

Parks Canada Microfiche Report 249

Supplying the Rideau: Workers,
Provisions and Health Care
During the Construction of the
Rideau Canal, 1826-32
by Jaime Valentine 1985

Supplying the Rideau: Workers, Provisions and Health Care
During the Construction of the Rideau Canal, 1826-32

by Jaime Valentine

Introduction

- 1 Chapter I: The Supply Line - Labour
 - i. Recruiting for the Rideau
14. ii. Wages and Working Conditions
23. iii. Transiency
31. Chapter II: The Supply Line - Provisions
 - i. Providing for the Work Force
 41. ii. Living Conditions
54. Chapter III: "Bleed Away and Blister": Sickness and Health Care
67. Conclusion
69. Notes
81. Bibliography

Appendices

86. I. Employment Agreements, Philemon Wright and Sons,
Hull, 1827-30
93. II. Articles Required to run P. Wright and Sons'
Business for one winter
96. III. Inventory of Articles left at T. Wright's house
Burritt's Rapids, 1833
99. IV. Medical Orders, Dr. A.J. Christie, Bought of Jos.
Beckett, 30 June 1827
102. V. Monthly Return of Diseases, Dr. A.J. Christie,
July, 1827
110. VI. Cure for the Cholera Morbus, Dr. A.J. Christie

Tables

Following pg. 30: -Wage Rates Paid by Philemon Wright and
Sons, 1827-32

-Division of Labour at Dow's Swamp
Embankment from 11 October 1827 to
18 June 1828

Following pg. 53: -Cost of Provisions at various sites along
the canal

-Partial List of Provisions Supplied
Burritt's Rapids Site by P. Wright and
Sons, Hull

Introduction

The story of the building of the Rideau Canal is one which has fascinated all those who have studied this amazing engineering feat over the past 150 years. More recently, attention has come to focus on the working and living conditions of the thousands of labourers who constructed the locks and dams along the route of the canal. This focus represents two trends, the first, general and the second, more particular and immediate. Firstly, the concentration on the working lives of the Rideau Canal builders is indicative of a trend in North American historiography which has attempted to rescue the "little guy" from the margins of history and to study the lives of working class people in and of themselves. Secondly, this emphasis is a direct result of Parks Canada's desire to present meaningful interpretive displays on the lives of the builders of the Rideau Canal to its visitors. The majority of the work available at present on the Rideau construction labourers received its impetus from Parks research, but the results of this research can easily be placed within the wider framework of contemporary labour history.

The plight of the Rideau Canal labourers was first given rigorous attention by H. Clare Pentland in his 1960 Ph.D thesis, recently published as Labour and Capital in Canada, 1650-1860.¹ While Pentland overemphasizes the number of Irish Catholics working on the canal (he states they were clearly in the majority²), his analysis of immigration as creating the conditions necessary for a wage labour market in Canada is cogent. Prior to the commencement of construction on the Rideau in 1826 there was a chronic lack of itinerant wage labourers from which to draw the thousands of workers needed for its completion. The heavy influx of immigrants from the British Isles in the late 1820's and the early 1830's provided a major source of wage labour for the canal. The Irish Catholics, being the most raucous and unruly of the immigrant groups, gained a reputation which easily exceeded their numbers. Pentland also drew on contemporary sources, such as John Mactaggart's Three Years in Canada, to illustrate the arduous and miserable conditions which confronted those who made their way to the works and which were responsible for the loss of many lives through accident and disease.

The first major work on the Rideau Canal labourers to appear under the auspices of Parks Canada was that produced in 1976 by Edward Bush entitled The Builders of the Rideau Canal, 1826-32.³ Bush's work focuses on the working lives

of the military and civilian labourers and artisans involved in the construction. He provides numerous biographical sketches of military personnel, contractors and miscellaneous figures as well as a wealth of appendices and illustrative materials upon which further research could be built. Bush was also among the first to question Pentland's assertion that Irish Catholics predominated in the building of the canal. Using contractors' work sheets, Bush was able to show that contractors who had previously been based in Lower Canada continued to rely upon French-Canadians to supply the majority of their work forces at sites along the Rideau Canal.⁴ While an exact distribution of numbers among ethnic groups employed on the canal will probably never be known, Bush's statistics were a necessary corrective to the notion of Irish-Catholic predomination among labourers on the canal.

The work which grew directly out of Bush's pioneering effort was a report by William N.T. Wylie entitled "Transience and Poverty: A Study of the Rideau Canal Construction Workers, 1826-32".⁵ Utilizing several collections of primary documents, Wylie endeavours to look more closely at the material conditions which impinged on the daily lives of the canal labourers and how they reacted to such conditions. Through the use of a selection of secondary sources dealing with early nineteenth-century

labour and canal construction in North America, he is able to place the Rideau Canal labourers in a wider framework than simply the wilderness interior of eastern Upper Canada. Wylie also includes a chapter on worker unrest and organization, an area which had generally been overlooked by historians of the canal. A version of his report later appeared as an article in Labour/Le Travailleur, the only academic journal in Canada devoted solely to labour history.⁶

Katherine McKenna's report on Newboro is unique among the studies of canal labourers in that it was to be utilized for archaeological as well as interpretive purposes at a single site.⁷ The report serves to remind us that conditions were not necessarily uniform along the canal. The lack of a reliable contractor at the Isthmus site and the severity of malarial outbreaks produced particularly harsh and unpredictable conditions for the labourers at Newboro. McKenna introduces a new element into the study of the living conditions of the Rideau Canal labourers when she attempts to determine to what extent the workers brought their wives and families to the wilderness interior site. If the historian of the Rideau is apt to think that the common labourers appear to be the invisible movers behind the building of the canal, their families become virtually inanimate among the relevant historical records and any

attempt to bring them alive cannot help but add to our understanding of the construction period.

Another study which has proven useful to Rideau Canal historians is Dianne Patychuk's B.A. honours thesis dealing with malaria on the Rideau.⁸ To most Canadians today malaria conjures up images of tropical forest and mosquito nets and they find it hard to envisage it ravaging the rolling countryside through which the Rideau winds. Patychuk does a commendable job of tracing the disease's origins as well as its villainous yearly visits to the Cataraqui sector of the canal and provides us with detailed statistics on the number of men affected and their rank. Rampant disease introduced a new problem which the military minds behind the project did not anticipate and Patychuk attributes, perhaps unfairly, ulterior motives to the health care system which they devised for the canal. It is true that fewer military men died and that they were probably cared for when sick, but that is not to say that Colonel By and the Ordnance Department were indifferent to the lives of the thousands of labourers who struggled along the canal. Day labourers employed by the military were eventually afforded the same system of medical treatment as was in effect for members of the military. The primary reason an equivalent system was not extended to cover contractors' labourers was that no stipulation for it had been made in

the original contracts and any attempt to introduce such a provision would only have led to a series of litigations. Patychuk is quite correct in pointing out that a hierarchy did exist among those employed on the canal and it will be seen it extended to several areas besides that of health care.

The latest, and perhaps most complete, study to appear on Rideau Canal labourers is a chapter in a forthcoming book on dam building along the Rideau by Robert Passfield.⁹ Passfield brings to this study years of exhaustive research and an extensive knowledge of the Rideau Canal construction period. As does Wylie, Passfield places the recruitment of labour in a national and international framework and focuses special attention on the poor condition of many immigrants, especially the Irish, when they arrived on the canal. Their physical condition was only made worse in the early years of construction through severe weather and the problems of provisioning such a massive work force in a wilderness region. Passfield places less emphasis on the worker unrest of 1827 than does Wylie and contends that By was ultimately successful in conciliating the Irish to the system which prevailed on the canal. He is correct in that strikes and confrontations were few and far between after 1827, but the numbers of Irish labourers who flocked to the works and drifted away almost as quickly suggests there was a hefty

proportion who had not become conciliated to working life on the Rideau at all.

The report which follows has had the immeasurable benefit of being able to incorporate the findings of the above studies with the research undertaken for this project. The project grew out of recommendations made by Bill Wylie concerning collections he had briefly canvassed and thought were worth pursuing. These included two collections at the Public Archives of Canada - the Philemon Wright and Family papers, and the Christie papers in the Hill Collection. Philemon Wright was the founder of Hull and by the time construction began on the Rideau, he had created a bustling community of 800 based on agriculture and lumbering. The family's firm played an integral role in the building of the canal both as major contractors and as suppliers to the military and other contractors. Their business records and correspondence provide a wealth of information about labourers and provisioning during the construction period and form the basis of much of the following report. Dr. A.J. Christie is probably best remembered as the editor of Bytown Gazette in its fledging years, but he was also involved in a medical capacity on the Rideau Canal. As assistant to the medical staff corps, Christie was responsible for attending labourers employed by both the military and contractors. A series of monthly medical

reports for 1827 which he submitted to Colonel By provide an illuminating glimpse at the ailments which inflicted the workers on a day to day basis.

The other two collections which formed the basis of this report were the Redpath papers located in the McCord Museum in Montreal, and a miscellaneous collection of papers relating to the contractors Rykert and Simpson located in the Parks Canada Realty Division, Hull, Quebec. John Redpath was the contractor for the massive works at Jones Falls and while his business records were not as meticulously kept as those of the Wright's, they do provide useful information on the number of workers employed and the wage rates they received. His records also show that he kept a "company store" from which he sold provisions to his workers, often at highly inflated prices. Rykert and Simpson were the principal contractors for the Smiths Falls site. The papers found at the Realty Division were collected for a trial between Rykert and Simpson and the King for unpaid wages, which the contractors lost. They include names and occupations of labourers and artisans employed and the wages they received.

The direction of the report was obviously determined by what was found in the source material. Since the great bulk of the records canvassed were those of contractors involved in the construction process, the report leans towards a

study of contractors' labourers rather than those who were employed by the military. Much has been made of the efficient supply system set up by Colonel By and the Ordnance Department but the fact remains that most contractors were left to recruit and supply their own labour forces. With over 25 contractors involved in the construction, the problems of such a supply system were numerous and an individual contractor's ability to overcome them often determined whether they succeeded or not. The labourers who found their way to the Rideau interior were not particularly patient and any delays in paying their wages or even satisfying their voracious appetites often sent them off in search of work elsewhere.

The first chapter of the report deals with the recruitment process involving labourers. After the first year, contractors usually had little problem in finding workers (except for certain skilled trades, particularly masons) because of a steady flow of immigrants and French-Canadians from Lower Canada. Wages were a major inducement for workers coming to the Rideau, and their relationship with working conditions will be probed in the second part of the chapter. Finally, an attempt will be made to explain the high rates of transiency among the Rideau labourers.

The second chapter looks at the system of provisioning the work force set up in the wilderness of eastern Upper

Canada. An intricate regional network of supply existed which worked well for the most part but also often broke down leaving workers without food and contractors without building supplies. The final chapter deals with sickness and health care and attempts to look beyond the well documented ravages of malaria to the day to day ailments which affected the labourers. The ability of authorities - including the medical profession - to deal with the ever present sickness will also be examined.

This report is by no means meant to be the last word on the Rideau Canal construction workers, but simply attempts to augment the findings of previous researchers. Taken together, the collected works of the Rideau labourers illustrate how the otherwise invisible lives of a labouring class can be at least partially recreated. We do not yet know all that we would like to about the thousands of men and women responsible for building one of the great engineering achievements of the nineteenth century, nor are we likely to. But it is hoped that this report will contribute something of value to this small, but important, chapter of Canadian history.

Notes to Introduction

1. H. Clare Pentland, Labour and Capital in Canada, 1650-1860, (Toronto, 1981).
2. Ibid., p. 103.
3. Edward Forbes Bush, The Builders of the Rideau Canal, 1926-32, Manuscript Report Series No. 185, Parks Canada, Ottawa, 1976.
4. Ibid., Appendix F.
5. William N.T. Wylie, "Transience and Poverty: A Study of the Rideau Canal Construction Workers, 1826-32", Microfiche Report Series No. 34, Parks Canada, Ottawa.
6. William N.T. Wylie, Poverty, Distress and Disease: Labour and the Construction of the Rideau Canal, 1826-32", Labour/Le Travailleur, II, Spring, 1983, pp. 7-29.
7. Katherine M.J. McKenna, "Working Life at the Isthmus, Rideau Canal, During Its Construction, 1827-31: The Human Cost of a Public Work", Microfiche Report Series, No. 34, Parks Canada, Ottawa, 1981.
8. Dianne Patychuk, "Malaria on the Rideau: A Case Study in the History of Health Care in Canada", revised draft, B.A. Honours thesis, Queen's University, 1979, copy on file, Parks Canada, Cornwall.
9. Robert Passfield, "'All Will Succeed': The Winter of 1829-30", Manuscript on file, Parks Canada, Cornwall, 1985.
10. Ibid., p. 20.

Suggestions for Further Research

The possibilities for further research on the Rideau Canal labourers appear to be fairly limited. The research for the report entitled "Supplying the Rideau: Workers, Provisions and Health Care During the Construction of the Rideau Canal, 1826-32" was limited to four collections of primary documents and several secondary sources. The recently completed chapter by Bob Passfield on canal labourers incorporates much of the previous research done on the subject as well as presenting a great deal of new research. It should prove to be most useful for interpretive purposes.

Of the collections used for this report, the Wright papers contain the greatest possibilities for further research. Wright's contracts on the Rideau were essentially only a sidelight to his more lucrative business in timber and agriculture. His employees appear to have circulated quite freely among the various aspects of Wright's operations and it may be of some value to undertake a wider study of the Wright family's business endeavours. This could perhaps help to determine to what extent canal labourers remained in the area after the completion of construction. Studies of townships through which the Rideau passes might also be useful in this respect. Bruce Elliott

of Queen's University is currently undertaking a study of March Township and may be of some help on the subject.

The other area in which there may be possibilities of further research involves comparing the experience of Rideau Canal labourers with that of other canal labourers during the 1830's and 1840's. This may extend beyond Parks Canada's mandate, but cooperative efforts with other historians, such as Ruth Bleasdale of Dalhousie University may prove fruitful.

Finally, the question of family life during the construction period is one which deserves more attention. Research material for such a study may be quite limited, but the comparison of employment records with later census data or militia returns might prove useful. The Wright papers contain a good deal of correspondence with some of the firm's employees which sheds some light on this question.

CHAPTER I The Supply Line: Labour

I: Recruiting for the Rideau

The first major logistical problem faced by Colonel By as Superintending Engineer of the Rideau Canal project was the mobilization of the largest single work force yet to be assembled in British North America. In the first year of construction By envisaged a workforce of 6,000 toiling between Bytown and Kingston, with at least 1,000 of those being highly skilled craftsmen.¹ The obstacles to enticing such a large number of men to the backwoods of Upper Canada seemed formidable. The area was heavily wooded, swampy and of questionable agricultural value should workers view employment on the canal as an avenue to permanent settlement. The ready availability of land elsewhere in Upper Canada easily absorbed the influx of immigrants and a serious labour scarcity, especially of skilled tradesmen, existed in the province. The urban centres of Upper Canada could hardly offer the prospect of fulfilling By's quota as the largest, Kingston, had a population of only 2,849, and the next largest, York (Toronto), boasted 1,677.² The Lower Canadian communities of Montreal (22,357) and Quebec City (22,101)³ seemed more promising, especially given their position as burgeoning immigration centres. Bytown (Ottawa) was known as Richmond's Landing in 1826 and consisted of a few scattered buildings and a storehouse which serviced the military settlements inland and the lumbering community of the Ottawa Valley.⁴ More prominent in the lumber trade was the bustling community of Wright's Town (Hull)

across the Ottawa River from the future site of Bytown. It boasted a population of 800 whose activities were centred around the varied business endeavours of Philemon Wright, the town's founder.⁵

Two major factors were to ensure that a labour force large enough to carry out the enormous workload associated with the Rideau existed by the late 1820's. The first of these involved the dramatic increases in immigration from the British Isles after 1815 and a population crisis in Lower Canada during the same period which forced many young French-Canadians off the lands into the cities looking for work.⁶

When the idea of constructing a canal through the wilderness of Upper Canada was first contemplated following the War of 1812, the British government foresaw the difficulties of providing the workforce for such a project. It subsequently initiated a government-assisted immigration scheme to encourage discharged soldiers and British immigrants to settle in the vast wilderness area north of the Rideau River. The first military settlements were founded deep in the bush on tributaries of the Rideau River, at Perth on the Tay River in 1816, and at Richmond on the Jacques River in 1818.⁷ Economic conditions in Great Britain and Ireland following the Napoleonic Wars also contributed to the increasing flow of emigrants to North America. With farm labourers being pushed off the land and the once proud textile industry in serious decline in Scotland and Ireland, hordes of landless labourers and unemployed artisans sought passage to America. The Colonial Office under Lord Bathurst initiated a programme whereby

a deposit of L16, refundable after two years, provided families with passage to Upper Canada, provisions on the voyage, a grant of 100 acres upon arrival, tools for clearing the land and government provisions until the first crop was harvested. Although this offer had attracted over six hundred Scots immigrants to the Rideau interior by 1816, the deposit of L16 provided a deterrent to many who wished to leave Scotland but had no savings.⁸

Despite financial difficulties, the Rideau military settlement continued to grow and by 1826 there were as many as 10,700 settlers in the townships to the rear of the Rideau River. Among their number were 3,570 males, including 1,300 discharged soldiers.⁹ In 1823, 500 Irish immigrants, predominately Catholic, had joined the Scots through a similar government scheme initiated by Peter Robinson. This was a selective immigration with attention being paid to habits, industry, temperance and good character. Most were small tenant farmers, but there were also several blacksmiths, tradesmen and weavers.¹⁰ Most could read and write and calculate their rations, but proved to be less efficient in mastering the rigours of bush farming than the Scots. John Mactaggart, By's Clerk of Works on the Rideau Canal, felt that the Irish Catholics made poor farmers even on cleared land: ... "they will only exert themselves so far that they may not starve; they will not struggle for any comforts beyond this."¹¹

The early immigrants were generally families of at least small means, as evidenced by the cost and selectivity of their

immigration schemes. Having settled on the land early and experienced considerable success as farmers, it was unlikely that the men of the military settlements would likely be unable to provide By with the necessary work force to begin the canal. What they might, and eventually did, supply the Rideau project with were significant surplus crops of potatoes, grain, and vegetables.

Emigration for the poor from Britain remained a pipe dream until 1817. It was in that year that timber ships returning to Quebec offered cheap passage, enabling poor families to emigrate unassisted. Fares that had previously cost L10 and upwards tumbled to L2 or less. Moreover, Quebec ships took three children for one adult fare while New York ships did not, a vital factor for poorer families who insisted on emigrating as family units.¹² The result was a heavy tide of British immigration into Canada rather than the United States, with anywhere from 10,000 to 23,000 entering the Canadas each year.¹³ The great majority of immigrants coming to North America prior to 1835 were from Ireland. Until the mid-1820's the bulk of these were Ulster Protestants, many of whom were displaced weavers and artisans. Finding the labour market of Lower Canada congested, the Ulsterman was likely to pass onto Upper Canada where plenty of land was still available and relatively cheap. Many also found their way into employment on the Erie Canal, the first major public works project of its kind in North American, between 1817 and 1825. Once discharged from the Erie, some of these men would provide a small, but experienced, nucleus for By's work force.

