

ASPECTS OF ETHNOBOTANY IN THE RED RIVER SETTLEMENT IN THE LATE 19TH CENTURY

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The land of the Red River was rich and luxuriant and growth was abundant . . . (The Metis family of buffalo hunters) collected wild rice, shaking it into the bottom of their flat boat; the children picked raspberries, wild cherries, strawberries, bush cranberries, and roots, the most common being a white tuberous tap-root they called the prairie turnip. Nuts were sought and prized . . . (Carpenter 1977:21, Marie Rose Smith — chronicle of Metis Life in the 19th Century).

We had a pleasant stay at Fort Garry, and received all sorts of entertainment. They live like princes here. Just fancy what we had at a dinner party: Oyster soup, white fish, roast beef, roast prairie chicken, green peas, tomatoes stewed, and stewed gooseberries, plum pudding, blanc mange, raisins, nuts of all kinds . . . (Healy 1923:129, from a letter written by Charles Mair in 1868).

INTRODUCTION

The Red River settlement encompassed a broad spectrum of life styles as illustrated by the plants collected by the Metis family of buffalo hunters and by the opulent dinner party at Upper Fort Garry. The ethnobotany of only a part of this ethnic and economic diversity is examined below through a comparison of plant uses at three sites: Upper Fort Garry at the confluence of the Red and Assiniboine Rivers, and two relatively prosperous Metis farms along the Red River to the south (Figure 1). Plant remains are used to explore the relationship between ethnobotany and socioeconomic status among these groups. Differences in remains of fruits, nuts and in charcoal from wood fuel are expected to reflect differences in socioeconomic status. These expectations are based on the convenient

working assumption "that material culture and behaviour are related in a systematic manner" (Rathje 1979:19), although the links may not be simple.

It is unusual in North American archaeology to use plants as a measure of social differences. Although remains of exotic plants have been identified from historic sites in eastern Canada (J.H. McAndrews, personal communication), the best examples of plants as measures of social status come from analysis of Medieval England (Green 1984) and Dutch materials (Paap 1984). In contrast, animal remains and meat cuts have been widely used to measure social position (eg., Monks this volume, Schultz and Gust 1983). As with faunal remains (Schultz and Gust 1983), seeds, nutshells, and charcoal fragments may be preserved in quantity, and are probably less subject to curation before being discarded than are other classes of artifacts.

The Red River Settlement: A.D. 1845-1882

The use of plants and their products are best appreciated against the backdrop of the economic, social and political forces that shaped the Red River community. The latter half of the nineteenth century was a time of transition — from the dominance of the fur trade to the rise of agriculture, commerce and transportation (Morton 1967). As the fur trade declined, free trade expanded. Since 1821, the Hudson's Bay Company (HBC) had struggled to maintain its monopoly over all trade in western Canada. In an attempt to maintain political and economic order in the Red River settlement, British troops of the sixth Regiment were stationed in the forts at Upper and Lower Fort Garry from 1846 to 1848. During their stay, free trade subsided only to reappear as soon as the troops had left. The HBC monopoly was essentially broken in 1849.

