reported, "I can only say that everything from foundations to roofing, with the possible exception of the wall board for the interior of the dwelling house, is undoubtedly the cheapest and poorest quality that money could buy." The detachment was open for only three years, 1935-1938. RCMP Archives Unit, Ottawa, File GS1316-46, Port Harrison, Detachment Report, December 1935.