By 1826 a new phenomenon had entered the British North American immigration scene. This phenomenon was the impoverished Irish Catholic peasant.¹⁴ Having been shoved off their tenanted land by landlords who were shifting from a labour-intensive grain economy to one based on livestock, these peasants, or the 'poor Irish' as they became known, arrived at ports in Lower Canada in wretched conditions, with little or no money, and no immediate prospect of work. They were often greeted with derision rather than sympathy. John Mactaggart, no friend of the Irish, was convinced that if "they will not amend their ways of their own accord, there will be few found alive after being five years in the country."¹⁵ Mactaggart's solution was to find any means possible of keeping the Irish at home since "they may just as well die in Ireland as in Canada." His ideal settlers were those who "had been badgered and abused in Great Britain, and who [in] spite of all their misfortunes, have a little cash left."¹⁶ Immigrants of no means were undoubtedly in for a rough time upon their arrival in the Canadas. Although some were starved to the point of emaciation, A.C. Buchanan, Chief Emigration Agent at Quebec City, contended that giving unaccustomed food such as beef, biscuit, salt pork, and coffee to the Irish emigrant would only make him ill.¹⁷ By 1826, a substantial number of Irish Catholics had been treated by the Montreal Emigration Society for want of food, clothing and shelter.¹⁸

One of the overriding difficulties the Irish emigrant faced in Lower Canada was that he had entered a relatively closed labour market. Since the early nineteenth century, Lower

Canadian agriculture had been in a state of decline. Soil exhaustion, a decline in yield and a drop in the price of wheat accentuated a condition of serious agrarian overpopulation.¹⁹ The result was that thousands of young French-Canadians migrated to the cities in search of employment on the docks, as indentured servants or as apprentices in a trade. The burgeoning timber industry of the Ottawa Valley and New Brunswick was able to absorb a proportion of these farm workers during the winter, when up to 2,000 French Canadians found work in the shanties along the Ottawa River. Philemon Wright had paradoxically commenced the lumber business on the Ottawa in 1808 in order to hold onto his farm labourers. Normally only one-quarter of the men he employed on his farms were needed in the winter, but if he discharged them "it would have been impossible for me to have obtained men in the spring, when I most wanted them, as the distance from my settlement was so great."²⁰ In the summers, however, the labour markets of Montreal and Quebec were usually flooded with these itinerant workers by the time timber ships arrived laden with hopeful immigrants.

Colonel By and the Ordnance Department appear to have been unaware of the fluid nature of the labour market in Lower Canada at the time. Under the system of contracts By had let out for the construction of the canal, the actual recruitment and employment of labourers and artisans was the responsibility of individual contractors. By, however, felt it necessary to advertise for workers in newspapers in Kingston, Montreal and as far afield as New York. Dr. A.J. Christie, writing to a friend

in the United States stated that "in the course of the winter, our newspapers have been continually filled with letters from the Colonel and others alluring unthinking men to the works, holding out every bait for their inducement."²¹ These ads held out the promise that the government would furnish provisions, accommodations, and medical care at every site where these were not readily available.²² By's greatest concern was a supposed shortage of skilled craftsmen in the Canadas. To circumvent this problem he asked for four companies of Royal Sappers and Miners from Great Britain. This corps was composed of soldiers hired for their proficiency in certain trades, particularly masonry, carpentry, mining and quarrying. By had to be content with two companies, which arrived in the summer of 1827 and were promptly put to work in construction and policing capacities.

By's apprehensions about labour shortages were somewhat premature. The floodgates of immigration and a cyclic decline in the timber industry²³ ensured a steady stream of willing labourers for the construction of the canal. Dr. Christie, an early but not lasting critic of the project, felt that the workers were being "drawn like sheep to the slaughter."²⁴ Conditions were harsh and By was ill-prepared for the initial assault on the Upper Canadian wilderness. In the fall of 1826, he asked P. Wright and Sons of Hull to recruit 100 men to build the Union Bridge over the Chaudiere Falls and to commence work on the canal during the following winter.²⁵ Without proper accommodation and sufficient provisions, however, By was forced to discharge the majority of these labourers except for a handful

retained for masonry work on the bridge.²⁶ Work continued slowly on the bridge under the direction of Thomas McKay, the master mason. Snow had to be scraped from the masons' platforms each morning and special precautions taken against the dangers of ice. Only two days were deemed too cold to work outside, however, and only one man succumbed to frostbite, a condition Mactaggart attributed to the serving of grog to workmen once or twice a day.²⁷

Work was to begin in earnest on the canal in the summer of 1827. By had spent the winter in Montreal talking with various contractors and drawing up construction plans. It had been decided that the project would be contracted out to private entrepreneurs rather than rely on the military.²⁸ This was seen as a cost-saving measure as the military would have had to be paid even when they were idle during the winter months. Contractors were paid only for work done and not for the cost of maintaining a work camp at even the most isolated sites. By explicitly stated that work was only to be given to contractors who had experience in the appropriate area of construction, a task not easily accomplished in a frontier society which had little experience in canal building. While reliable stone-masons such as Thomas MacKay and John Redpath were quite readily available, there were few people in the Canadas with sufficient knowledge in excavation work. It has been said that "Colonel By had no trouble with anyone of the major masonry contractors but nothing except trouble with most of the excavation contractors."²⁹ The result was a legacy of low bids, broken

contracts and litigation which hounded By all the way to a British Parliamentary Inquiry and left several contractors and many workers with empty pockets. Ruggles Wright the eldest of Philemon Wright, summed up the exasperation of many contractors when he wrote to By in 1828:

I fear that the work could not be done for these prices being unexperienced myself in the different lines of work in the Canal Business. God Knows³⁰ what a fair recompense for the work would be.

If the contractors had any reservations about going ahead with work once they had been awarded contracts, it was not reflected in their recruitment of labour. During the winter of 1826-27, By had told Philemon Wright that "the more men you employ for the following season the better" as long as he did not exceed his estimate.³¹ Wright accordingly dispatched one of his sons to Quebec City and a son-in-law to Montreal to begin the process of recruitment, and by April 1827 had acquired a full complement of masons, carpenters, and labourers.³² This system of delegating responsibility for recruiting to the contractors appears to have been extremely efficient. No serious difficulties were encountered in raising the necessary work force with the majority being recruited in Quebec and Montreal and others coming from Kingston and the military settlements previously established in the Rideau interior. The following year the Wrights had merely to contact their agents in the port cities in order to replenish their labour stocks:

We ... are in want of from fifteen to twenty smart [French] Canadian labourers The wages will be eight dollars a month and their

time will commence from their arrival at Hull, our allowing their steam boat fare to Hull. We cannot make them any advances faster than they have earned it, as we have suffered enough already from advancing labourers.³³

Wright's insistence on hiring French-Canadians only and his refusal to advance them any wages reflects problems he had had the previous year with Irish labourers. Ruggles Wright had hired 33 men in Quebec and had entrusted them to a foreman, McLaren, who was also given money to disburse among the men. Wright warned his brother, Tiberius, that "The Men I send you are the decidedly noisy Irish. Make the best of them you can."³⁴ As it turned out, only half of the Irish labourers ever made it to Hull, as thirteen of them simply disappeared in Quebec City once they had been given money by McLaren and another three skipped ship in Lachine. Ruggles Wright received a staff reprimand from his father and was warned "not to employ any more of these men until you hear from [me] again."³⁵

Wright's reluctance to hire Irish Catholics is further evidenced by the fact that of 151 workers employed by P. Wright and Sons at the Dow's Swamp Embankment between December 1827 and March 1829 a full 88 per cent were French-Canadian.³⁶ While the records for their operations at Burritt's Rapids are not as complete, it is clear that at least three-quarters of the workers employed there were also French-Canadian. It has been suggested that this proclivity for hiring French-Canadians to the almost total exclusion of Irish Catholics was due primarily to Wright's long dealings in the agricultural and timber industries in Lower Canada rather than to any conscious racism.³⁷ Wright had long

relied on contacts in Montreal for supplies of provisions and labourers and it is only logical that he would continue to rely on these sources during the Rideau project. Another contractor who had had extensive dealings in Lower Canada prior to the building of the Rideau was John Redpath. Of the workers he employed at the interior site of Jones Falls, at least two-thirds were French-Canadian,³⁸ substantiating the premise that sources of labour remained somewhat stable from pre-canal days, despite a heavy influx of immigrants.

The idea that Irish Catholics dominated during the building of the Rideau³⁹ was due primarily to the high visibility they gained through their raucous behaviour and a seemingly genetic disdain for cleanliness. Contemporary accounts were filled with descriptions (often blatantly racist) of the Irish fondness for heavy drinking, brawling and their contempt for authority. As for their usefulness as workers, John Mactaggart gave the following opinion:

If I had any work to perform in Canada of my own, I would not employ any Irish, were it not for mere charity. The native French Canadians are much better labourers, as they understand the nature of the country, can bear the extremes of the climate much better, keep strong and healthy, and always do their work in a masterly and peaceable manner; whereas the Irish are always growling and quarrelling, and never contented with their wages.⁴⁰

Not all contractors shared Mactaggart's views. For instance, records both for Chaffey's Locks and the Smith's Falls sites do not contain a single French-Canadian name.⁴¹ Both sites had local connections, with John Haggart of Perth and Thomas Rykert of Smiths Falls being the main contractors. Rykert's

partner, James Simpson, was a young Irish immigrant who was probably responsible for recruiting the heavy proportion of Irish employed at Smiths Falls. One also finds a preponderance of Irish names among the workers of the Royal Engineers Department and the contractors Robert Drummond, John Pennyfeather and Thomas Mackay who were treated by Dr. A.J. Christie at or near Bytown.⁴² Mackay noted that during the five years he worked on the canal he had employed between 100 and 300 men, two-thirds of whom were Irish, and that he had never experienced any difficulty in keeping them quiet.⁴³ Mactaggart was a firm believer in an ethnic segregation of workers by site and while it is difficult to determine whether By advocated such a policy, individual contractors may have found it in their own, and their labourers', best interest to keep French and Irish apart.

Contractors probably provided the main catalyst behind labour recruitment but there were other methods by which the roving labourers could find their way onto the Rideau. The Irish and Scots were both clannish peoples and kinship played an integral role in attracting workers to the various sites. The more literate among the labourers wrote letters home to their families and friends promising immediate employment and high wages on the Rideau Canal.⁴⁴ Many Irish Catholics had also set up boarding houses in Montreal upon their arrival in Canada. Having gained some degree of stability, they were able to come to the help of the newly arrived and direct them to the Rideau for possible employment.⁴⁵ The other major source from which Rideau labour was recruited were farmers newly settled on their lands

who welcomed any means of ready cash before their first crop came in. Those who owned teams of oxen and horses could both labour on the canal and rent out their teams to contractors at very attractive rates.

II. Wages and Working Conditions

Besides the guarantee of ready employment, workers from common labourers to master tradesmen were lured to the Rideau by the prospect of high wages. Due to a widespread scarcity of labour, wage rates in Upper Canada were generally higher than those in Lower Canada during the 1820's. There does appear to have been some disparity between rates in the western reaches of the province and the eastern borders where French-Canadians, escaping the congested labour market of Lower Canada, tended to stabilize supply.⁴⁶ The massive influx of workers to the Rideau in 1827 is thought to have lowered wage rates in eastern Upper Canada, although they probably recovered the following seasons when malaria drove many men from the works.⁴⁷

Lieutenant Edward Frome of the Royal Engineers Department reported the following daily wage rates for tradesmen as being in effect during the construction of the Rideau: carpenters, 5/ to 5/6, masons, 5/ to 6/6, Smiths and sawyers 5/ to 5/6, and stone cutters 6/ to 7/. Labourers wages were said to average 2/6 a day, with variations between 2/ and 3/.⁴⁸ But just as there existed a hierarchy of pay between occupations, there was also a hierarchy within occupations according to terms of employment. The highest rates were paid for piece work, followed by the day rate, then by the month, and lastly by the year. The only piece work on the canal was that done by stone cutters who, as mentioned received from six to seven shillings a day, depending on the number of stones produced. Wage rates were by no means uniform throughout the canal. At Smiths Falls, labourers hired

by the month earned the relatively lucrative wage of 3/6, while those on a daily rate were paid 4/. There is even one entry of a labourer employed by the Royal Engineers Department at Smiths Falls earning 5/ per day. Carpenters employed by Rykert and Simpson received between 5/ and 6/8 depending on their tenure of employment, while a mason could earn as much as 7/6 for a day's work. The foreman was paid 5/ a day on a monthly basis.⁴⁹ Those employed by the month had the obvious advantage of comparatively long term employment, while day labourers seldom received even a week's work in a month.

A distinctly privileged group of workmen were the overseers and master tradesmen hired by the Royal Engineers Department to travel the length of the canal and supervise the work of the various contractors. In all, By hired seven overseers, a master blacksmith, master carpenter, and three master masons. Originally employed as artisans, these men's work had to prove to be impeccable before By entrusted them with what he considered perhaps the most crucial work of the whole project. The trust placed in them was reflected in the wages and benefits they received. Both groups received a wage of 7s - 6d per day with a daily food ration, the only difference being that the overseers were provided with a servant each. The master tradesmen were given an additional 6d. per day in lieu of a servant.⁵⁰

The majority of a worker's wages on the Rideau would be eaten up by the cost of living. Provisions were extremely expensive due to the high cost of transport over long distances and the determination of several contractors to recover some of

their losses through selling supplies to their labourers. The workers who may have been best off were those who received room and board on top of their wages, although this system also had its disadvantages, including lengthy delays of payment. Those who were provided with room and board were often required to sign contracts ranging anywhere from two months to two years. The contracts often had stipulations that the labourer would not receive his wages until the expiration of the contract, thus placing him on about the same footing as an indentured servant. Philemon Wright was one contractor who provided room and board for his Rideau Canal workers and who also forced them to sign a contract. Many of the canal workers were illiterate (as evidenced by the regular use of 'x' to sign contracts) and their understanding of the terms of these contracts was perhaps sketchy at best. Table I illustrates the wages paid by Wright and some of the conditions he attached to his contracts. Perks such as a pair of boots, tools or the cost of a steamboat fare were often thrown in. Canal labourers appeared to have fared relatively well in comparison with other workers employed by the Wright's, averaging approximately the same wage as sawmill hands and timber labourers, if slightly less than farm labourers and more experienced lumbermen.

Workers' wages were often severely reduced by the irregularity of employment, the inability of contractors to pay, and sickness. During the winter months in particular, contractors found it difficult to employ workers on a steady basis. Some sites closed down altogether, while others could

only operate on an intermittent basis. During the winter of 1830-31, sixty-five workers at Smiths Falls averaged only eleven working days a month.⁵¹ Work stoppages were also caused by problems in transporting building materials, bureaucratic delays, and other weather inclemencies. Work at Burritt's Rapids was delayed at the opening of the season in 1829 due to heavy rains, while in September, 1830 Tiberius Wright complained to his brother that "all our masons are idle for want of the Col's Sanction to the plan."⁵² While such delays were for the most part unavoidable, their net results were to plunge labourers into periodic bouts of destitution which often led to gangs of labourers forcibly taking provisions from houses or taverns.⁵³

At the outset of construction it had been decided that a certain amount of contractors' money was to be retained by the Commissariat until it was determined whether they had paid their workers' wages. Delays in payment to contractors often meant that workers went unpaid indefinitely. Philemon Wright complained to By that a delay in payment for their contract at the Hogsback had resulted in 140 men going unpaid for 40 days.⁵⁴ Such cash-flow problems were also the fault of inexperienced contractors whose low bids often meant that workers could not be paid when their work was finished. At sites where workers were provided with room and board, wages were often held up for months or until their contracts were fulfilled. The following list of wages due a group of labourers at Burritt's Rapids were held up while Philemon Wright petitioned Colonel By for an advance payment against work already performed at the site.⁵⁵

Name	Pay Due
Paul Rashott	9.18. 3 1/2
Pierre Felix	18.1 . 7 1/2
Mitchel Felix	18.13. 7 1/2
Grandir Lamotte	17.2 . 3
Bapt Stacier	17.8 . 11
Ant Akey	16.16. 3
Iruie Corneyea	16.13. 5 1/2
Joseph Beebo	14.6 . 9
Joseph Martino	14.16. 5 1/2
D. Cavier D'Tuain	13.17. 3
F.F. Feverer	11.8 . 11

In some cases, these amounts accounted for up to nine months backpay. Stone cutters faced a unique problem in that contractors would refuse to pay them for stones which they felt were not up to By's exacting standards of craftsmanship.⁵⁶ Despite such problems, frugal workmen were often able to save up to half their wages and use them to make a downpayment on land further in the Upper Canadian interior.⁵⁷

Were the Rideau Canal labourers well paid for the work they performed? Without reliable statistics on the colonial standard of living it is impossible to determine what a 'living wage' would have been, but it is clear that the workers earned every cent they were paid. Days were long and arduous (up to 14 or 16 hours) and the work was fraught with hazards. The overwhelming majority of the work was performed by man and beast with very few mechanical labour-saving devices in evidence along the line of the canal. The failure to use steam power to facilitate construction was common among early North American canal projects. On the Rideau it appears to have been discouraged by its heavy initial cost, an abundance of relatively cheap labour and the inability of the rocky terrain to accommodate it.⁵⁸ In

1830, Dr. Christie commented on the use of a steam-engine for clearing a lock-pit at Kingston Mills and a pump driven by a waterwheel erected for the same purpose at Davies Mills.⁵⁹ Both these devices were used primarily to ensure that work could carry on in wet, swampy conditions rather than to ease the plight of the workers.

The nature of the work on the Rideau was similar to that on other major canal projects in Britain and North America and included the excavation of soil and rock, rock quarrying and masonry construction, the erection of wooden waste weirs and bridges, and the building of embankments and dams. Soil excavation was done with picks and shovels and was then carted away with wheelbarrows to suitable dumping sites. Being situated in a heavily-wooded wilderness region, the felling and clearing of trees along the Rideau was an important feature of the work process.

The French-Canadians were particularly well-suited for this work through their experience on farms and in the timber industry. The Irish, however, were ill-prepared for working in the bush and often mutilated themselves through their "awkward and unhandy" use of axes; as Mactaggart put it: "When he first commences hewing down trees, he often hews them down upon himself, and gets maimed or killed; and if he attempts squaring, he cuts and abuses his feet in a shameful manner."⁶⁰ The removal of stumps posed severe difficulties. Experiments in blasting them out and cutting in underneath and pulling them out had proved fruitless. In the end a method known as "pooling-in" was

utilized, whereby the roots of the tree were cut and an excavation was made to drop the stump in. Mactaggart noted that this was highly dangerous work, with many Irish labourers being smothered or losing limbs in the process.