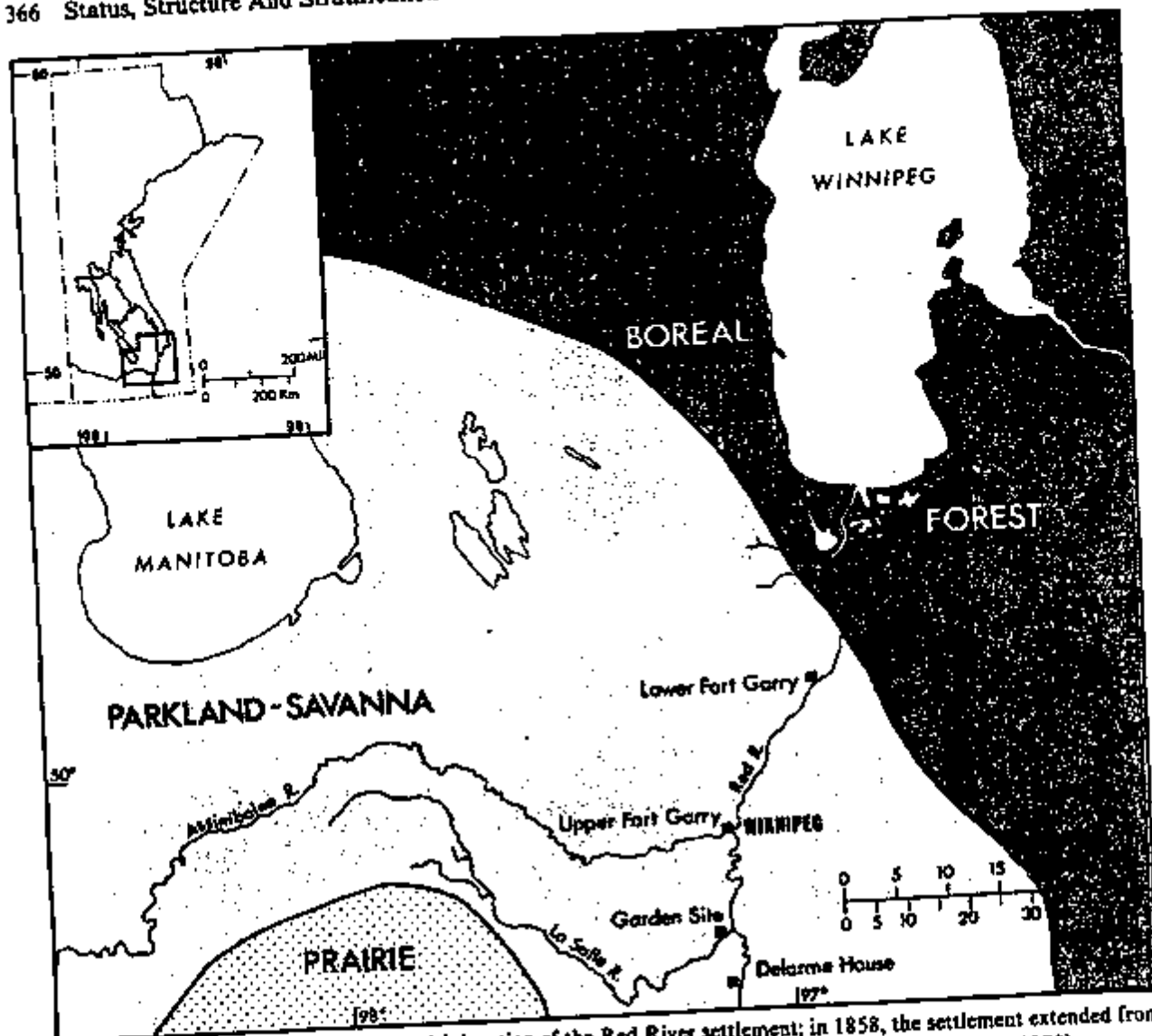


Figure 1. Map of southern Manitoba with location of the Red River settlement; in 1858, the settlement extended from Lower Fort Garry south to Delorme House and about 30 km west along the Assiniboine River (Wilson 1970).

Encroachment on HBC control was generated by the westward expansion of settlement and industry in Canada and the adjacent United States. Increased trade between Red River and the east through St. Paul, Minnesota, was inevitable. By the 1850s, goods could be brought by ox cart from St. Paul as well as from England via York Factory on Hudson Bay (Innis 1956). After 1859, steamboats plied the river route between Red River and St. Paul and by 1878, a railroad had been built to that city (Morton 1967). Improved transportation meant not only that Red River produce could finally reach outside markets, but quantities of goods could be brought to the once isolated colony.

The first half of the nineteenth century saw the growth of ethnic diversity within the settlement and the latter half witnessed increasing disparities in wealth as well as profound political changes. With the new economic order came commercial farming,

a growing cadre of traders, merchants, and other entrepreneurs. Differences in wealth grew more marked — within, as well as between, ethnic groups including the Metis (Pannekoek 1979; Sawchuk 1978). By mid-century, there were more than 5,000 settlers including "Scottish, English, French Canadian and Metis; Hudson's Bay Company officials, merchants and farmers, Roman Catholic and Protestant" (Wilson 1970:7). By 1870, when the area joined Canada, the population had more than doubled (Morton 1967). The 1870 census showed French-speaking Metis comprised half the total. Though numerically strong, the Metis were eventually overwhelmed by the power of eastern Canadian interests. In 1869, under the leadership of Louis Riel, the Metis had organized a provisional government that attempted to negotiate provincial status for the settlement and surrounding district. These efforts failed and others took Manitoba into

Confederation — on the Federal Government's terms. Riel was banished and many Metis emigrated westward.