The forte of the immigrant Irish was in pick and shovel work and they were used extensively in this field along the Rideau. Although Mactaggart insists that even here "the poor Irish receive dreadful accidents" these were more often than not the result of a general unfamiliarity with blasting procedures and lax safety standards rather than particular deficiencies among the Irish labourers. Several unexperienced Irishmen were known to profess knowledge of quarrying which they did not have because they knew it paid higher wages. Quarrying was labourious work and one which required particular expertise. Rock was excavated by drilling holes in them which were then filled with gunpowder and blasted. Each hole was drilled by three men, using a sharp-pointed rock chisel and sledge hammer. The speed of drilling varied from 12 feet in a day for three men at work on a 1 3/4 inch diameter hole to as little as 4 feet in a day for a 3 inch hole. This rate was quickened marginally by the use of a "plug and feather" device by which the swelling of wooden plugs when wetted was made to split rocks. The holes were then filled with gunpowder which consisted of a mixture of three parts of "nitre" to one part of a mixture of sulpher and charcoal.⁶¹ The timing of blasting and retrieval was carried on in the beginning on a purely ad hoc basis. The result was a considerable loss of life, limb, and often eyesight in the early stages of

construction, not only to workers and overseers, but to innocent bystanders as well. In December, 1827 it was reported that a woman (presumably the wife of a worker) had her skull fractured by a stone thrown from a blast at the Hog's Back.⁶²

It is not known how many workers were killed or maimed for life during the construction of the Rideau but the number was probably not inconsiderable. Of twenty-one Sappers and Miners who died on the Rideau, six were killed accidentally. Some were injured and pensioned off, such as William Roberts, who was blinded by the blasting of a rock.⁶³ Contractors' labourers or their families were not as lucky when they were injured or killed, as most contractors regarded injury and death as an unfortunate, but also unavoidable, consequence of work of such a nature. Most accidents were blamed on the inexperience of workers or on intoxication. Inquests were seldom conducted into the cause of death and when they were, the question of compensation was rarely entered into. At the investigation into the death of John Rusenstrom, who was killed in a fall from the Hogsback Dam while employed by P. Wright and Sons, the verdict of the jury was that his death was the "Consequence of intoxication by Ardent Spirits" and therefore the firm had no liability.⁶⁴ Some workers, such as those at the Isthmus, petitioned for compensation even though they were not technically entitled to it. They often received it, although grudgingly, as in the case of Martin Hogan who had been granted by Colonel By the sum of 4/10/0 for his injuries. The Ordnance Department, ever wary of By's spending, at first disallowed the payment, but later

relented, stating "that under the circumstances they [the Board] have ordered that this expense be now allowed, but they consider he had no right to authorize the payment and request he may be informed that they do not approve of the transaction."⁶⁵

III. Transiency

The Rideau Canal was neither a pleasant nor a healthy place to work and live during its construction. Many immigrants came to British North America expecting to find an El Dorado but were instead confronted with the prospect of seemingly never-ending days of back-breaking spade work. The dream of owning land was what prompted most immigrants to get up and move and wage labour was usually construed as a necessary means to that end. Standing in water up to one's knees continually dodging flying pieces of timber and rock would have seemed to be unduly harsh means even to the hardest settlers. French-Canadians on the other hand had more experience in the wage labour market and knew that work on the Rideau generally meant a season's or a year's wages before they moved into the timber industry or, if they were lucky, onto a farm in Lower Canada. It is not surprising, therefore, that the Rideau Canal work force experienced an extraordinarily high transiency rate among its members. Artisans and labourers alike would seldom remain at one site for more than a few months and often "ran away" before they could collect any of their wages.

The question of turnover among the Rideau work force has tended to revolve around the problems associated with outbreaks of malaria. This is quite understandable, especially considering that this was the only time at which contractors and the military appeared concerned about the loss of workers. Malaria first appeared on the canal in the summer of 1827 and returned with increasing severity in the following summers. An outbreak could decimate the work force at a particular site in two ways:

directly through the affliction of those employed at the site, or indirectly through a mass exodus of those who wanted nothing to do with the dreaded disease. It has been estimated that this turnover amounted to between 7 and 20 per cent a month at affected sites, although at some sites such as the Isthmus, there was a 100 per cent morbidity rate.⁶⁶ Such delays wreaked havoc with contractors' schedules and usually resulted in increased costs or delayed payments from the Commissariat. After 1827, the Military decided to halt work altogether during August at most sites along the Cataracqui section of the works. As a result, work had to be carried on well into the winter months where the hardships of frost and snow had to be overcome. The effects of malaria were probably hardest on the workers themselves. Work stoppages meant loss of employment for all whether or not the worker was affected by disease. With few material possessions or savings to fall back on entire, families were plunged into destitution during lengthy stoppages. It is little wonder that mere mention of the disease could send scores of workers fleeing from a site.

Malaria was not the only, nor perhaps even the most important, reason why workers left their employment on the canal. The disease was rampant only along the lower reaches of the canal, from Newboro to Kingston. The upper end of the canal remained relatively unscathed from malaria, yet also experienced extremely high turnover rates. A study of 151 men employed by P. Wright and Sons at Dow's Swamp between December 1827 and March 1829 reveals that 87 of them, or over 57 per cent, remained for

less than three months. A further 20 per cent stayed for between 4 to 6 months, while only 15 men, or 10 per cent of the work force employed over this period of time, remained with the Wright's for over a year.⁶⁷ A similar study of workers at Smith Falls reveals that 40 per cent of the workers there were employed for one month or less, while only 6 per cent persisted beyond four months.⁶⁸

The operations of the Wright's offer a revealing picture of the lives of transient workers in Upper Canada at the time. Philemon Wright had been established in Hull since 1800 and was essentially the only employer of wage labour in the area prior to the commissioning of the canal. Men (and sometimes women) would rotate among his craft shops, grist and saw mills, extensive farming endeavours and timber operations according to the dictates of season or demand. Wright had thus built up a meaningful and reciprocal, almost feudal, relationship with many of his employees, a considerable number of whom had settled in the area.⁶⁹ The coming of the canal brought with it the prospects of quick profits for Wright and a further extension of his pool of labour. Baptiste Dorion, a mason by trade, provides an interesting example. First recruited from Montreal, Dorion was employed as a mason on the Union Bridge from late 1826 through to October, 1827 when he disappeared for a five-month period. It is quite possible that he was employed in some aspect of Wright's timber operations during this interim. Dorion reappeared on the Rideau in February, 1828 where he was employed for approximately four months before being sent to Ruggles

Wright's Gatineau Falls farm in June. He returned to Dow's Swamp in January, 1829 only to leave again in March, this time placed in charge of a timber raft being prepared to be sent to Quebec.⁷⁰ Less than five per cent of Wright's workers can be traced in this manner, but it is quite probable that many others followed Baptiste Dorion's example and went in search of other forms of wage labour more to their liking.

The high turnover rate among Wright's canal labourers is all the more interesting when juxtaposed with the relative permanence of the families who first settled in Hull. Using a militia return for 1808 and a census of heads of families for 1825, Bruce Elliott has shown that 31 of 57 families (or 54 per cent) remained in Hull over this period. Perhaps even more remarkable is that in 1851, 25 (or 44 per cent) of the families were still there.⁷¹ It thus becomes quite clear that spatial mobility was much higher among the itinerant labourers of a canal works than for those who had found some stake on the land.

Transiency was also related to other factors. Men were fired for intemperance, or discharged for shoddy work. Some left after heated disagreements with overseers, as when Ezekiel Whittemore refused to mark, and thus accept for payment, stones cut by his masons. Others drifted away when breakdowns in the supply line left sites without adequate building materials or when contractors were unable to pay them. The military also experienced trouble with transiency (or desertion as it was known in military terms). Of 160 Sappers and Miners who arrived from England in the spring of 1827, thirty-five had deserted by the

time their tenure ended four and a half years later. The problem of desertion was endemic in the British Army of the day and apparently grew in relation to the army's proximity to the American border. To check desertion, it was thought prudent to keep the Royal Sappers and Miners at the Bytown end of the canal, and as an added inducement, the men were offered a reward of 100 acres of land each in the vicinity of the canal should they see the project through to the end. Seventy-one soldiers petitioned for this land upon their discharge in December, 1831. By was not overly optimistic about leaving behind this particular legacy to the Rideau area as he remarked to a local landowner: "I am afraid they will be like spoiled children, difficult to please and give more trouble than they are worth."⁷²

While the military were capable of offering such inducements to check desertion, or could resort to the threat of a court-martial should deserters be apprehended, few contractors bothered with turnover among their work force, largely because of the ease with which they could be replaced. One exception was Wright, who appears to have been more than mildly upset by the thirteen men who skipped ship with his money in their pockets in Quebec. In correspondence with his sons and business associates, Wright increasingly referred to "indenters" [indentures] rather than labourers or employees and was determined that those who had signed contracts with him would fulfill them. A revealing letter from a magistrate in Montreal bears out this emphasis: "... you may taken any of the deserters you find. And make an Example of him or them for their perfidy, and enforce renumeration for

losses, by money, or service, or otherwise. And you shall have a warrant and commitment whenever you discover those that were bound by Indenture."⁷³ It is not known whether Wright was ever able to "make an example" of any of his delinquent workmen, but chances are that most of them were quite willing to put their Rideau Canal experience behind them and were never seen again.

The reasons as to why so many Rideau workers decided to move on so quickly can only be guessed at: whether it was job dissatisfaction, fear for their life, a thirst for land, or simply an insatiable wanderlust. Having heard of a labour scarcity in Upper Canada, workers often arrived on the canal with an inflated view of the worth of their own labour and demanded exorbitant wages. The ability to gain higher wages elsewhere was often used by workers as a pretext for stopping work, but it is unlikely that such threats were often successful, as the following example of a group of masons at Burritt's Rapids illustrates:

Morville has left here on Saturday 20th without any reason but his own impudence which was thus, he came down on 13th of this month from the Quarry and wanted to get more money, or swore he would quit work and that he could get ten dollars a Month Elsware. Whittemore told him that he should fulfill his agreement, or that if he did not do so, he might do as he pleased ...Stopt with him two days and wanted to get to work again but was rejected. ⁷⁴Some of the Stone Cutters left here with him.

A group of eleven French-Canadian labourers at the same site, being owed between L10 and L18, were also impatient to move on. The men's supervisor remarked that "some of these men's time is not quite out, but there's anxiety to go and ... we thought it

best to discharge them."⁷⁵ Having collected a tidy sum for a season's work, these men saw little reason to remain.

A vital contributing factor to the unwillingness of many immigrants to remain in the Rideau corridor was the lack of available land in the area. Virtually all of the surrounding township lands were in private hands, and were either being held for speculative purposes or being offered for sale at prices as high as \$6.00 (30 shillings) per acre. Thus the immigrant labourer who had his heart set on acquiring land had two options. He could either penetrate deep into the wilderness of the back concessions, a proposition most were loath to undertake, or move on to the western reaches of Upper Canada where land could be had for between 7s. 6d to 10s. per acre with bush lots going for as little as 5s.⁷⁶

Finally, many workers were simply unprepared for the nature of the work involved on the Rideau and baled out at the first opportunity. Dr. Christie spoke of the "lazy, idle and indolent" who were attracted to the works and soon left:

... now finding that they can no longer be retained in a state of idle indifference (for under contractors or at work at the price they must exert themselves) they are leaving the works in disgust. The roads are crowded with these people returning to their pristine residences and with the usual ... viciousness of their character insulting every officer⁷⁷ of the establishment they meet on their route.

Christie's upper-class bias may have misread the motivations behind such a mass exodus but his statement portrays the sense of fluidity which characterized employment on the Rideau. That transiency was so prevalent among these workers should not in

itself be so surprising. After all, immigrants who have travelled thousands of miles can hardly be expected to settle permanently in the first place they plop down. The questions that remain are the where to and why of these thousands of itinerant labourers.

TABLE I

Wage Rates Paid-By Philemon Wright and Sons, 1827-32
 (all rates include board and lodging unless otherwise stated)

<u>Occupation</u>	<u>Wage rate</u>	<u>Year</u>	<u>Remarks</u>
Canal labourer	L20/annum	1827	One pair of French shoes to be given at expiration of their time.
Canal labourers [mass contract]	L20/annum	1827	One-third wages to be given during winter months. The remainder at expiration of contract. Cost of steamboat trip from Quebec to be paid.
Baker	L3/mth.	1827	Family to stay with him in bake house. Must board (feed) at own expense.
Sawmill hand	\$8/mth.	1828	
Blacksmith	L56/annum	1828	
Canal labourer	L1/15/mth.	1828	Must find own washing.
Canal labourer	L2/mth.	1828	
Canal labourer	\$8/mth.	1829	Three month contract.
Canal labourer	L2/5/mth.	1830	Two month contract.
Mason (canal)	L3/mth.	1830	Two year contract. One pair of boots provided each year.
Foreman (canal)	3/mth.	1830	If the work on the Rideau Canal is not finished at the expiration of six months the said Paul Reshot is to stop until first ice.
Canal labourer	L1/7/6/mth.	1830	
Carpenter	L3/mth.	1830	Necessary tools to be provided.
Cabinet maker	\$17/mth.	1830	

Labourer (farm)	L20/annum	1830	
Blacksmith	L2/2/6 mth.	1830	One pair of shoes provided.
Canal labourer	L20/annum	1830	
Shoemaker	\$5/mth.	1831	
Blacksmith	\$14/mth.	1831	
Blacksmith	L40/annum	1831	Fare for one return steamboat trip to Montreal every six months.
Carpenter	\$14/mth.	1831	
Potato harvest (man)	\$12/mth.	1831	
wife	\$4/mth.		
Tanner and currier	\$15/mth.	1831	Fare for one return steamboat trip to Montreal every six months.
Canal labour	\$7 mth.	1831	Three month contract.
Labourer (timber)	\$7 mth.	1831	
Common labourer (unspecified)	L20/annum	1831	Must provide own washing.
Farm labourer	\$9/mth.	1832	One pair of shoes provided.
Tanner	\$18/mth. 1st yr. \$20/mth. 2nd yr. \$22/mth. 3rd yr.	1832	
Sawer	\$12/mth.	1832	
Shantymen	\$9/mth.	1832	While taking timber down to Quebec.
"Hewer"	\$14/mth.	1832	\$12/mth when not hewing.
"Scorer"	\$10/mth.	1832	

Table II

Division of Labour at Dow's Swamp Embankment from
11 October 1827 to 18 June 1828

<u>Occupation</u>	<u>Total No. of Days Worked</u>
Labourers	7980
Supervisors	612.75
Joiners	139.25
Harness Maker	102.75
Mason	22
Horses	2850.5
Oxen	93

19 June 1828 to 5 November 1828

Labourers	4003.25
Supervisors	273.75
Horses	1675
Oxen	101.5

Sources: PAC, MG24D8, Vol. 127, pp. 67505-67508

CHAPTER II: The Supply Line: Provisions

I. Providing for the Workforce

At the completion of construction in 1832, Thomas Phillips was one of four contractors awarded a congratulatory silver cup by Colonel By, who described Phillips' work as "some of the best on the whole line of the Rideau Canal ... he being perfect master of my mode of constructing locks and dams."⁷⁸ Phillips, however, was at first very reluctant to become involved in the building of the Rideau. He foresaw many problems associated with the undertaking of such a vast project in a wilderness area. In a letter to his friend, Dr. A.J. Christie, in the winter of 1826 Phillips lamented that "the deplorable accounts given by those who have been that way, from the badness of the roads and accommodation is almost enough to discourage me."⁷⁹ Phillips was particularly concerned about how provisions were to be transported to the interior along roads that were no better than "mud trails" which would become impassable during the rains of spring and autumn. Christie felt that his friend's apprehensions were well borne out by Colonel By's first attempt to get construction underway in the winter of 1826. "He came plum into the heart of the wilderness", wrote Christie, "with [few] workers, no accommodation for them, no provisions on which they could subsist, and the summer ... having yielded to that period in which travelling is impracticable, no means of procuring them supplies."⁸⁰

By and his engineering staff thus became acquainted early on with the problems of providing for a large work force in a wilderness setting. Plans were made over the winter of 1826 to provide for the workers' physical and psychological well-being in order that a "strong, healthy and cheerful" work force would ensure smooth and continuous construction. John Mactaggart spoke of a "melancholy peculiar to Canada" which would have to be overcome:

People who labor under it must be encouraged with soothing language, good treatment, and now and then, as circumstances require, a little assistance, gratis, as a stimulant.⁸¹

To that end beds, blankets, mittens, caps, shoes, socks and "plenty of spirits" were to be made available to the workers through Government stores so as to avoid the possibility of unscrupulous contractors reaping large profits from their unsuspecting employees. Surgeons and medical supplies were also to be made available because, although the devastating effects of malaria could not have been foreseen, it was known that "the swampy wilderness, and swampy waters, may sometimes create distempers."⁸²

Provisions were also made early on to procure reliable food supplies. The Commissariat Department in Montreal was to let tenders for the supply of items such as barrels of salted pork and flour and puncheons of rum. These would be forwarded to Bytown where they would be sold to contractors in bulk at cost price plus transport. Bedding and clothing on the other hand were to be sold directly to the workers under the same price determinants, with simple repayment terms. Workers could pay for

these items directly by foregoing an equivalent portion of their wages, or through small deductions from their pay over an extended period of time. As early as March 1827, some 2,774 lbs. of flour, 6,600 lbs. of salt pork and 47 barrels of rum had been forwarded to Wright's Town for distribution through the Royal Engineers Department. With concern for the health of the immigrant labourers, By also ordered 1,000 sets of blankets in the hope of reducing sickness among the work force. The Irish, however, proved reluctant to pay for even this modicum of relief, with disastrous results for their physical well-being.⁸³

During the spring of 1827, the Commissariat Department had great difficulty keeping up with By's voluminous requests for supplies, with the result that contractors had to rely on their own initiative to feed and provide for their workers. Mactaggart, in one of his interminable warnings to immigrants, proclaimed that "food was not to be had for the taking" in Upper Canada.⁸⁴ Most contractors were able to cope with supplying the influx of such a large labour force through a network of local and regional contacts and in some cases, self-sufficiency. Several contractors already had well-established supply links with Montreal, which was to become the major entrepot for the Rideau Lakes section of the works. The military settlements of the Rideau interior had by this time begun to produce significant surplus crops and only lacked ready access to a market. In 1826, for example, Bathurst township was producing 4,826 bushels of potatoes, 21,469 bushels of grain, and 11,145 bushels of turnips. The coming of the canal works was said to have "produced a

revolution in the area "by providing a ready market and good prices for every description of produce that could be spared. In addition, local farmers could profitably employ their cattle at high prices "during a period of the year in which they were heretofore idle and a burden to feed."⁸⁶

Transport costs could add between 25% and 50% to the price of such goods brought down from Montreal and By was particularly concerned about keeping food costs down. Inflated food costs would mean demands for higher wages from the workers which would inevitably push up the final cost of the canal. By and the contractors thus welcomed the steady influx of provisions from local farmers as a welcome supplement to the higher-priced goods from the centres of Montreal and Kingston. Brockville and Prescott also became important supply centres for several of the interior sites. Prices were high enough to induce local farmers to maximize production on their bush clearings, and the hamlets along the canal became beehives of activity as farmers brought their produce to be sold and local millers and merchants attempted to cash in on the boom in trade. Men such as Stephen Burritt, the Loyalist founder of Burritt's Rapids, carried on a thriving trade with contractors in such items as beef, pork, flour and whiskey. Corn, poultry, eggs and fresh butter were also obtained in this manner, but less regularly. At Bytown, prices were kept low once Ordnance provisions became readily available. Colonel By also managed to regulate the price of bread in the town by signing an agreement with one of the local

bakers who took over the idle Government bakeries and sold bread to the troops, artificers and labourers at a set price.⁸⁷

Immigrant labourers at times became producers themselves. They took up plots of land in the areas By had ordered cleared to increase air circulation after the malaria epidemic of 1828. Having had a year to observe the techniques of bush farming, they managed to settle in and supplement their diet as they knew best, as one visitor to the Rideau works commented:

most of them have their own little cabins to live in, with a plot of ground to each, enough to grow potatoes sufficient for their own consumption, which is a consideration of some importance to them.⁸⁸

Some of these part-time farmers also became proficient at growing some of the fruits and vegetables which flourished in the wilds of eastern Upper Canada, including, onions, plums, raspberries, strawberries, cranberries, pumpkins, melons, cucumbers and several kinds of beans. Recipes for "wild teas" borrowed from local settlers also became favourites in the work camps, with everything from marsh plants to the bark of the maple tree being used to brew the pleasing concoctions.⁸⁹

Contractors who had been settled in the Rideau area for some time, such as Philemon Wright, had the advantage of well-established contacts with local farmers or their own facilities for providing their work force. Although initially intended as a community of independent farmers, Hull had by 1824 grown into a thriving, virtually self-sufficient community comprising, among other endeavours, Wright's tannery, a stone blacksmith shop with water-driven bellows, a 'mansion house' and outbuildings, a stone

store, saw and grist mills, barns and sheds, a lime kiln, a gun house, a school house and the Columbia Hotel, erected in 1820 at a cost of L2,200. The Wrights were also proud owners of a stone dam - "the finest piece of Stone work in North America as is supposed by many" - build to convey water to the new saw and grist mills erected in 1824 at a cost of L1,600. The total value of their Columbia Falls Farm and the Village in 1824 was stated to be L23,547. In addition, Wright's "Gatenaë" [Gatineau] Farm boasted a distillery valued at L2,000 and another saw mill on top of its 8,000 acres of cleared land.⁹⁰ It is not surprising that the Royal Engineer's Department came to rely heavily on the Wrights' during the early going both as a major regional entrepot and as suppliers to the works. It was estimated that Bytown would supply 1500 to 2000 rations daily to military and civilian labourers at the beginning of construction.⁹¹ It was with this in mind that By ordered the construction of the bridge across the islands of the Chaudiere Falls to enable provisions to move without difficulty from the sawmills, grist mills and smith forge of Wright's Town to Bytown. During the first year of construction P. Wright and Sons became important suppliers to the Bytown site of such items as timber, bread, grain, straw, iron castings and whiskey.