THE ARCHAEOLOGICAL SITES

During its lifetime (1835-1882), Upper Fort Garry was the administrative, economic and social centre of the western fur trade, and it was there that the HBC Governor and other company officials lived (Guinn 1980). In the words of an early resident "Fort Garry was a very quiet place, and exceedingly exclusive" (Cowan 1935).

Three seasons of excavations in the southwest precincts of the Upper Fort Garry fort have uncovered part of the west wall, building foundations and two privy-refuse pits rich in artifacts and organic remains (Monks 1983, this volume). Estimates date the deeper pit from 1846 to at least 1848 and the shallower pit to about 1880-1882 (Monks this volume). The deeper pit contained insignia of the Sixth Regiment, the group garrisoned at the fort from 1846 to 1848. These insignia and other artifacts suggest that the regiment's officers and their families used the pit. It is likely that refuse in both pits can be attributed to people of high social rank.

Plant remains were derived from 3521 samples taken in columns and water-screened through a stack of soil sieves from 6.4 to 0.25 mm mesh. These have been supplemented by 50 miscellaneous samples from the site, plus a number of charcoal fragments. Details of procedures and preliminary findings may be found in Shay (1984).

The other two sites are in the Parish of St. Norbert, one of the more prosperous of the Metis parishes (Pannekoek 1979) that lay some 15-25 km south of Upper Fort Garry. The house and out-buildings of Pierre Delorme stood near the west bank of the Red River about 25 km south of its confluence with the Assiniboine River. Delorme, a prominent Metis politician, lived there from perhaps 1856 to 1880 (McLeod 1982). He was a member of Louis Riel's provisional government and was later elected to the House of Commons (McLeod 1982). Plant remains and other artifacts were recovered from cellar fill under the kitchen (ca. 1860-1880), and the granary-dairy (ca. 1880-1904), the latter used a time after the Delorme occupation.

About 10 km north of Delorme, on the La Salle River near its junction with the Red River, is the Garden Site, the farmstead of Pierre Beauchamp (McLeod 1983). Beauchamp lived on the farm from 1845 until 1868 and other farmers apparently occupied it until 1892 when the land was donated for a monastery. Plant remains and artifacts were

distributed in three stratified refuse pits. Judging by his assets, Beauchamp was more prosperous than the average French Metis settler (Kotecki and Brown 1983) although he probably ranked below Pierre Delorme in wealth. With the above information, the three sites, Upper Fort Garry, Delorme and Garden, can be easily ranked in terms of their inhabitant's relative wealth: First Upper Fort Garry, the richest; second Delorme House, and third, the Garden Site.

ARCHAEOLOGICAL EXPECTATIONS

How should plant remains reflect these apparent differences in wealth and ethnicity? As noted above, two groups of plants are used as measures: 1) fruit and nuts, and 2) charcoal fragments (the residues of heating and cooking).

Many of the fruits and nuts wanted by the Red River settlers had to be imported because of the harshness of the Red River climate for European species (Harp 1970). Imports from England by the HBC included almonds (*Prunus dulcis*), "pickled" walnuts (*Juglans regia*), prunes (*Prunus domestica*), and raisins (*Vitis vinifera*) (H.B.C.A.P.A.M.B. 239/m/14). Native plums, cherries and black and/or red currants were apparently cultivated at Lower Fort Garry (Thomas 1979). Plants imported as seeds included watermelon (*Citrullus*), tomatoes (*Lycopersicon*), and a variety of vegetables, spices and ornamentals (Thomas 1979:Appendix B). Wild fruits, such as strawberries (*Fragaria*), raspberries (*Rubus*), and high-bush cranberries (*Viburnum*) were widely available (Ross 1858; Carpenter 1977) and some of them may have been cultivated. The only edible native nuts were hazel (*Corylus*) and acorns (*Quercus*).