Having to rely on a relatively rudimentary supply system, the diet of the Rideau Canal labourer was seldom lavish but usually abundant enough. The supplies given to Lieutenant Pooley's survey party during the summer of 1827 are generally indicative of that provided the Rideau work force. Pooley's men

subsisted on flour, biscuits and bread, fresh beef, salt pork, pease, indian corn, salt, and rum. Upon his return, Pooley was questioned as to why he had used such large quantities. He attributed it to the large appetites of the French-Canadian voyageurs.⁹² The arduous work and long days tended to produce voracious appetites among the workers which demanded that the supply line remained unbroken. A study of the Wright's operations between Montreal and Hull to their workers at Dow's Swamp illustrates the immensity of such an undertaking. Over a six-month period, February to August, 1828, the Wright's forwarded the following provisions to Dow's Swamp: 461 lbs. of flour, 2,532 lbs. of biscuit, 321 bushels of potatoes, 325 bushels of oats, 9 barrels of fish, 144 barrels of pork, 6,355 lbs. of bread, 211 bushels of Indian corn, 14 bushels of bran, 12 bushels of pease, and 28 bushels of grain.⁹³ The pork and fish were forwarded from Montreal with the majority of the other items originating from the Wright's own operations. The workers' diet was often circumscribed by the inability of suppliers to keep up with contractors' demand. The lack of fish available to the Dow's Swamp labourers was particularly lamented. Ruggles Wright wrote to a supplier in Montreal saying "... it is a very great loss that you have not sent up any Pickled Fish for their never was a year that required half the quantity that his year requires."⁹⁴

Prices for food varied widely along the canal depending on location, availability and quantity purchased. Table III provides a rough indication of price variation among sites at

Newboro, Jones Falls, Burritt's Rapids and Bytown. Because of differences in dates, currency and accounting practices it is difficult to reach any comparative conclusions although it does appear, perhaps surprisingly, that prices at Bytown tended to be generally higher than at sites in the interior. These prices were not necessarily those that were passed on to the workers, however, as at least two of the sites (Jones Falls and Burritt's Rapids) operated "company stores" through which provisions were sold usually at inflated prices. At the Isthmus, it was found necessary to supply the workers directly from the Government stores (as opposed to the usual practice of the stores selling to contractors),⁹⁵ while at Dow's Swamp the workers were provided their room and board by the contractor. The contractors' stores reaped large profits, especially through the sale of whiskey and tobacco, which many an improvident or merely bored workman often consumed insatiably. Although Mactaggart, writing in 1829, states "the sharks of storekeepers were held at bay, and the poor labourers were not deprived", the records of such stores show that at the time of reckoning (payday) many labourers were caught on the short end of the balance sheet.⁹⁶

Colonel By was praised in many quarters for setting up an efficient supply system which provided reasonable prices and plentiful provisions for the workers. But just as By's concern for recruiting a work force was delegated to the individual contractors, so too was most of the responsibility for acquiring provisions passed on to them as well. Here the contractors encountered various difficulties, unlike the relative ease with

which they were able to attract workers. Problems were particularly acute during the first year of construction, but continued intermittently throughout. When By requested that the Wright's hire as many men as they could to build the Union Bridge during the winter of 1826, Tiberius Wright wrote in desperation to his brother that they were "destitute of everything even to writing paper" and despaired as to how they could carry on.⁹⁷ Their supply problems continued throughout the winter and into the next spring when they found themselves out of tea, rum, pork, flour and tobacco. Tiberius Wright even went as far as to attribute a suicide to this sorry state of affairs:

...this afternoon a man from the Canall went to the side of the Kettle [the name given to a section of the Chaudiere Falls] and sat down and sold off his Stokings and Shoes. He crossed himself and jumped into it and [went] to the bottom. The sentry saw him but too late for any assistance - pray come home⁹⁸ as soon as possible for want some assistance.

Most supply problems were the result of poor communications in the Rideau wilderness. Letters took days, even weeks, to reach their destination resulting in the need for a good deal of advance planning. It had been stressed at the beginning of the project that contractors were to remain at their sites at all times in order to better supervise operations.⁹⁸ This was often not the case, however, and several supervisors or overseers were left the unenviable task of maintaining the supply line with little or no control over finances. Ezekiel Whittemore, the supervisor at Burritt's Rapids, was continually begging that one of the Wright's should come and attend to business or at least send him money to carry on transactions. On one occasion he

could not pay for several barrels of pork which had been transported all the way from Brockville. On another he could not afford hay to feed their oxen, complaining that they were "eating us up."¹⁰⁰ On at least two occasions workers left Whittemore's employ because of a lack of supplies or money to pay them. His patience finally came to an end in 1831 when he was attempting to transport some mill iron to Burritt's Rapids from Prescott. The company's own horses were too weak and lame to undertake the task because there was no money for hay to feed them. Unable to find an available team in "all of Prescott", Whittemore wrote to the Wright's in exasperation stating that "this Forwarding Business drives me all most Crasey," and apparently absconded to the United States.¹⁰¹

Until reliable trails were cut out of the forest alongside the canal, the canoe was the primary mode of transporting people and provisions from site to site. Large birch bark canoes built by local Indians, which were said to be "really bordering on perfection," were in high demand because of their lightness and swiftness. They usually drew less than nine inches of water with a ton of supplies aboard, but required a good deal of expertise in their control. French-Canadians had the reputation of being accomplished canoeists and acquired the majority of jobs in transportation along the Rideau. Despite the experience of these navigators, Mactaggart reported that "the numbers drowned in the rivers and lakes during summer by the upsetting of canoes is very great. The dread of death seems to sit lightly on the inhabitants."¹⁰² Accidents also led to the loss or damage of

many supplies. The tipping of a Government canoe was said to be responsible for the receipt of some biscuit at Burritt's Rapids which was "very mouldy indeed, and unfit for the men to eat."¹⁰³ Despite the military's intention to establish effective and efficient supply lines to feed the Rideau Canal work force, the realities of transportation and communication in the wilderness of Upper Canada often dictated otherwise.

II. Living Conditions

The commitment of the military and most contractors to maintain a well-fed workforce was not always translated into a concern for their housing conditions. The erection and maintenance of accommodations to protect labourers from the vicissitudes of Canadian weather was seen as a necessary, but temporary, expense and disbursements in this area were often minimal. The problem was especially crucial for those who required shelter most acutely - the Irish immigrants. The French-Canadian proportion of the work force arrived on the Rideau generally in robust and healthy condition and were well accustomed to the rigours of the Canadian climate. Fleeing destitution in their homeland, the Irish on the other hand, arrived dressed in rags and suffering from malnutrition. Their wretched condition was only compounded by the deprivation encountered during their transatlantic voyage. Reverend William Bell, the first clergyman to settle in the Rideau area, described the conditions aboard the timber ships on which the majority of Irish immigrants arrived:

Two tiers of beds were arranged along each side of the ship for she took no cargo; but went out for a load of timber. Each of these berths was six feet long, four feet wide, and three feet high and one was allotted for every two adults or three children....We were allowed two meals a day - breakfast and dinner. Those who wanted a third had to find it themselves. To this we had no objections had the provisions been good but we soon found that the salt beef and biscuit were not fit for hogs....The first three days we had good provisions but after that they were detestable. Brose of oatmeal was now served up for breakfast and nothing to it but water. For dinner we had beef, so old and ill preserved that it was black, stinking, rotten and quite bitter to the taste. My family could not touch either it or the biscuit which was also rotten and full of vermin. It was said that both had been purchased the year before at a government sale of condemned stores. 104

Colonel By, in his haste to begin construction, was not ready for an onslaught of such physically deprived immigrants, indeed he was ill-prepared for the arrival of any workers. By the fall of 1826, when the first pauper immigrants began to arrive in anticipation of work, the clearing of the site that was to become Bytown had only just begun and there was little room to build or even camp on. Several masons had also arrived to begin work on the Union Bridge and to erect the support buildings for the Canal project. Dr. Christie described the plight of these masons amidst the tumult of the newly-arrived immigrants:

... but what miseries these poor fellows and their families have undergone has been witnessed by all those who have visited the place. Respectable tradesmen dragged by falacious hopes and futile expectations where they had to herd with the lowest of the low and mean to be crammed into a habitation of three small apartments among a set of drunken and dissipated beings to the number of nearly

200 beings or adopt the dreadful alternative of lying under the canopy of an unsheltered Canadian sky at the risk [sic] of being frozen to death.

It was the latter alternative that Irish labourers were forced to adopt and By had no choice but to let them go before winter set in, although most of them had few or no funds to take them elsewhere.¹⁰⁵

The provision of decent accommodation soon became a question of utmost importance both for the military and those seeking employment on the Rideau. Despite Colonel By's concern that those employed on the Rideau project be properly housed, it became clear that the military were to be the prime beneficiaries of any planned housing scheme.

Bytown became the most vivid example of a hierarchical housing system which prevailed in varying degree along the canal. The officers of the Royal Engineers Department and thirty British regulars were housed in sturdy stone structures overlooking the Ottawa River on the site of the present Parliament Buildings, One of these structures had originally been intended to serve as a military hospital, but with the arrival of the Royal Sappers and Miners in the early summer of 1827 By ordered that another hospital be built so that the original building could be used for their accommodation. These barracks proved too small to house the two corps of Royal Sappers and Miners and the 30 to 40 wives and numerous children who accompanied them. To remedy the problem, By had cook houses built in front of each barrack with rooms above to house the women and children, which helped to relieve much of the crowding in the soldiers' barracks. These

barracks were quite sparsely furnished and no definite plans had been made for them after the construction of the canal, although By pointed out to his superiors that their sound construction and strategic location suited them well for permanent use.¹⁰⁶

By was also concerned with the accommodation of civilian labourers employed both by the military and contractors. To this end, he ordered the construction of two civilian barracks capable of housing 200 contract workers during 1827 at the cost of £900. Little is known about these barracks besides the fact that they were located east of the Entrance Valley at the corner of William and Rideau Streets in the Lower Town and were used throughout the construction period. They were undoubtedly built of wood and conditions were probably more cramped than in the stone barracks occupied by the military. Their construction was also seen as a method to ensure the existence of a ready work force within easy walking distance of the canal. As John Mactaggart explained:

Every care should be taken with respect to the comfort of the contractors and their people; they will have places near the works...and the utmost assistance will be afforded by the government to the erection of such buildings, so that every person will be safely sheltered, and not time lost in coming and going to the works.¹⁰⁷

While the erection of these barracks for civilian labourers was a positive step in alleviating a serious housing problem, they did not nearly meet the demand for housing among the newly-arrived work force. The option of renting property soon became open to those arriving in Bytown. The Ordnance Department owned a substantial tract of land in the vicinity of the Entrance

Valley (purchased by Lord Dalhousie in 1823). By had this land surveyed into lots and then leased, rather than sold, to settlers in the hope of providing temporary accommodation for canal workers. The first lots were leased under very reasonable terms, with a settler able to obtain a plot of land in perpetuity at a quitrent of 2s.6p. per annum. In order to reduce speculation on Ordnance land, however, these terms were quickly reassessed and lots were afterwards leased for a thirty-year basis at rents of between L1 and L6. The situation then existed of some lots being a great deal more desirable than others. Artificers were generally the only people capable of renting the more expensive lots and the system of leasehold on Ordnance land was to become a major grievance among Bytown residents in the 1830's.¹⁰⁸

The inequity of the housing system was most evident among those who most desperately needed good accommodation - the poor Irish. Arriving with little but the ragged clothes on their backs, the pauper immigrants could not afford the rents on Ordnance properties. Instead, they would erect ramshackle shanties virtually overnight on any open space available, which the military authorities would simply order them to take down the next day. In the end, By was forced to allow the Irish paupers to settle along the banks of the canal free of charge where they created a primitive community of crude hovels, mud huts and caves burrowed into the side of a sandy hill. "Corktown", as it was known, came to epitomize the depravity of the Irish immigrant to genteel Upper Canadian society. Prone to "pig together even worse than in Ireland", the Irish were targeted as nothing better

than a dirty, drunken, brawling, degenerate mob that preferred drinking the squalid water of a nearby swamp rather than fetch clear water accessible from the river.¹⁰⁹ The result for the Irish was a continued saga of disease, misery, and suffering, a condition usually only combatted by increased bouts of heavy drinking.

At the other end of the canal a similar urban shantytown was created in the fall of 1827 following the release of Irish labourers from the Cataraqui sector of the works. Kingston was the only major established centre along the line of the canal and hundreds of labourers flocked to it in search of somewhere to while away the winter. Here they erected crude hovels on the outskirts of town and barely eked out an existance amidst disease and hunger. After they rioted in desperation, the staid citizenry of Kingston were forced to pay attention and the local clergy, both Roman Catholic and Protestant, came to their aid. Among the items requisitioned for their relief for the long winter ahead was the condemned bedding of the Kingston garrison.¹¹⁰

The plight of the workers along the rest of the canal was less conspicuous if only because they laboured primarily away from centres of population. Most were housed in work camps adjacent to their site comprised of anything from canvas tents to log shanties. Because of the temporary nature of the work sites, contractors were unwilling to invest large sums on housing. Pragmatism, however, decreed that workers had to be offered sufficient shelter from the elements and most contractors erected at least rudimentary structures for their workers. At smaller

sites, such as Burritt's Rapids, several small log huts might be erected. Contractors employing larger numbers, such as John Redpath at Jones Falls, were forced to build accommodations for up to 200 in structures 30 by 40 feet. At the Isthmus, with no reliable contractor to care for the workers, the military was forced to erect several large shanties at considerable expense. Shanty was the general term applied to the temporary structures constructed by itinerant labourers in frontier regions during the nineteenth century. In Upper Canada, they were most normally associated with the winter lumber camps of the Ottawa Valley. Lumber crews would hastily build shanties at the beginning of the season only to leave them behind, usually for good, once the ice broke up in the spring. A contemporary description provides an idea of their appearance and construction.

A shanty is a building made with logs, higher in the front than the back, making a fall to the roof, which is generally covered with troughs made of pine or bass-wood logs. The logs are first split fair in the middle, followed out with the axe and adze. A row of these troughs is then laid from the front or upper-wall plate, sloping down to the back plate the hollowed side uppermost. The covering trough is then placed with the hollow reversed, either edge nesting in the centre of the upper trough. A door in front and one window complete the building. ^{III}

The shanty was home to a group of men who would sleep, sometimes several to a bunk, on beds arranged around the walls. These beds may have consisted of little more than a plank sometimes covered with straw stuffing. The central fireplace was the hub of the shanty, where food, warmth and revelry were most often obtained.

While the term 'shanty' was used indiscriminately among contemporary observers to describe any temporary log structure, there is some evidence that those constructed by and for Rideau Canal labourers differed somewhat from the shanties of the Ottawa Valley. The log buildings seen in many of the sketches done by Thomas Burrowes during the construction period resemble small barracks more closely than they do lumber shanties. These buildings have pitched roofs, a fireplace and chimney, and often, several windows. One traveller to the Rideau project described the houses he was let into:

They were generally of logs piled on one another to form a dingle-storied house, with a "but and a ben," or an outer or inner room. In the outer was the kitchen, parlour and bedroom; in the inner was the loom, or the tools and bench of a carpenter, with pork, flour and salt-barrels.¹¹²

It would appear that the traveller is describing the residence of a craftsman on the Rideau and it is likely that labourers lived in more cramped and less comfortable conditions. The central fireplace of the lumbermen's shanty was absent primarily because of the discomfort it would cause during the summer when the canal work was at its height.

The other major difference between the shanties of the lumberman and the canal labourer is that, while the former was built for one season only, those built along the Rideau had to endure for several years. They were still temporary structures, however, and did not always provide ample protection from the elements. In the height of mosquito season, sleep, usually the

one reliable respite from the drudgery of work, became a nightmarish ordeal:

...when we wake the face is covered in blood;
and if the hands or legs be exposed, they are
rendered frightful to look at and the feet
will not go into the shoes or boots they have
been accustomed to.

Even away from the areas ravaged by malaria, sickness could not help but spread under such conditions. At those sites which undertook winter work, water left in the shanties overnight was frozen solid in the morning and hands were frostbitten attempting to shave.¹¹³

The hierarchical housing system in evidence at Bytown also existed at other sites which were carved out of the wilderness during the building of the canal. Alongside the rough and crude shanties of the labourers, contractors usually lived in relative comfort, even splendour. At Dow's Swamp, P. Wright and Sons had erected a "permanent dwelling house" for themselves while providing temporary accommodation for their workers. The Jones Falls site was characterized by the physical separation of the three groups involved in the construction there. The labourers' barracks were located down in the basin where they were working, next to a malarial swamp. The contractor, John Redpath, was prudent enough to build a house for himself up on the hill near the present stone arch dam where he could watch the progress of the works from a safe distance. Even further removed from the affluence of the swamp were the two superintending Royal Engineers, Lieutenant Colonel Boteler and Lieutenant Burgman, who inhabited substantial permanent stone structures that were

plastered and whitewashed inside overlooking Sand Lake.¹¹⁴

One of the more obvious examples of social distancing occurred at Burritt's Rapids. The construction of the locks and dam took place approximately a half-mile from the village, and the workers huddled in tents and crude log huts around the worksite while several of the masons were boarded with local settlers. Tiberius Wright, in charge of operations at the site for his family's firm, purchased a two-storey wooden frame house in the village and furnished it in the manner to which he was accustomed (see Appendix III). Judging from the family's correspondence, Wright was but an infrequent visitor to the site yet he saw fit to surround himself with cherry oak tables, windsor chairs and "Blue Edge" china. The transient nature of the work force and the wilderness setting in which they toiled mitigated against even the most rudimentary comforts of day-to-day existence. Only those already established in the area or those possessed of sufficient capital could afford the luxury of warmth and comfort. For the common labourer, comfort normally came in the form of a pipeful of tobacco and a glass or two of whiskey at the end of a long, hard day.