During the coldest part of the winter, some households are said to have burned more than a 1 m³ (cord) of wood a day (Bredin 1981). Timber in the immediate vicinity of the Red River settlement had been largely depleted by the 1840s and firewood supplies had to be rafted upstream from as far as 100 km (Morton 1950). The price of a cord of firewood in the late 1860s was six shillings, roughly a day's wages (Hargrave 1871).

What specific differences among the sites can be expected? According to Ford (1979:Figure 9.2), plant foods are chosen by various societies for their cultural value and for their intrinsic biological properties in about equal measure. Thus, both food cost and ethnicity might contribute to differences among the plant samples. Considering only cost, it is logical to assume the richest site, Upper Fort Garry, would have the highest proportion of imported fruits and

nuts, followed by Delorme House and the Garden site. Firewood selection in most societies is primarily determined by its availability and its heating quality (Ford 1979: Figure 9.2). Being better able to afford it, Upper Fort Garry would be expected to consume the highest quality fuel, with Delorme next and the Garden Site third.

SITE COMPARISONS AND DISCUSSION

Fruit and Nuts

Although contexts and sample sizes vary widely, there are no imported foods at the Garden Site, a few at Delorme and a substantial proportion from Upper Fort Garry (Table 1). Forty-four percent of the nuts in the two privy/refuse pits are imported types. These include Brazil (*Bertholletia excelsia*), almond (*Prunus dulcis*), walnut (*Juglans cf. regia*), pecan (*Carya cf. illinoensis*), and European hazel (*Corylus sp.*). Nut shells comparable to one of the local species of hazel (*C. americana*) made up the balance of the sample (abundances of each type given in Shay 1984). No imports were noted among the 31 hazel nuts recovered from the Garden Site middens (McLeod 1983). No sample size is available for Delorme House, but McLeod (1982) reports a fragment of Brazil as well as hazel nuts.

Table 1. Comparison of nut and fruit remains from three sites in the late nineteenth century Red River settlement. The sites are arranged by relative wealth from left to right.

	<i>Fur Trade elite</i>	<i>Metis farmssteads</i>	
	<i>Upper Fort Garry</i> ^a	<i>Delorme House</i> ^b	<i>Garden Site</i> ^c
	2 Privy/ Refuse Pit ca. 1846- ca. 1882	cellar fill ca. 1860- 1880	3 middens ca. 1845- 1892
<i>Nuts</i> ^d			
sample size	(n=86) %	(unknown)	(n=31) %
Local	55.8	Hazel nut	100.0
Imported	44.2	Brazil nut	0.0
<i>Berries and Fleshy Fruits</i> ^e			
sample size	(n=5058) %	(unknown)	(n=30) %
Local	97.8		100.0
Introduced	0.8		0.0
Imported	1.4	peach	0.0

NOTES

- Based on totals given in Shay (1984).
- From McLeod (1982:108). Peach pits were also found in the granary-dairy area (ca. 1880-1904, McLeod 1982:196). Delorme occupied the farm from 1856-1880 (McLeod 1982:5-6).

- From McLeod (1983:212) Pierre Beauchamp lived on the farm from 1845 until 1868 although it was occupied by other Metis until 1892 (McLeod 1983:95).
- Counts include fragments and whole nuts.
- Excludes *Prunus* spp. (plums and prunes, both local and imported).

One type of fleshy fruit (*Vitis vinifera*) makes up 1.4% of the total 5,058 seeds from the Upper Fort Garry pits. Since the tally was made, fig (cf. *Ficus*) has been tentatively identified. Two nonnative species that were either imported, or brought to Red River and cultivated, were tomato (cf. *Lycopersicon*) and water melon (cf. *Citrullus*). No imports were found among the 30 fruit seeds from the Garden site; rose (*Rosa*) and saskatoon (*Amelanchier*) made up the sample. Note that plum/prune (*Prunus*) are not included in the totals for any site because of the difficulty of distinguishing local from imported varieties. From the variability in size and shape of the 234 *Prunus* stones found at Upper Fort Garry, both local and imported types are represented (H.H. Marshall, personal communication). At Delorme, a number of exotic peach pits (*Prunus persica*) were recovered (McLeod 1982) together with several *Prunus* species. The fruit and nut remains clearly meet the expectations outlined above, Upper Fort Garry yielding the most evidence of imported types, Delorme having several imports and the Garden Site none.