The social life of those who toiled along the Rideau Canal was anything but glamorous. Frontier society afforded little time for the pursuit of leisure activities among settlers. Several of the smaller settlements along the canal - Perth, Smiths Falls, Burritt's Rapids, Merrikville - probably held small fairs and barn dances, but what little other socializing there was, centred around the contractor's home or the workers' shanty.

The one time when employer and employee came together to raise glasses was over the celebration of work. The overwhelming obstacles which faced the builders of the canal produced a special camaraderie whenever a lock or dam was completed. When Lord Dalhousie laid the cornerstoned for the canal in September, 1827, he was accompanied by several rounds of explosives, the broaching of a puncheon of rum for the workers, and the gaiety of festive bonfires and blazing bonfires at night. A more spontaneous celebration occurred at the completion of the works at Long Island. A traveller reported coming upon the site in the midst of the wilderness where a Highland piper was entertaining the "peaceable, good-humoured and contented" workers who were enjoying a "hearty treat" laid on for them by the contractors, Messrs. Phillips, White and Mackenzie. As the sun sank and the mens' spirits rose with the skirling of the pipes, the party moved out onto the smoothly frozen bottom of the lock chamber where the men sang and danced for several hours in what became known as the "Long Island Ballroom."¹¹⁵

The day-to-day existence of work on the Rideau Canal seldom reflected the happiness of the celebration at Long Island. Common labourers had little time to contemplate the pursuit of leisure and when they did it was invariably over a bottle of whiskey. The drudgery of canal work and the harshness and isolation of the Upper Canadian environment meant that drink was often the only solace the worker could find. Settlers were more than ready to supply the steady demand for drink. Many farmers along the route of the canal kept a tavern of sorts, which they

moved temporarily onto the ice of the lakes and rivers during the winter months. The quality of the spirits produced varied, ranging from a whiskey call Craigdarroch produced by a Mr. Ferguson of Perth and said to rival Scottish Glenlivet, to a sugar-maple rum of "excellent quality," to a potato whiskey which Mactaggart reviled as "the laudanum that sends thousands of settlers to their eternal rest every season." As well most contractors ensured that their workers were well supplied with spirits. John Redpath, himself apparently a temperance advocate, allowed his workers a choice between rum, whiskey, brandy and beer. The contractor at Brewer's Mills also kept a tavern for the accommodation of travellers and "the intoxication of the men he employs" while records at Burritt's Rapids show that several workmen drank over a gallon of whiskey a week.¹¹⁶

Not all contractors condoned the heavy use of alcohol among their workers. Philemon Wright, who was not above making a profit on the sale of whiskey to his men, inserted a clause in contracts specifically designed for canal labourers demanding they "refrain from intoxication," and on several occasions fired workers for intemperance.¹¹⁷ Wright was witness to some of the worst excesses of the Irish canal labourers in Bytown where they regularly gathered at Mother McGinty's Tavern in Corktown imbibing whiskey, beer and Jamaican rum.¹¹⁸ These sprees invariably led to vicious barroom brawls which spilled out onto the streets of Bytown to the dismay and disgust of most citizens. As if to flaunt their improvidence, the Irish labourers would congregate every Saturday afternoon on the north side of Rideau

Street, near Mosgrove, where a boxing ring was set up to allow them to demonstrate their pugilistic abilities.¹¹⁹ These ritual beatings seemed to purge the Irish of their propensity to riot spontaneously, for after the spring of 1827 such instances became the exception rather than the rule in Bytown. Even in the interior, incidents of labour unrest and unruliness were few and far between. Overall, the building of the Rideau Canal was spared the bitterness and bloodshed which accompanied the building of other canals in Upper Canada during the 1840's and the timber trade in the Ottawa Valley in the late 1830's. Several reasons may be postulated, which, taken together, helped create a situation of labour quiescence. These include: a conscious attempt on the part of the contractors and the military to separate French-Canadian and Irish labourers between worksites; a preponderance of Irish Catholics over Protestants; a reasonably efficient supply system; the presence of the military in a supervisory capacity; and lastly, an extraordinarily high turnover rate among the work force.¹²⁰

TABLE III - Cost of Provisions at various sites along canal

<u>Item</u>	<u>Cost</u>	<u>Site</u>	<u>Date</u>
Pork	\$4/barrel	Isthmus	July, 1832
	L3.5/barrel	Jones Falls	February, 1830
	\$5-6/1/2 barrel	Bytown	n.d.
	L3.176-L5/barrel	Dow's Swamp	August, 1828
	L4/barrel	Burritt's Rapids	March, 1829
Flour	\$8/barrel	Isthmus	July, 1832
	L1/10s/barrel	Jones Falls	February, 1830
	3S/1b	Dow's Swamp	April 1828
	2s.7d/1b	Burritt's Rapids	
Potatoes	1s.3d	Jones Falls	February, 1830
	1s.8d-3s	Dow's Swamp	February, 1828
	2s.3d	Burritt's Rapids	June, 1829
Oats	1s.9d.-1s.11d.	Jones Falls	February, 1830
	1s.10.-2s.6d	Dow's Swamp	May-August, 1828
	2s.	Burritt's Rapids	June 1829
Indian Corn	3s./bushel	Burritt's Rapids	June 1829
	3s.6d.-5	Dow's swamp	1828

Sources: PAC, MG24D8, vol. 101, Waste Book 1828; vol. 103 Oxford Snye Day Book; MG24I9, "Memoranda of a Journey...", p. 2046; Public Archives of Ontario, Baird Papers, Reel 1, George Buchanon to N.H. Baird, 18 July 1832.

Partial List of Provisions Supplied Burritt's Rapids Site by P. Wright and Sons, Hull:

- sledges, hammers, axes, drills, nails and plugs of feather from blacksmith shop
- moccasins and sides of leather from tannery
- 14 barrels of fish from Montreal
- window glass from kilns
- lace, soap, candles, Irish linen, curry combs from stores
- blasting powder from lime kiln
- biscuit from bake house
- dozen pair men's shoes from shoemaker
- rope from hemp mill
- cotton and flannel shirts and cotton trousers from tailor shop
- carts from carpenters shop
- flour from flour mills

It is clear from this listing that P. Wright and Sons were reluctant to ship perishable goods over any significant distances. Over the six-month period from which these entries are taken (February to July 1828) only one delivery each of fish, biscuit and flour was made. It would have been easier for the supervisor to deal with local farmers who came to trade in Burritt's Rapids especially given the cost and unreliability of transport from Hull. It would appear that the large quantities of whiskey and tobacco sold to the workers were also purchased in this manner as there is no record of either item being shipped from Hull. While the Wright's probably yielded substantial profits from the sale of whiskey and tobacco, it does not appear that they attempted to gouge their workers on essential items. For instance, two sides of leather which yielded 7 pairs of moccasins cost the Wright's L1.10s. They sold the finished moccasins to their labourers for 5s. a pair for a total of L1.15s., leaving only 5s. to pay for the labour of the shoemaker and any profit.

Source: PAC MG24D8, vol. 101, Waste Book 1828; vol 103, Oxford Snye Day Book.

CHAPTER III:

"Bleed Away and Blister": Sickness and Health Care

The single greatest impediment to the completion of the Rideau Canal was not a lack of workers or provisions, or unconquerable engineering achievements, but sickness. A combination of harsh conditions in the swampy wilderness of Upper Canada and poorly-clad and malnourished immigrant labourers created a scenario ripe for the spread of disease and sickness of every description. Few escaped the ravages of nature during the construction of the canal and Colonel By and the military were forced to take extraordinary measures to combat the decimation of their work force. Malaria was the main and most devastating culprit in this rampage and most past accounts of sickness on the Rideau have dealt primarily with this disease. While the physical and psychological effects of malaria on the builders of the canal cannot be underestimated, this chapter will attempt to look more closely at the day-to-day ailments which plagued the workers and their families. This will be done through an analysis of monthly medical reports compiled by Dr. A.J. Christie and submitted to Colonel By between May and December, 1827. Contemporary accounts of disease and its treatment will be looked at to gain an understanding of workers' perceptions of the health problems they faced. The method of treatment for various diseases must also be considered in their nineteenth-century context.

The arrival of poor and starving immigrants from Ireland and the highlands of Scotland in the late 1820's posed serious

problems for authorities throughout North America. Emigration societies were set up to house and feed the paupers while several cities were forced to enact the beginnings of sanitary legislation in an attempt to clean up the squalid districts they settled in. After their long and often wretched transatlantic voyage, many immigrants were often more dead than alive upon arrived and required long periods in quarantine before being allowed to mingle with others in their adopted home.¹²¹ On the Rideau Canal, many contractors would not hire immigrants they deemed incapable of providing a decent day's work for their wages. Many staggered under the weight of their shovels and pickaxes or simply collapsed from exhaustion. Since these immigrants were an integral part of the labour supply line, however, By was forced to arrange a system whereby these men could undertake excavation work along the canal at rates per cubic yard somewhat less than those paid to the contractors. They were thus able to work at a less demanding pace than if working as day labourers and were paid when they requested a measurement of their work. Some 600 pauper immigrants were employed in this manner by the summer of 1829 and, if sickness or injury did not befall them, they were usually capable of sustaining themselves at the rates they were paid.¹²²

It became clear quite early on that many of the immigrants, particularly the Irish, were ill-suited for the change in climate, diet, and working conditions which accompanied their new job in the wilderness. Colonel By and the authorities were quickly alerted that measures would have to be taken to care for

the legions of sick arriving on the canal. By had not made any provisions for medical care upon his arrival at the Entrance Valley in 1826. Upon seeing the immediate need for care among many of the labourers, he hired Alexander James Christie, a civilian doctor living nearby in March Township, to attend to the workers. Christie worked in this capacity from September 1826 until April 1827 when a military staff surgeon, Dr. W. Tuthill, was appointed. Although several officials saw no need to retain any civilian doctors, Christie had ingratiated himself with By and Mactaggart enough to gain a position as assistant to the medical staff corps. He was to attend artificers and labourers employed by contractors who would pay him directly for his services. In this manner By hoped to provide much needed extra medical care without increasing the cost to the Ordnance Department. Christie's appointment provides insight into the nature of medical treatment in early nineteenth-century North America. While he was to be furnished with whatever drugs could be obtained in the frontier setting, the soi disant physician was primarily instructed to "Bleed away and blister", two of the more harsh treatments which are rarely used today.¹²³ Christie's monthly medical reports for the period May to December 1827 provide an interesting overview of the ailments which afflicted workers during the early period of construction.

Christie was a man of controversial character who has probably been best described as one of the "ubiquitous Scotsmen on the make" who played a large part in the growth of Upper Canada.¹²⁴ It is doubtful that he ever obtained a medical degree

or even much in the way of medical training, although he had obtained a license to practice in Lower Canada as early as 1817. He was continually embroiled with other members of the medical profession, one of whom called him "a person with whom no gentleman can associate without dishonour." Christie managed to retain the confidence of By, probably because of the assiduous manner in which he carried out his duties. Between May and December 1827 he treated 1,278 men along the canal, or approximately 160 per month, for anywhere from 1 to 25 days. These numbers did not include hundreds of women and children he also treated, often at no recompense to himself.¹²⁵

For the first three months of his tenure as medical assistant, over half of the cases Christie treated were related to bowel disorders. Indigestion, constipation and diarrhea appear to have been rampant among the workers, particularly the immigrant Irish. Christie attributed this phenomenon to a "sudden change of diet from vegetable to animal food." Bowel disorders were most severe among children, with eight deaths being reported to the offspring of labourers in one month.¹²⁶ A marked decline in such ailments was noticed in the fall once emigration had subsided, but it is likely that the same cycle of discomfort was to be repeated each spring with the arrival of timber ships laden with sickly immigrants.

The next most prevalent disorders were various forms of fever. While bowel complaints often resulted in the death of children, they seldom affected an adult for more than a week. Fever, on the other hand, was the main killer of those under

Christie's care.¹²⁷ Those not as seriously afflicted could still expect to be laid up for at least a fortnight. During this time workers did not receive any wages which resulted in extreme hardships for their families. Relapses of fever were also very common given the harsh conditions so that many labourers' ability to work was impeded in the future. The incidence of fever was proportionally higher during late summer when "several cases of intermitting fevers as well as some of a continued form were brought down from remote parts of the Rideau where fever and ague have been prevalent."¹²⁸ Christie was more apt to blame the spread of fever on the poor clothing and shelter and improvident habits of the immigrants. He noted that native Canadians were virtually immune from many of these ailments because of the care they took in dressing themselves and building proper accommodations. The Irish appeared reluctant to purchase such essentials as full-length trousers, socks or blankets and being crowded "promiscuously in dirty, miserable huts" were prone to contagions of all sorts. Relapses Christie particularly blamed on "indulgence in improper foods and spiritous liquors." Ironically, when some of the immigrants finally began to erect huts as winter approached, the heavy bouts of drinking which inevitably followed such communal construction brought many of them back to Christie's care with relapsed fevers.¹²⁹ The other major ailments treated by Christie included contusions, gonorrhoea, hepatitis, ophthalmia and phlegm. The latter was one of four humors in nineteenth-century physiology and was generally associated with sluggishness or apathy. It appears that

contractors' labourers were stricken with this condition from time to time and spent up to ten days convalescing.

The only disease French-Canadians appeared to suffer proportionally more from was a skin-affliction known among them as charbon. Mactaggart compared it to yaws,¹³⁰ a contagious tropical disease marked by ulcerating lesions on the arms and legs. The disease resembled syphilis in many ways and Mactaggart may well have been mistaken in his diagnosis. Venereal diseases were quite common amidst the promiscuity and intemperance of frontier society and its victims constituted the third largest group of Christie's patients after bowel disorders and fever. Consumption (or pulmonary tuberculosis as it is known today) was also very prevalent among canal workers and considered to be of a "most rapid nature." Mactaggart related a story of sitting in a tavern with Dr. Christie, who, upon hearing a master mason cough, declared the man would be dead within six weeks time, a prognosis which turned out to be true. Those afflicted with consumption probably had little chance of survival considering that recommended treatments included horseback riding, liverwort and Caledonia Springs water.¹³¹ Proper medical supplies were often difficult to procure and had to be shipped in from Montreal or Quebec City at considerable expense. Dr. Tuthill's medicine chest was empty during the malaria outbreak of 1828 leaving workers with little or no relief from the disease. Medical supplies were often more fragile to transport than other provisions and Dr. Christie wrote a scurrilous letter to a

supplier in Quebec City refusing to pay for damaged supplies he had received.¹³²

The one crippling disease which seldom discriminated as a nationality or class was malaria. In the summer of 1830 almost 800 workers were affected between the Isthmus and Kingston Mills with 100 per cent of the work force down at Chaffey's Mills representing the extreme case. It has been estimated that during the five years of construction, 500 workers died of malaria at Kingston Mills alone.¹³³ Labourers and their families were probably more susceptible to the disease because of the crowded, unsanitary conditions in which they lived, but contractors and the military were by no means immune. Even Colonel By was bled twice for the contagion. It was the ravages of malaria which impressed upon By the realization that his workers were not merely expendable commodities, capable of endless replacement. The refusal by workers to toil under malarial conditions forced By to reassess the manner in which medical care was meted out and to extend to common labourers a system which had been previously reserved for the military.

The principle that all men employed by the Ordnance Department on the public works of Canada would be cared for when sick through a system of "medical stoppages" was first established in the summer of 1827. Under this system, the Ordnance storekeeper deducted 1-1 1/2 d. per day from foremen and artificers and 1 d. per day from labourers permanently employed by the Ordnance Establishment to build up a fund for medical care and supplies. When a worker became ill and was hospitalized, his

pay ceased and 9 d. a day was released to cover his hospitalization costs. If he were married further payments of up to 2/3 of his daily wage were delivered from the stoppage fund to his family for their support.¹³⁴ The policy did not initially cover the 600-1,000 civilian labourers employed by the Ordnance Department nor contractor's employees. As work progressed and sickness spread there arose an urgent need for more widespread medical care. Several times By ordered desperately sick labourers into hospital where they were cared for out of a contingency fund for the Canal. He was also known to pay for worker's care out of his own pocket, for which he was reimbursed by Ordnance authorities in December 1828. The following year the stoppage system was extended to cover civilian labourers employed by the military. Authorities in the Medical Department had also wanted it extended to cover contractor's labourers but were unsuccessful in doing so. As such provisions had not been included in the original contracts, any attempt to force them upon contractors would only result in costly litigation proceedings. Moreover, the extension of the policy to cover all those employed on the Rideau would have required a massive medical operation which the military were not prepared or could afford to undertake.¹³⁵

Consequently, the bulk of labourers on the Rideau Canal were left without any comprehensive system of health care. Dr. Tuthill and his assistant, Dr. John Edward Rankin, were authorized to use medicines and surgical supplies from the public stores to attend civilians along the canal but only did so on an

ad hoc basis after the military's requirements were met. Contractors were unwilling to adopt any type of insurance scheme for their employees, and, therefore, workers and their families were left to seek medical aid wherever they could find it and whenever they could afford it. Local surgeons were expensive and probably beyond the means of most labourers. For instance, two doctors named Church and Milliken earned L3-15-6 in one day for treating four patients at Burritt's Rapids in 1828. Baptiste Leveille, a carpenter at the same site, paid Church and Milliken L2-14-6 over a 16-day period when he received three treatments for a fever.¹³⁶

Medical care was not only expensive but often hazardous in its practice. The medical profession had not attained the exalted status it now enjoys largely because a rigorous scientific basis had not yet been developed. In all parts of Canada people consulted and were treated by unlicensed and irregular practitioners until the late 1860's. Many people did so simply because they preferred to or because there was no social or scientific reason for choosing licensed doctors.¹³⁷ The area through which the Rideau Canal wound contained its fair share of unlicensed practitioners (including Christie) and medical superstitions, as Mactaggart noted in 1829.

The country swarms with quacks, and a man of real surgical merit receives no encouragement; people are apt to prescribe for themselves when they take a turn of illness, and so are hurried out of the world sooner than most likely they would otherwise be....those from the United States will not employ any as a surgeon, unless he is a Yankee likewise, as

they conceive, if an Englishman were allowed to open a vein, he would bleed them to death; or, if they took one of his powders, it would poison them.¹³⁸

Diseases such as malaria and cholera baffled doctors of the time. The relationship between the mosquito and malaria was not yet known, although workers were warned about the "poisonous effects" of the mosquito.¹³⁹ The original meaning of the word malaria was "bad air" and it was thought that the disease could be effectively combatted by improving the circulation of air around worksites. To this end land was purchased at Clowes Quarry, Old Sly's, First Rapids, Chaffey's, Upper and Lower Brewers and Kingston Mills which was to be cleared for 250 feet on both sides of the canal. The policy was actually implemented at the Isthmus under By's orders but it did not seem to have had any appreciable effect.¹⁴⁰ The most effective medicine was the extract of cinchona bark - better known as quinine - for which there was a very high demand. Mactaggart observed that "it seems to be a very potent medicine, but being very dear, poor people are at a loss to procure it." Labourers were left to the more desparate and brutal treatments meted out by unknowing physicians, including bleeding, the giving of purgatives or tartar emetic, and the application of cold to a shaved head in order to reduce the fever. Contemporary medical journals recommended such treatments as a gill of very strong coffee mixed with lime, a tea made with the bark of yellow birch, cold baths, Laudanum pills, and yarrow (an herb) and milk plasters applied to the wrists. Local Indians used a hot bath quite similar to a Finnish sauna to combat the disease. They built a bath of rude

stone and sand beside a lake or river and in it made a fire, keeping it burning until the stones and sand were very hot. They then carried the patient to the bath and poured water over the hot stones sending it hissing over the body. They then wrapped the patient in a buffalo robe and a profuse sweat followed which was meant to purge the fever.¹⁴¹

Cholera only became a serious problem on the Rideau Canal in 1832, although Christie diagnosed at least three cases of Cholera morbus in 1827. In 1832, every village along the route of the canal was affected by an outbreak which had spread throughout Lower and Upper Canada from Quebec. Ironically enough, the waterway which was to protect Canada in case of a military attack now served to transmit an equally disastrous epidemic from Kingston into the interior of the country and up to Bytown.¹⁴² With construction virtually completed the disease only affected lockmasters, overseers and those labourers who chose to remain in the area. The outbreak was also responsible for delaying the opening of the canal. At Jones Falls, a supervisor was severely reprimanded for leaving his post when he walked to Kingston to check on his family.¹⁴³ Cholera was understood even less than malaria but doctors and public officials had to put on appearance of combatting it in face of widespread public panic. The first Bytown Board of Health was established and provisions were taken to stem the spread of the disease. Inspectors were appointed to tour the town, a special wharf was built to facilitate transportation to the hospital, funeral processions were banned from the main streets and pigs were stopped from running at

large. A requisition and receipt book from the hospital used during the epidemic shows that substantial quantities of food were ordered for those sick or quarantined but very little medicine.¹⁴⁴ This is perhaps not surprising given Christie's prescribed cure for cholera which included two tablespoons each of soft maple charcoal, hogs lard, and maple sugar. (See Appendix) If ineffective, this concoction was probably at least harmless unlike some of the other treatments used in the fight against cholera. These included cauterization of the spine, blistering by cantharides or boiling water applied to the spine, electric shocks and intravenous injections of various liquids including mercury. It is small wonder that people rejected doctors who practised this "benevolent homicide."¹⁴⁵

The method of medical treatment worked out under Colonel By's direction resembled somewhat the system of housing which prevailed along the Rideau Canal. A hierarchy existed which gave preference to the military first and common labourers last. Unlike the housing situation, however, day labourers employed by the Ordnance Department were eventually extended limited medical treatment under the stoppage system. On the other hand, contractors' labourers, who were usually left completely to their own resources when it came to health care. With an abundant labour supply in the area once work was underway, workers could not afford to remain sick for any great length of time. Overall, however, the system of health care in effect during the construction of the canal was commendable for its time. Aside from the unforeseen devastation of malaria, the death rate among

workers was not exceedingly high. Of 1,278 men treated by Christie between May and December 1827, only 17 died, and seven of those were through accidents. Six women and 38 children also lost their lives during the same period, but at the same time it is interesting to note that there also were 54 births along the canal.¹⁴⁶ The last figure indicates that there was a thriving familiar life in the wilderness of the Rideau interior, a fact borne out by the many travellers through the area. While the arduous work of building the Rideau Canal may have been a male domain, the task of settling the area around it undoubtedly involved the full efforts of many families. It is the struggles of working-class families to adjust and gain a stake in the harsh wilderness of their adopted homeland that supplies the forgotten backdrop to the successful completion of the Rideau Canal.

Conclusion

The outbreak of cholera which delayed the opening of the Rideau Canal in 1832 was a tragic, but somehow fitting, end to this small chapter in Canadian history, for it served to highlight the many unknowns involved in this massive undertaking. The frontier region through which the canal was built posed special problems for the military and workers alike. The military minds behind the project had little idea of its immensity or of the unhealthy and arduous conditions under which it was to be constructed. Once work was begun under the supervision of Colonel John By, it went ahead at a feverish pace without much regard for anything but the finished product. An extensive network of recruitment was set up and thousands of hopeful immigrants and dispossessed French-Canadians flocked to the works, often only to leave again as quickly. Military supervisors and contractors only became concerned about this rapid labour turnover when malaria ravaged the work force and drove them en masse from the canal. The result was that attempts to improve workers' conditions were directed primarily at dampening the effects of sickness, and even here thousands of contractors' labourers received little or no benefits.

The Rideau Canal labourers were expected to endure the hardships of work in a wilderness setting. The extremes of the Canadian climate, makeshift accommodation, difficulty in obtaining proper clothing, loneliness, unpaid wages, and the built-in hazards of the work itself were only some of the obstacles which had to be overcome. That many workers were not

willing to endure these hardships is clear from the large numbers who left the works in a hurry. Where they went is uncertain, but most probably set off in search of land. Unskilled wage labour was largely a new phenomenon in Canada at the time and one with which many immigrants were not content. Although they were unaware of it, the thousands of immigrant labourers who built the Rideau Canal were the first stock of a transatlantic labour market which would fuel the growth of the North American transportation facilities and industrial development well into the twentieth century.

NOTES

1. Public Archives of Canada (PAC), RG8, Series C, Vol. 42, C-2617, p. 10. By to Major Darling, 2 October 1826.
2. Robert Legget, Rideau Waterway, (Toronto, University of Toronto Press, 1967), p. 23.
3. Ibid.
4. James A. De Jonge, "The Military Establishment at Bytown", 1826-1856, Microfiche Report Series, No. 109, Parks Canada, Ottawa, 1983.
5. Legget, Rideau Waterway, p. 23; Bruce S. Elliott, "The Famous Township of Hull: Image and Aspirations of a Pioneer Quebec Community", Histoire Sociale/Social History, Vol. 12, (1979), pp. 339-67.
6. The actual dating of and reasons behind the 'crisis' is the cause of some debate among French-Canadians economic historians. See Fernand Quellet, Economic and Social History of Quebec: 1760-1850 (Carleton University, 1980), ch. 12; T. LeGoff, "Agricultural Crisis in Lower Canada: Review of a Controversy", Canadian Historical Review, 1975 and the reply by G. Paquet and J.P. Wallot in the same issue. What concerns us is that farming as a way of life was not really a viable option for a majority of a generation of young French-Canadians.
7. Robert Passfield, "All Will Succeed": "The Winter of 1829-30", unpublished manuscript, copy on file at Parks Canada, Cornwall, p. 2.
8. Ibid., p. 2-3; Jean S. McGill, A Pioneer History of the County of Lanark (Toronto, 1969), pp. 6-23.
9. Passfield, "All Will Succeed...", p. 3.
10. McGill, A Pioneer History, pp. 89-90.
11. John Mactaggart, Three Years in Canada (London, 2 Vols., 1829), Vol. II, p. 250. Mactaggart displays a strong condescension towards the Irish typical of middle-class Scots of the era. Despite this bias, it appears by all accounts that most Irish Catholic immigrants of this period made poor, and often indifferent bush farmers. See Passfield, "All Will Succeed...", pp. 13-14, esp. fn. 93.
12. H. Clare Pentland, Labour and Capital in Canada, 1650-1860, (Toronto, 1981) p. 103.

13. Donald H. Akenson, The Irish in Ontario: A Study in Rural History, (Montreal, 1984), p. 11, Table I, "Emigration from the British Isles to Major Extra-European Countries (unrevised data) 1815-45. Quoted in Passfield p. 3-4. It has recently been estimated that the Irish comprised between 47 and 85 per cent of the total number of immigrants landing at Montreal between 1817 and 1847. Bryan D. Palmer, Working-Class Experience: The Rise and Reconstitution of Canadian Labour, 1800-1980 (Toronto, 1983) p. 26.
14. There is a good deal of contention over how large a group of Irish Catholics comprised prior to 1835. Pentland states they made up no more than 10% of the heavy post war emigration, (Labour and Capital, p. 103), while Akenson, using post - 1825 data, claims they might have made up as much as 30% of this emigration. (The Irish in Ontario, p. 26). Whatever the number, the Irish Catholics did not receive their high degree of visibility and notoriety until they were employed in large numbers on the Rideau.
15. Mactaggart, Three Years in Canada, Vol. II, p. 245.
16. Ibid., Vol. I, p. 194.
17. McGill, A Pioneer History, p. 25.
18. Pentland, Labour and Capital, p. 104.
19. Ouellet, Economic and Social History, p. 255ff. Overpopulation was due to high birth rates and the subdivision of seigneuries.
20. P. Wright, "Account of the First Settlement of the Township of Hull", Journals of the House of Assembly of Lower Canada, Vol. XXXIII (1823-4), Appendix R.
21. PAC, MG24I9, Vol. 2, "To My Friend Billy Tyrconnel in the United States, p. 320. This letters appears to have been written in the spring or summer of 1827 as Christie mentions that construction had only begun on the Chaudiere Bridge.
22. Mactaggart, Three Years in Canada, I, p. 160.
23. Arthur R.M. Lower, Great Britain's Woodland: British America and the Timber Trade 1763-1867, McGill-Queen's University Press, Montreal and London, 1973, pp. 67-76.
24. "To My Friend Billy Tyrconnel", p. 319.
25. PAC, MG24 08, Vol. 15, T. Wright to R. Wright, October 16, 1826, p. 5422.

26. Ibid., T. Wright to Ruggles Wright, 16 December, 1826, p. 5539.
27. Mactaggart, Three Years in Canada, I, 341.
28. For information on individual contractors see Edward Forbes Bush, The Builders of the Rideau Canada, 1826-32, Manuscript Report Series No. 185, Parks Canada, Ottawa, 1976, pp. 14-18; 101-118.
29. Legget, Rideau Waterway, p. 46.
30. PAC, MG24D8, Vol. 33, R. Wright to By, 24 May, 1828, p. 14730.
31. Ibid., Vol. 15, Thomas Brigham to P. Wright, 13 January 1827, p. 5582.
32. Ibid., Brigham to P. Wright, 16 April 1827, pp. 5805-8.
33. Ibid., Vol. 33, R. Wright to D.W. Eager, August 29, 1828, p. 14783; R. Wright to Theodore Davis, 11 August 1828, p. 14769.
34. Ibid., Vol. 16, R. Wright to T. Wright, 15 October 1827, p. 6064.
35. Ibid., Francis Moinihan to R. Wright, 22 October 1827, p. 6076.
36. Ibid., Vol. 127.
37. William N. T. Wylie, "Transience and Poverty: A Study of the Rideau Canal Construction Workers, 1826-32", [Microfiche Report Series, No. 34, Parks Canada, Ottawa] pp. 11-12.
38. McCord Museum, McGill University, Montreal, Item 5, Workers' Salaries, 1827-8; ibid., Item 6, Ledger, 1826-9; ibid., Item 7, Day Book, 1828-32.
39. Pentland for instance states that "Irish Catholics certainly provided the bulk of the thousands of labourers employed on the Rideau Canal, 1827-32." Labour and Capital, p. 104.
40. Mactaggart, Three Years in Canada, II, p. 249.
41. Queen's University, Tett Papers, Business Records, Transfer Case 10, Day Book, 1828-1833; Parks Canada, Realty Division, Hull, Quebec, Check Lists of Joiners and Labourers Supplied by Rykert, Simpson & Co. for the Service of the Rideau Canal, July 1830 - November, 1831.

42. PAC, MG24I9, Vol. 6, pp. 1987-2029. These lists are not reliable as indicators of the proportion of French or Irish workers employed by these contractors as Christie points out that the large majority of those he treated were "newly-arrived immigrants."
43. Lucien Brault, Ottawa: Old and New, Ottawa Historical Information Institute, 1946, p. 63.
44. Passfield, "All Will Succeed...", p. 4; McGill, A Pioneer History, p. 28.
45. Pentland, Labour and Capital, p. 105. J. Lawrence Runnalls, The Irish on the Welland Canal, St. Catherines Public Library, St. Catherines, Ontario, 1973, p. 4.
46. Peter A. Russell, "Wage Labour Rates in Upper Canada, 1818-1840", Histoire sociale/Social history, XVI, 31, March, 1983, pp. 30-31. Passfield rightly criticizes Russell for failing to make this distinction, and also for failing to differentiate between master tradesmen and journeyment. See "All Will Succeed...", fn. 38. Unfortunately, rates for master tradesmen as compared to journeymen are difficult to determine for the Rideau.
47. Wylie, "Transience and Poverty", p. 13.
48. Frome, Charles Edward, "Account of the Causes which led to the construction of the Rideau Canal, Connecting the Waters of Lake Ontario and the Ottawa, the Nature of the Communication Prior to 1827; and a Description of the Works by means of which it is Converted into a Steamboat Navigation", Papers on Subjects Connected with the Duties of the Corps of Royal Engineers, Vol. 1, 1837, p. 98.
49. Rykert and Simpson Account Book, Check List of Labourers supplied the Royal Engineer Department for the Service of the Rideau Canal.
50. Passfield, "All Will Succeed...", fr. 183.
51. Rykert and Simpson Account Book, Calculations are based on records for the period December 1830 to March 1831.
52. PAC, MG24D8, E. Whittemore to T. and R. Wright, 3 April 1829, p. 6780; T. Wright to R. Wright, 3 September, 1830, p. 7292.

53. Pentland, Labour and Capital, p. 108. On the wider phenomenon of seasonal unemployment among Canadian workers of this period see Judith Fingard, The Winter's Tale: The Seasonal Contours of Pre-Industrial Poverty in British North America 1815-1860, "Canadian Historical Association, Papers (1974), 65-94. Also see Passfield, "All Will Succeed...", p. 17.
54. PAC, MG24D8, Vol. 127, "Memorial to Lord Aylmer", p. 67432.
55. Ibid., F. Moinitan to P. Wright, 20 November 1828, p. 6527; T. Wright to R. Wright, n.d., p. 7670. The Wrights appear to have had particular difficulty in supplying wages to their Burritts' Rapids workers as Whittemore, the supervisor there, was continuously requesting money to pay them. See ibid., pp. 6527, 6558, 6958, 7292.
56. Ibid., Whittemore to P. Wright, 14 December 1828, p. 6550.
57. Passfield, "All Will Succeed...", p. 17. Glenn J. Lockwood, "Irish Immigrants and the 'Critical Years' in Eastern Ontario: The Case of Montague Township, 1821-1881", pp. 158-168 in D.H. Akenson (ed.), Canadian Papers in Rural History, Vol IV, Gananoque, 1984.
58. Wylie, "Transience and Poverty", p. 16. Wylie offers very useful descriptions of the work process, see ibid., p. 15-20.
59. PAC, MG24I9, Vol. 7, "Memorandum of a journey from Kingston to Bytown made along the route of the Rideau Canal, in February 1830", pp. 2039, 2047.
60. Mactaggart, Three Years in Canada, II, 243.
61. Robert Legget, Rideau Waterway, pp. 46-47.
62. PAC, MG24I9, Vol. 6, Monthly Medical Reports. Dr. A.J. Christie, p. 2029.
63. McKenna, "Working Life at the Isthmus, Rideau Canal, During its Construction, 1827-1831: The Human Cost of a Public Work", Microfiche Report Series No. 34, Parks Canada, 1981, p. 30.
64. PAC, MG24D8, Vol. 131, p. 68663. It is interesting to note that the five-man jury included Ruggles and Tiberius Wright and Thomas Brigham, their brother-in-law.
65. McKenna, op.cit., p. 29.
66. Dianne Patychuk, "Malaria on the Rideau: A Case Study in the History of Health Care in Canada", Revised draft, BA Honours thesis, Queen's University, 1979, p. 3.

67. PAC, MG24D8, Vol. 127, pp. 67536-67569. Calculations are mine.
68. Rykert and Simpson Account Book, Check Lists of Joiners and Labourers Employed in the Service of the Rideau Canal at Smith Falls. Calculations were based on a group of 65 workers over a period of 4 months.
69. On the evolution of this self-enclosed community read the excellent account by Bruce Elliott "The Famous Township of Hull...", passim.
70. PAC, MG2408, Vol. 111, Accounts of Work on Bridge and Masons employed, 1827; Vol. 119, Employment Agreements; Vol 127, Work Sheets.
71. Elliott, "The Famous Township...", pp. 334-5.
72. PAC, MG24D8I9, Vol 16, p. 6072; Vol. 17, p. 6357, 6527, 6550, 6560; Vol. 19, p. 7292; Vol. 18, By to Peter Robinson, 31 December 1829, p. 4469; Bush, Builders, p. 66; Brault, Ottawa: Old and New, p. 49.
73. PAC, MG24D8, Vol. 16, pp.6134-5.
74. Ibid., Vol. 17, Francis Moinihan to T. Wright, 22 December 1828, pp. 6560-61.
75. Ibid., Vol. 17, F. Moinihan to P. Wright, 20 November 1828, p. 6527.
76. Lockwood, "Irish Immigrants and the 'Critical Years' in Eastern Ontario", p. 158, cited in Passfield, "All Will Succeed...", p. 12. By 1824, some eight million acres of land in Upper Canada were in private hands, only three million of which were occupied, with about a half million acres actually under cultivation. (Gerald M. Craig, Upper Canada: The Formative Years, 1784-1841, Toronto, 1963, p. 131.
77. PAC, MG24I9, "To My Friend Billy Tyrconnel in the United States", p. 321.
78. PAC, RG8, C series, Vol. 435, Vol. 51, pp. 75-6, cited in Bush, Builders, p. 116. The other contractors thus rewarded were Phillips' partner, Andrew White, John Redpath and Robert Drummond.
79. PAC, MG24I9, Vol. 1, Thomas Phillips to A.J. Christie, 15 December 1826, p. 311.
80. Ibid., Vol. 2, "To My Friend Billy Tyrconnel", p. 319.

81. Mactaggart, Three Years in Canada, I. p. 161.
82. Ibid., P. 160.
83. Passfield, "All Will Succeed...", p. 9; PAC, RG8, Series C, vol. 45, C-2618, p. 201, "Statement of Provisions furnished the Royal Engineers Department by the Commissariat Department," 7 June 1828.
84. John Mactaggart, Three Years in Canada, II. 242.
85. Bathurst was easily the most productive of the townships. Ramsay township produced approximately two-thirds that of Bathurst, while the other back townships - Huntley, Goulbourn, Pakenham, Beckwith and Lanark produced only about 1/10 of the same total. McGill, A Pioneer History, p. 100.
86. Edwin Welch (ed.), Yankees and Loyalists: A Trip from Bytown to Kingston in February 1830, Ottawa Historical Society, 1979, pp. 2, 13.
87. PAC, MG24 D8, vol 103, Oxford Snye Day Book: Katherine McKenna, "Working Life at the Isthmus," p. 20. For a full account of the bread-pricing arragment in Bytown, see Passfield, "All Will Succeed...", pp. 18-19.
88. George Henry, The Emigrant's Guide, or, Canada as it is, W. Gray, Quebec, n.d. p. 60.
89. McGill, A Pioneer History, pp. 27-28.
90. Elliott, "The Famous Township of Hull", p. 348. P. Wright and Sons employed 164 men and 11 women in 1820 among his various operations in the town, including seven masons, six carpenters, four blacksmiths, four shoemakers, two millers, two tanners and curriers, four teamsters, a baker, a saddler and two clerks. The other eighty-odd families in the area employed 119 men and 23 women, all from labourers. Ibid., p. 347-9.
91. De Jonge, "The Military Establishment at Bytown," p. 7.
92. Legget, Rideau Waterway, p. 44.
93. PAC, MG24 D8, Vol. 101, Waste Book 1828. Calculations are mine. The site averaged between 40-45 workers during this period. Ibid., Vol. 127.
94. Ibid., Vol. 116, Ruggles Wright to James Carrol, 8 July 1828, p. 6077.