Charcoal

Charcoal residues from cooking and heating also reflect differences among the sites though the comparisons suffer from uneven sample sizes and differing dates (Table 2). The types identified include oak (*Quercus*), elm (*Ulmus*), ash (*Fraxinus*), maple (*Acer*), hazel (*Corylus*), poplar and or willow (*Populus/Salix*) and conifers such as spruce (*Picea*) and pine (*Pinus*). Based on its high heat equivalent (28-31 million BTU's per cord) oak is a superior fuel compared with the others which range from 16 to 24 (Table 2, from Mullins and McKnight 1981:123). Upper Fort Garry has 27% oak charcoal, the granary-dairy at Delorme 8%, and the middens at the Garden Site, 7%. Although charcoal in the granary-dairy area (ca. 1880-1904, McLeod 1982:202) postdates Pierre Delorme's occupancy, the cellar fill (ca. 1860-1880) includes conifers, poplar, willow and ash, but not oak. Based on the quality of fuel used, Upper Fort Garry appears more prosperous than the other two sites.

Table 2. Comparison of identified charcoal remains from three sites in the Red River settlement. The sites are arranged by relative wealth from left to right.

TAXA	Fur Trade elite		Metis farmsteads	
	range of Caloric values ^a	percent composition	percent composition	percent composition
Oak (<i>Quercus</i>)	28-31	27.3	8.2	6.9
Elm (<i>Ulmus</i>)	24		2.0	9.5
Ash (<i>Fraxinus</i>)	22-23	6.1	33.0 ^c	8.8
Maple (<i>Acer</i>)	19		3.1	7.1
Hazel no data (<i>Corylus</i>)	6.1			—
Poplar/ willow (<i>Populus/Salix</i>)	16-18	54.5	7.2 ^c	53.6
Conifer	16-22	6.1	46.3 ^c	14.2
Total		100.1	98.8	100.1

- a. For native Manitoba species in millions of BTU per cord, air-dry (Mullins and McKnight 1981:123)
- b. Eleven samples identified by J. Zwiazek (personal communication)
- c. Charcoal types found in cellar fill (ca. 1860-1880) dated to the time of Pierre Delorme's occupancy (McLeod 1982:107).
- d. Based on McLeod (1983:209). Pierre Beauchamp lived at the farm from 1845 until 1868 although it was occupied by other Metis until 1892 (McLeod 1983:95).

The plant remains thus show a link between ethnobotany and socioeconomic status at Red River. Despite the uneven sample sizes, relative affluence and ethnic differences are reflected in the fruits, nut and charcoal deposited by the fur trade elite and by the two Metis farmers. The high proportion of imported fruits and nuts and the abundance of high quality fuel at Upper Fort Garry are also paralleled in the faunal remains, china and glassware (Monks this volume); and it would be instructive to compare the three sites with respect to these features. It would also be valuable to compare a number of sites and deposits of different ages, to form a material chronicle of the developing economy and ethnic diversity of the settlement.

What are the implications of the variations in diet suggested here? There is no great nutritional difference within the major types of fruits and nuts (Watt and Merrill 1963), although the quantities

consumed by the three Red River groups in the late nineteenth century may have been quite different. In England at that time, the rich may have had ample protein but their diet, like that of the poor, was badly balanced (Drummond and Wilbraham 1959).

This study has only scratched the surface of the long history of the food and fuel used at Red River. There is a treasure trove of ethnobotanical information waiting to be systematically retrieved and compared. These treasures include HBC inventories, orders and other documents, census records, and personal diaries and letters. The quest for this information must continue because "Never was a cliché more fatigued — or truer — than the one that bids: Tell me what you eat and I'll tell you what you are" (Cannon cited in Lowenberg et al. 1974:156).

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