95. McKenna, "Working Life at the Isthmus," p. 18. The workers paid for these provisions through deductions from their wages in much the same manner as those who dealt with company stores. The situation at Newboro was considered highly irregular by the Ordnance Department.
96. Mactaggart, Three Years in Canada, I, p. 162. Bob Passfield states that the workers were paid regularly every Saturday ("All Will Succeed...", p. 17) He bases this on a statement in Lett's Bytown which says "Every Saturday was pay day on the Government works..." (p. 99). While this may have been true in Bytown (and it may well have been truer for the military than for contractor's labourers) it was certainly not the case for several of the interior sites. As pointed out in Chapter I, the Commissariat's policy of withholding payment from contractors until work was completed caused interminable delays in payment of wages. There are also several accounts of labourers receiving tickets to the company store at Jones Falls in lieu of wages. McCord Museum, Redpath Papers, Item #12, Receipt book, McKay and Redpath, April 28, 1828 - December 20, 1828.
97. PAC MG24D8, vol. 15, T. Wright to R. Wright, 16 December 1826, p. 5539.
98. Ibid., vol. 16, T. Wright to R. Wright, 28 June 1827, p. 5909. Mactaggart also mentions this incident, see Three Years in Canada, II, pp. 166-7. He goes on to say that suicide was thought to be more prevalent in Canada than England at the time, although there is no way of determining this or how many labourers or immigrants may have committed suicide during the building of the Rideau.
99. Mactaggart, Three Years in Canada, I, p. 161.
100. PAC, MG24D8, vol. 17, E. Whittemore to P. Wright and Sons, 20 December 1828, p. 6558; Ibid., vol. 18, p. 6605.
101. Ibid., vol. 20, p. 7646.
102. Mactaggart, Three Years in Canada, II, 171.
103. PAC, MG24D8, vol. 17, C.C. Wright to R. Wright, 3 June 1828, p. 6276.
104. Quoted in McGill, A Pioneer History, p. 9.
105. PAC, MG21I9, "To My Friend Billy Tyconnel," p. 320.
106. De Jonge, "The Military Establishment at Bytown."
107. John Mactaggart, quoted in Ibid.

108. De Jong, "Military Establishment; Brault, Ottawa: Old and New, p. 61.
109. Mactaggart, Three Years in Canada, II, pp. 243-44.
110. Passfield, "All Will Succeed...", p. 11.
111. Samuel Strickland, Twenty-seven Years in Canada West or the Experience of an Early Settler, (1853, Edmonton, 1870), I, p. 30.
112. Captain James E. Alexander, "Bytown, and the Rideau Canal in the 1830's", in Gerald M. Craig (ed.), Early Travellers in the Canadas, 1791-1867, Toronto, 1975, p. 86. For examples of Burrowes' sketches see Passfield, The Rideau Canal: A Pictorial History, passim.
113. Mactaggart, Three Years in Canada, I, 184; II, 2.
114. PAC, MG,24D8, vol. 127, P. Wright and Sons, Memorial to Lord Aylmer, p. 67429. Patychuk, "Malaria on the Rideau", p. 20; PAC W.O. 44, vol. 24, p. 623, Estimates, Jones Falls, 21 Jan. 1831. I am grateful to James De Jonge for the latter reference.
115. Brault, Ottawa: Old and New, p. 51; Brockville Recorder, February 16, 1830, quoted in Steam and Stone: Tales of the Rideau Waterway, Vol. 10, No. 2, February, 1984.
116. Mactaggart, Three Years in Canada, I, p. 180, 199. Redpath papers, Item 3, Day Book, 1826-32. Taverns along the canal were generally filthy and unkempt, their sole purpose being the distillation of alcohol. For some vivid accounts, see Welch, Yankees and Loyalists, passim.
117. PAC, MG24D8, vol. 119, Employment Agreements. Also see Appendix I. Ibid., vol. 17, E. Whittemore to P. Wright, 8 July 1828, p. 6357; vol. 34, P. Wright to M. Gardner, 14 February 1830, p. 14932.
118. Lett's Bytown, pp. 81-82.
119. Ibid., p. 99.
120. For details on rioting and labour unrest see Passfield, "All Will Succeed...", pp. 20-24, and Wylie "Poverty, Distress and Disease," pp. 25-29. Passfield is probably closest to the mark in seeing the riots of 1827 as spontaneous outbursts as opposed to organized resistance to authority. It would seem that the lack of unrest after 1827 is what needs to be explained and here Wylie probably places too much emphasis on the role of the military, although it cannot be discounted altogether. Since transiency is one of the central themes of Wylie's work, it is somewhat

surprising that he did not stress this more as an impediment to labour organization and restance.

121. Pentland, Labour-and Capital, pp. 103-105; Runnalls, The Irish on the Welland Canal, p.4.
122. Passfield, "All Will Succeed...", p. 14. Those working along the Bytown section of the canal also enjoyed the benefits of winter work at the Hog's Back and Dow's Swamp which helped to alleviate the usual pattern of seasonal destitution.
123. C.C.J. Bond, "Alexander James Christie, Bytown Pioneer: His Life and Times, 1787-1843", Ontario History, (1964), pp. 17-36; PAC, MG 24I9, vol. 2, Mactaggart to Christie, 15 February 1827, p. 332; J. Forbes to Col. Durnford, 14 March 1827, p. 347.
124. A.R.M. Lower, Canadians in the Making, Toronto, 1959, p. 159, quoted in Bond, "Alexander James Christie", p. 18 The biographical information on Christie is taken largely from this article.
125. PAC, MG 24I9, vol. 6, pp. 1987-2031. Christie appears to have had considerable difficulty in collecting payment from his patients, as he was continually petitioning By for money from the military's chest or for more profitable employment. See, ibid., vol. 2, pp. 335, 337, 343, 375, 376-78, 438, 441.
126. Ibid., vol. 6, p. 1988.
127. With a lack of contemporary statistics it is difficult to determine whether the mortality rate on the Rideau was extraordinarily high, but this does not appear to be the case. For the eight-month period for which Christie submitted reports, only 17 men died and at least 5 of these were through drowning or construction related accidents. Six women and 38 children also died during this period.
128. PAC, MG 24I9, vol. 6, p. 2016. Christie operated primarily at the Bytown end of the canal although he did treat significant numbers of Robert Drummond's labourers between Kingston Mills and Davis Mills. He claimed only one case of "fever and ague" as having originated in Bytown.
129. Ibid., pp. 2009, 2015-16.
130. Mactaggart, Three-Years in Canada, II, 20.

131. William Renwick Riddell, "Popular Medicine in Canada a century Ago", Ontario Historical Society, Papers and Records, 25 (1929), pp. 398-99. Mactaggart's description of the consumptive mason's fiance provides an interesting picture of social customs in Rideau frontier society: "Dear girl! her lover dies, - but she had another in a few weeks afterward, and they were married." Mactaggart, Three Years in Canada, II, 18.
132. Patychuk, "Malaria on the Rideau", p. 79; PAC, MG 24I9, vol. 2, C. Collis to Christie, 9 November 1828, p. 405.
133. Bush, Builders, p. 29, 59. For further information on the malaria epidemics see: Ibid., pp. 25-59; Patychuk, "Malaria on the Rideau", passim; Wylie, "Poverty, Distress and Disease", pp. 23-25; and McKenna, "Working Life at the Isthmus", pp. 32-41
134. Bush, Builders, p. 28.
135. Patychuk, "Malaria on the Rideau", pp. 74-7; DeJonge, "The Military Establishment at Bytown", n.p.
136. PAC, MG 24 08, vol. 103, Oxford Snye Day Book.
137. Geoffrey Bilson, "Canadian Doctors and the Cholera", in S.E.D. Shortt, Medicine in Canadian Society: Historical Perspectives, Montreal, 1981, p. 122.
138. Mactaggart, Three-Years in Canada, II, 20.
139. Ibid., I, 184. Mactaggart wrote that none, including native Indians, were immune from the effects of mosquitoes, but that immigrants often suffered blindness from their attacks.
140. Patychuk argues that this measure may have actually increased the risk of malaria as it opened the ground for the collection of water in pools that provided breeding places for the mosquitoes. See "Malaria on the Rideau", p. 26.
141. Mactaggart, Three Years in Canada, II, 18-21; Patychuk, "Malaria on the Rideau", p. 78; Riddell, "Popular Medicine", pp. 398-402.
142. PAC, MG 24 I9, vol. 6, Monthly Medical Reports, 1827; Brault, Ottawa: Old and New, p. 233.
143. Cord Museum, Redpath Papers, Item #20, J. McPhee to J. McQuaig, 15 August 1832.

144. PAC, MG 24 I9, vol. 7. Requisitions and Receipts, Cholera Epidemic, 1832, pp. 2074-2219.
145. Bilson, "Canadian Doctors and the Cholera," p. 118.
146. PAC, MG24I9, vol. 6, Christie - Monthly Medical Reports.

Bibliography

- Akenson, Donald Harman
Being Had: historians, evidence and the Irish in North America.
 P.D. Meany, Don Mills, 1985. The Irish in Ontario: A Study
 in Rural History. McGill-Queen's University Press, Montreal, 1984.
- Bleasdale, Ruth E.
 "Class Conflict on the Canals of Upper Canada in the 1840's."
Labour/Le Travailleur, 7 (1981, pp. 9-89.
- Bond, C.C.J.
 "Alexander James Christie, Bytown Pioneer: His Life and
 Times, 1787-1843". Ontario Historical Society,
Ontario History, Vol. LVI (1964) No. 1, pp. 17-36.
- Brault, Lucien.
Ottawa: Old and New. Ottawa Historical Information
 Institute, Ottawa, 1946.
- Bush, Edward Forbes
The Builders of the Rideau Canal, 1826-32. Manuscript
 Report Series No. 185, Parks Canada, Ottawa, 1976.
- Canada Public Archives
 MG 24, 08, Philemon Wright and Family Papers
 Vols. 15-34, Correspondence
 Vol. 100, Montreal Account Book, 1827-36.
 Vol. 101, Waste Book, 1828
 Vol. 102, Day Book, 1828-31
 Vol. 103, Oxford Saye Day Book
 Vol. 111, Account Book, 1828-36
 Vol. 119, Employment Agreements
 Vol. 127, Subject Files, Rideau Canal
 MG 24, 19, Hill Collection, Christie Papers
 Vol. 2, Correspondence
 Vol. 6, Monthly Medical Reports, 1827
 Vol. 7, Memoranda of a Journey taken from Kingston to
 Bytown; Receipts and Requisitions, Cholera Outbreak, 1832
- Coleman, Terry
The Railway navvies: a history of the men who made the railways.
 Hutchinson, London, 1965.
- Connolly, T.W.
History of the Corps of Royal Sappers and Miners.
 Longman, Brown, Green and Longmans, 1855, 2 vols.
- Cowan, Helen
British Emigration to British North America, 1783-1837,
 University of Toronto Press, 1928.

- Craig, Gerald M.
Upper Canada: The Formative Years, 1784-1841, McClelland and Stewart, Toronto, 1963. (ed.) Early Travellers in the Canadas, 1791-1867. Greenwood Press, Toronto, 1975.
- Cross, Michael
 "The Shiner's War: Social Violence in the Ottawa Valley in the 1830's". Canadian Historical Review, Vol. 54 (1973), pp. 1-26. "Violence and Authority: The Case of Bytown." In S.J. Bercuson and L.A. Knafla, eds., Law and Society in Canada in Historical Perspective, University of Calgary, Calgary, 1979, pp. 5-22.
- DeJonge, James
 "The Military Establishment at By-town, 1826-1856"
 Microfiche Report Series, No. 109, Parks Canada, Ottawa, 1983.
- Duncan, Kenneth
 "Irish Famine Immigration and the Social Structure of Canada West." In Michael Horn and Ronald Sabourin, eds., Studies in Canadian Social History, McClelland and Stewart, Toronto, 1974, pp. 140-63.
- Elliott, Bruce S.
 "The Famous Township of Hull: Image and Aspirations of a Pioneer Community." Histoire sociale/Social History, Volume XII (no. 24), November, 1979, pp. 339-368.
- Fingard, Judith
 "The Winter's Tale: Contours of Pre-Industrial Poverty in British North America, 1815-60." Canadian Historical Association, Historical Papers, Ottawa, 1974, pp. 54-94.
- Fleming, Laurel, ed.
Hearth and Heritage: A History of Chaffey's Lock and Area, 1800-1980, Brown and Martin Ltd., Kingston, 1981.
- Frome, Charles Edward
Papers on Subjects Connected with the Duties of the Corps of Royal Engineers. London, 1844.
- Gagan, David
"Hopeful Travellers: families, land and social change in mid Victorian Peel County: Canada West". University of Toronto Press, Toronto, 1981.
- George, Victor Alan
 "The Rideau Corridor: the effect of a canal system on a frontier region, 1832-1895". MA thesis, Queen's University, 1972.

Hill, Hammett, P.

"The Construction of the Rideau Canal, 1826-32". Ontario Historical Society, Papers and Records. 22, (1925, pp. 117-24.

Hull, Parks Canada, Realty Division

Rykert and Simpson Account Book, Smiths Falls

Journals of the House of Assembly of Lower Canada. Vol. XXXIII, 1823-4.

Legget, Robert

Rideau Waterway. University of Toronto Press, Toronto, 1972.

Lett, William P.

Recollections of Old Bytown. Historical Society of Ottawa, Ottawa, 1979.

Lockwood, Glenn J.

Montague: A Social History of an Eastern Ontario Township. Mastercraft Printing and Graphics, Kingston, 1980.

Lower, A.R.M.

Canadians in the Making: a social history of Canada. Longmans, Green and Company, Toronto, 1958
Great Britain's Woodyard: British America and the Timber Trade, 1763-1867, McGill-Queen's University Press, Montreal, 1973.

Mactaggart, John

Three-Years in Canada: An Account of the Actual State of the Country in 1826-7-8 Comprehending its Resources, Productions, Capabilities; and including Sketches of the State of Society, Advice to Emigrants, & C. Henry Colburn, London, 1829.

McCord Museum. Redpath Papers

Items 3-7, 12-15, 20-21.

McGill, Jean S. A Pioneer History of the County of Lanark

T.H. Best Printing Co. Ltd., Toronto, 1968.

McKenna, Katherine, M.J.

"Working Life at the Isthmus, Rideau Canal, During Its Construction, 1827-31: The Human Cost of a Public Work." Microfiche Report Series, No 34, Parks Canada, Ottawa, 1981.

Morton, Desmond with Terry Copp

Working People: An Illustration History of the Canadian Labour Movement. Deneau Publishers, Ottawa, 1980.

Osborne, Brian

"The Artist as Historical Commentator: Thomas Burrowes and the Rideau Canal." Archivaria, 17, Winter 1983-84, pp. 40-59.

- Ouellet, Fernand
Economic and Social History of Quebec, 1760-1850. Macmillan and Co., Toronto, 1980.
- Palmer, Bryan D.
Working Class Experience: The Rise and Reconstitution of Canadian Labour, 1800-1980. Butterworth and Co. Ltd., Toronto, 1983.
- Passfield, Robert
 "'All Will Succeed': The Winter of 1829-30". Manuscript on file, Parks Canada, Cornwall, 1985.
Building the Rideau Canal: A Pictorial History. Fitzhenry and Whiteside, Don Mills, 1982.
- Patychuk, Dianne
 "Malaria on the Rideau: A Case Study in the History of Health Care in Canada," Revised draft, BA Honours Thesis, Queen's University, 1979, copy on file Parks Canada, Cornwall.
- Pentland, H. Clare
Labour and Capital in Canada, 1650-1860. James Lorimer and Company, Toronto, 1981.
- Queen's University, Kingston
 Tett Papers
- Riddell, William Renwick
 "Popular Medicine in Canada a Century Ago. "Ontario Historical Society Papers and Records, 25 (1929), pp. 398-403.
- Runnalls, J. Lawrence
The Irish on the Welland Canal. St. Catherines Public Library, St. Catherines, Ontario, 1973.
- Russell, Peter A.
 "Wage Labour Rates in Upper Canada, 1818-1840." Histoire sociale/Social History, XVI, 31, March, 1983, pp. 30-43.
- Short, S.E.D.
Medicine in Canadian Society: Historical Perspectives. McGill-Queen's University Press, Montreal, 1981.
- Sneyd, Robert Brown
 "The Role of the Rideau Waterway, 1826-1856". MA Thesis, University of Toronto, 1965.
- Strickland, Samuel
Twenty-Seven Years in Canada or the Experience of an Early Settler. Revised edition, M.G. Hurtig, Edmonton, 1970, 2 vols.

Welch, Edwin, ed.

Yankees and Loyalists: A Trip from Bytown to Kingston in February 1830. Historical Society of Ottawa, Ottawa, 1979.
Sights and Surveys, Two Diarists on the Rideau. Historical Society of Ottawa, Ottawa, 1979.

Wylie, William N.T.

"Poverty, Distress and Disease: Labour and the Construction of the Rideau Canal, 1826-32". Labour/Le Travailleur, II, (Spring 1983), pp. 7-29.

Appendix I

Employment Agreements - Philemon Wright and
Sons, Hull, 1827-30 - PAC, MG 24 D8, vol.119

Articles of Agreement entered into this *Eighth*

day of *April* in the Year of Our Lord one thousand eight hundred and twenty *two* Between PHILEMON WRIGHT and Sons, of the Township of HULL in the County of York in the District of Montreal, Lumber Merchants and Farmers, of the one part, and *Richard Morrison* of *the said District*

Labourer, on the other part—The said *Richard Morrison* for the consideration here-in-after mentioned, doth covenant, promise and agree, to and with the said Philemon Wright and Sons, their Executors, Curators and Administrators by these presents in manner following, that is to say, That he the said

Richard Morrison shall and will for and during the Term of *one year* to begin and be accounted from the *first day of May* serve, abide and continue with the said Philemon Wright and Sons, their Executors, Curators and Administrators, as their Covenant hired *Labourer* and diligently and faithfully, according to the best and utmost of his power, skill and knowledge, exercise and employ himself in, and do, and perform all such service and business, whatsoever, relating to the *Marine* Trade and business, and in and about all other business, matters and things whatsoever, as the said Philemon Wright and Sons, and all other persons under whose charge he may be placed by the said Philemon Wright and Sons, shall from time to time order, direct and appoint to and for the most profit and advantage of the said Philemon Wright and Sons, that he can, and shall, and will keep the secrets of the said Philemon Wright and Sons, relating to their said business, and likewise be just, true and faithful to them in all matters and things, and not absent himself from the employ without first obtaining liberty from the person whose charge he is placed under, and that he will not wrongfully detain, injure, embezzle or purloin any Monies, Goods or things whatsoever belonging to the said Philemon Wright and Sons, or knowingly suffer any other persons to detain, embezzle, injure or purloin the same without giving immediate information thereof, to the said Philemon Wright and Sons or to the person employed by them and under whose charge the said *Richard Morrison* may be placed, and will, at all times, refrain from intoxication, and shall and will commence his said service on the day before mentioned, immediately on the order of them the said Philemon Wright and Sons, and in all respects acquit and demean himself as an honest and faithful *Labourer* ought to do. And the said Philemon Wright and Sons for themselves, their Executors, Curators and Administrators do covenant, promise and agree that upon the true and faithful performance, of all and every the aforesaid Covenants by him the said *Richard Morrison* on they, the said Philemon Wright and Sons, will well and truly pay or cause to be paid to the said *Richard Morrison* the sum of *Eighteen Dollars* ~~per month~~ *founder* during the time aforesaid and shall and will furnish the said *Richard Morrison*

with boarding and lodging suitable to the employment of him the said *Richard Morrison*

In witness whereof we have hereunto set our Hands and Seals the day and year first above written.

Signed, Sealed and Executed }
in presence of
Richard Morrison
Richard Morrison

Richard Morrison
Richard Morrison

On this day the 15th of the month of October
in the year of our Lord 1841 there were
eight hundred and twenty seven
Persons at the un-designated Notice
Public debt, admitted and sworn

in and for the Province of Lower Canada, residing
in the City of Quebec in the said Province
Personally came appeared and was present
John B. Brien, Hugh Glass, John Main, James Lang,
Dennis Kennedy, Francis Maitte, William Miller,
Peter Rende, James Blake, Michael Delany, Patrick
Ryan, Timothy Carey, Martin Woodcock, John
Bourke, John Hill, James Green, Patrick Macnamara,
Michael Doree, Thomas Doree, James Ringland, Edward
Maranda, John Dunbar, James Helligan, Jean Pagan, Alexis
Lounie, Patrick Poyte, John Gibson, Daniel Curran,
John Linn, Timothy Daulton, Philip Ryan, and James
John Patrick all of Quebec Laborers of the one part
and Puyte Wright of the Township of Hull in the district
of Montreal Receiver of the present, for himself and
Carlues Philson Wright and Thomas Wright of the
same place Messrs. of the other part William
John B. Brien, Hugh Glass, John Main, James Lang, Dennis
Kennedy, Francis Maitte, William Miller, Peter Rende,
James Blake, Michael Delany, Patrick Ryan, Timothy Carey,
Martin Woodcock, John Bourke, John Hill, James Green,
Patrick Macnamara, Michael Doree, Thomas Doree,
James Ringland, Edward Maranda, John Dunbar,
James Helligan Jean Pagan, Alexis Lounie, Patrick
Poyte, John Gibson, Daniel Curran, John Linn,
Timothy Daulton, ~~Philip Ryan~~ and James John Patrick
did and do voluntarily and of their own free will
and accord bind an engaged themselves to the
said Puyte and sons herewith to proceed to
the Township of Hull and there to work in the

Witnessing

Mowing, sowing, cutting, sowing, labouring, & carrying
 work and such other employment as they may be
 to put them to and to serve their said Master
 during the manner of service to be, full, complete, and undoes,
 and term of ye year to be fully completed, and undoes,
 during all which time the said Engages their said
 Master faithfully shall serve, their duties keep, their
 lawful commands ever, when most gladly obey.
 They shall do no damage to their said Master nor
 so it done by others, without letting or giving Notice
 thereof to their said Master, they shall not waste
 their said Master's goods, nor lend them unlawfully
 to others... with their own goods, or goods of others,
 during the term, without Licence of their said Master,
 they shall neither buy nor sell - They shall not
 absent themselves day nor night from their said
 Master's service without their leave, but in all
 things behave themselves as faithful Engages
 ought to do, during the said term, and the said
 Master on their part shall provide and provide
 for them the said Engages sufficient Meat, Drink
 and Lodging fitting for Engages during the said
 term, and shall and will also allow & pay to
 the said Engages the sum of Twenty Pounds
 current Money of this Province per Annum
 each and every one of them the said Engages
 the time that and will commence on the
 day that they shall be actually employed at
 Hull - The said Engages to receive on account
 of their wages during the winter Months One
 third of the wages they may have actually

earned

Agreement Entered into between J. Wright & Sons
Merchants Hull on the one part and David Morrau
on the other Part —

J. Wright & Sons hereby engages the
said David Morrau as a common Labourer to work
on the Rician Canal or wherever they the said J. Wright
& Sons shall see fit to send him, till the 1st day of November
one thousand eight hundred and twenty nine to commence
from the twenty four of October 1828 for the sum & price
of twenty pounds Halifax Cy with Board & Lodging be
the said David Morrau finding his own washing & his

And the said David Morrau hereby declares ~~his~~
acceptance of the above mentioned & hereby obligates
himself to serve the said J. Wright & Sons with fidelity
and Obed. and in witness thereof has been affixed his
Name & Signature this twenty third day of October
one thousand eight hundred and twenty eight
in presence of the undersigned witness —

Witness —

David ^{his} Morrau

Mark
J. Wright & Sons
Jas. Brown

This Indenture made at Hull in
 the County of & Province
 of Lower Canada this thirtieth day
 of March our thousand eight hundred
 and thirty between ~~William~~ the partners
 of the Township and County aforesaid
 of the first part and Pierre Reynard
 and Louis Mareschal of the second
 part witnesses That the said
 Philippe Wrightson being engaged
 the said Pierre Reynard and Louis
 Mareschal as laborers at the rate of
 Two pounds per Month for Pierre Reynard
 and One pound fifteen shillings
 currency per Month for Louis
 Mareschal, ~~from~~ for the period of
~~three~~ ~~months~~ ~~beginning~~ ~~on~~ ~~the~~ ~~thirtieth~~ ~~day~~ ~~of~~ ~~March~~
 until the first day of January fifteen
 hundred and thirty one, and to feed them
 in Board and lodging during the
 aforesaid time.

so time they
 commence
 work at the
 Redman

In consideration whereof the
 said Pierre Reynard and Louis Mareschal
 hereby covenant to settle and abide with
 the said P. Wrightson to refrain from
 intercession and to serve the said Wrightson
 with fidelity &c.

In witness whereof the parties to these
 presents have affixed their hands & seals at
 Hull the day and year above written.

G. Black
 W. H. H. H.

P. Wrightson
 Pierre Reynard
 Louis Mareschal

Appendix II

Articles Required to run P. Wright and Sons'
Business for one winter. PAC, MG 24 D8, vol.131.

Articles wanted to carry on our business for the winter 1847

- | | |
|--|---|
| 200 Bble Mejs pork | 20 Sides of sole Leather |
| + 30 Bble green cod fish | + 6 pieces of Linen for bags |
| - 20 Cwt of Dry Cod fish | + 16 ^{lbs} assorted thread |
| - 4 Chest of Tea | + 40 ^{lbs} of thick & large Blankets |
| - 2 Bble Brown Sugar | - 2 Doz saw Mill files & 30 ^{lbs} butter |
| - 4 Hogs of Tobacco | + 6 pieces of pocket Handker |
| 2 Boxes of pipes | + 4 pieces of quitan |
| 6 Boxes of Soap | - 4 pieces of Canadian Stoffe |
| 6 Boxes of Candle | + 1 Keg of Stinger Nail |
| + 2 Bble of pitch | + 1 Keg of Board Nails |
| 60 ^{lbs} of Shoes | + powder, Shot & flints |
| 20 ^{lbs} of Boots | + 8 pieces of Chints |
| + 50 ^{lbs} of Moccasins | + 8 do of factory Cotton |
| + 10 ^{lbs} of Lacks | - 6 pieces of Red flannel |
| + 60 ^{lbs} of large wooten trousers | + 2 do of white |
| + 40 ^{lbs} of drawers | + 1 do of green bays |
| + 6 Doz of Red Belt | + 1 do of fine Blue Cloth |
| + 5 Doz flannel Shirts | + 1 do of Black do |
| + 8 Doz Calico Shirts | + 2 do striped Cotton |
| + 3 Doz cloth vest | 8 ^{ths} of twine |
| - 4 ^{lbs} of Black silk Handker | + 1 group of large needles |
| - 3 Doz large Capote | - 2 ^{lbs} of Soap |
| + 5 Doz large Scotch Caps | + 20 ^{lbs} of shoe thread |
| + 5 Doz of Buckskin Mittens | + 2 Doz Chalk lines |
| + 1 group of good Luss. Knives | + 1 Crate assorted Crockery |
| + 1 Bble of Oil for the mill | + 2 groups of buttons |
| + 8 Small ground Stones | + 1 group of tail Troons |
| + 1 Cwt of supper | 4 Doz knives & forks |
| + 25 Bales of salt | - 3 pieces of Bombazett |

- 6 Small Blank Books
 6 Doz of Suspenders
 1 Small Bridge & Rope
 10 Cut of Paper from $3\frac{1}{2} + \frac{1}{2}$ ins
 10 " " " " from $3\frac{1}{2} + \frac{1}{2}$ -
 3 " " " " " " 1 In² Square
 3 " " " " " " $\frac{3}{4}$ - " "
 5 " " " " " " $\frac{1}{2}$ by $\frac{1}{4}$ In² flat
 5 " of Small English Bunks best hammered
 5 " best $\frac{1}{2}$ Inch Round
 2 " " " " " " $\frac{3}{8}$ " " " "
 2 " " " " " " $\frac{1}{4}$ " " " "
 2 " " " " " " $\frac{5}{8}$ " " " "
 5 " " " " " " $3\frac{1}{2}$ by $\frac{1}{2}$ In² Blank best
 3 " " " " " " $1\frac{1}{2}$ by $\frac{1}{2}$ flat Flat English
 2 " " " " " " 2 In² by $\frac{1}{2}$ flat English
 3 " " " " " " Cast steel 1 In² Square
 2 Bars $1\frac{1}{2}$ In² Cast steel -
 25 lbs of Borax -
 1 Bar 2 In² Square Turned
 1 " " " " " " $1\frac{1}{2}$ " " " "
 1 " " " " " " $1\frac{1}{4}$ " " " "
 1 Cwt 1 Gilder steel - -
 1 Doz of 2 In² Sugar

Appendix III

Inventory of Articles left at T. Wright's house,
Burritt's Rapids, 1833. PAC, MG 24 D8, vol.131.

69017

7 Inventory of articles left in the House of Whipple
 Esq. when taken possession of by Francis Laplante
 1 fall leaf table of Cherry 1 Round stand 1 Square stone
 1 Cooking stove & furniture - 1 looking glass - 6 Sets of
 Curtains for window - 1 Dg Windsor Chairs - 1 Broken Chair
 1 fall leaf table of pine - 1 Bureau - 3 Blue pine tables
 1 high post bedstead - 1 tea Board - 2 Beds - 4 Blankets -
 1 White Counterpane 1 pillow - 2 prs fire dogs - 2 Straw Beds
 2 benches - 1 stool - 1 Bunk - 1 Dutch oven - 1 Common
 bedstead - 1 Quilt - 1 pr Scales - 1 pr Sheepsheads - 1 old tin pan
 7 Large Basins - 4 Small basins - 6 Bake pans - 4 Iron pots -
 1 pr Stoves 1 Water pail - 1 Large wooden bowl - 1 frying pan
 1 pr Stoves 1 Water pail - 1 tin pail - 3 Dippers
 1 Grid Iron - 1 Set of Measures & funnel - 1 tin pail - 3 Dippers
 2 Cullenders - 1 Sauce pan - 1 tin tea Kettle - 1 coffee pot -
 1 Knife Box - 2 Spitting Boars - 1 Dredging box - 1 Steamer
 1 tin dust pan - 1 Gallon Measure - 1 Iron dish stand -
 6 table Spoons - 1 tea Spoon - 1 table bell - 1 Dg flour'd dining
 plates - 1 Dg flour'd breakfast plates - 7 white pye plates -
 9 Blue Edge plates - 10 Blue Edge'd Breakfast plates - 4 White
 plates - 1 White dining plate - 16 Blue Edge'd dining plates -
 of the last 7 are blue & 9 blue Edge'd - 5 Blue Edge'd Soup plates
 2 Steak dishes - 2 Meat dishes - 3 White Meat dishes - 2 Green
 Edge'd Steak dishes - 2 Wash bowls - 1 Water Ewer - 2 White
 pitchers - 3 Pt decanters 4 flour'd trays - 4 tumblers
 8 Wine Glasses - 12 Sawers 7 tea Cups - 1 Large boxers
 tinary 1 tin pan - 1 pye pan 3 tin Candle sticks -
 10 boxes Crackers - 1 open do - 1 Earthen pan -
 3 barrels Peas 11 Dec 1833 - signed Wm Campbell.

Appendix III - Inventory of articles left at T. Wright's house, Burritt's Rapids, 1833. PAC, MG 24, D 18, Vol. 131.

1 fall leaf table of Cherry 1 Round stand 1 Square stove
 1 cooking stove & furniture 1 Looking glass 6 Setts of
 curtains for window 1 Doz windsor Chairs 1 Broken Chair
 1 fall Leaf table of pine 1 Bureau 3 Blue pine tables
 1 high post bedstead 1 tea Board 2 Bedsts 4 Blankets
 1 White Counterpain 1 pillow 2 prs fire dogs 2 Straw Beds
 2 benches 1 Stool 1 Bunk 1 dutch oven 1 Common bedstead
 1 Quilt 1 pr Scales 1 pr Steelyards 1 old tinpan 7 Large
 Basons 4 Small basins 6 Bake pans 4 Iron pots 1 pr tongs
 1 Water pail 1 Large wooden bowl 1 frying pan 1 grid Iron
 1 Sett of measures & funnel 1 tin pail 3 dippers
 2 Cullenders 1 Sauce pan 1 tin tea kettles 1 coffee pot
 1 knife Box 2 Splitting? Boxes 1 drudging box 1 Steamers
 1 tin dustpan 1 Gallon Measure 1 Iron dish stand 6 stable
 spoons 1 tea Spoon 1 table bell 1 Doz Flowered dining
 plates 1 Doz flowered breakfast palstes 7 white pye plate
 9 Blue Edge plates 10 Blue Edged breakfast plates 4 White
 plates 1 White dining plate 16 blue Edged dining plates of
 the last 7 are blue & 9 blue Edged 5 Blue Edged Soup plates
 2 Steak dishes 2 Meat dishes 3 White Meat dishes 2 green
 Edged steak dishes 2 Wash bowls 1 Water Ewer 2 White
 pitchers 3 Qt dicanters 4 flowered Mugs 4 tumblers
 6 Wine Glasses 12 Sawcers 7 tea Cups 1 Large boyers?
 dictionary 1 tinpan 1 pye pan 3 tin Candlesticks
 2 Covered Crocks 1 open do 1 Earthen pan

Burritts Rapids 11 Dec 1833

signed Wm Campbell

Appendix IV

Medical Orders, Dr. A.J. Christie, Bought of Jos.
Beckett, 30 June 1827. PAC MG 24 I9, volume 2.

D^r. W. J. Christy

368 Montreal, 30th June 1877

By Town } Bought of Mr. Beckett & Co

2 lbs Sulfur	£	1	3
160 ^g Soda Sulphur	3	15	
3 Sulfur Sulfur		10	
18 ^g Pot. Alkali	7/6	7	6
18 ^g Hydrarg. Submuris.	4/6	6	6
56 Pot. Carbon Nit	3/6	1	
52 ^g Pot. Sulphur	4/6	13	
52 ^g Mag. Sulfur - (very high this day)	1/1	6	
17 ^g Magn. Carbon		1	9
54 ^g Pot. Sulfur. Tart.	1/9	7	
54 ^g Sulfur Sulfur	1/1	6	9
53 ^g Pot. Sulfur	2/6	7	6
53 ^g Magn. Sulfur	4/6	15	9
54 ^g Pot. Sulphur	2/6	2	
54 ^g Sulfur Sulfur	2/6	4	6
52 ^g Pot. Sulfur Sulfur	2/1	10	
52 ^g Pot. Antimonialis	4		8
53 ^g Carbonate Soda	2/6	13	6
12 ^g Sulfur Sulfur	1/9	1	6
18 ^g Acid. Sulphuric - 1/2 lb	1/1	2	4
52 ^g - - - - - 1/2 lb	1/6	1	8
12 ^g - - - - - 1/2 lb	2/6	2	5
51 ^g Magn. Carbon - 1/2 lb	1/9	4	1
12 ^g - - - - - 1/2 lb	2/1	4	
52 ^g Acid. Sulfuric	1/9	3	6
52 ^g Pot. Acid. Tart. - 1/2 lb	5/6	12	
52 ^g Aqua Carb. Ammonia - 1/2 lb	1/1	3	
53 ^g Pot. Sulfur Sulfur	3/6	10	6
30 ^g St. Sulfur - 1/2 lb	2/6	7	9
53 ^g - - - - - 1/2 lb	2/1	6	3
53 ^g Sulf. Sulfur	1/1	18	
53 ^g - - - - - 1/2 lb	3/1	9	
53 ^g - - - - - 1/2 lb	1/9	5	3
56 ^g Sulfur - - - - - 1/2 lb	2/1	12	
54 ^g Mag. Hydrarg. Tart. - 1/2 lb	7/6	11	7
54 ^g - - - - - 1/2 lb	2/1	13	
54 ^g - - - - - 1/2 lb		11	6
54 ^g - - - - - 1/2 lb	3/1	5	
Amount carried forward	£	14	17

Sollmann & Braught's form and		14	17	3
44g. Hydrang. Hyemmas	bl 5 ^o	8/9	2	3
44g. Nitrat	o 4 ^o	1/10	12	4
53 ^o Pulv. Sapis Calam.		9/9	2	3
58 ^o Spi. Laminul. Co	bl 4 ^o	4/9	9	4
54 ^o Rad. Surtina		3/9	3	1
54 ^o Cortex Amantii		3/9	12	
51 ^o Ligni Quassie		1/9	6	
54 ^o Gum. Benzoin		9/9	3	1
56 ^o Clove Root		1/9	10	6
56 ^o Sago		1/9	4	6
51 Radix Balsam Capivi		4/9	6	
53 ^o Pulv. Scilla	bl 4 ^o	8/9	3	4
51dg. Turbington's Balsam		1/10	6	6
56 ^o British Oil			6	6
51:6 ^o Tinct. Opium Camom.	bl 4 ^o	8/9	11	4
51 Gal. Lini Tinct	2 bl 4 ^o	5/9	7	
51:6 ^o Gal Tinctura	bl 4 ^o	1/9	2	2
52 ^o Gum Camphor Opt.	Madder 3 ^o	4/9	13	3
52 ^o Pulv. Hydrangon	o 3	10/9	1	3
51 ^o Ess. Rose Gallia	put 4 ^o	2/9	3	1
52 ^o Gum Bati		5/10	7	
52 ^o Gum. Resin		2/9	14	6
51dg. Opium Peppermint		4/10	6	6
56 ^o Gum. Hydrochlor		1/10	11	6
52 ^o Pulv. Lingibini Opt.		5/10	11	
1 half Assorted Herbs		25/9	15	
1/2 dg. Spirit Stk. No. 1. No. 2. No. 3.		2/9	6	
1/4 " " " " " 1 ^o		1/10	4	6
1/4 " " " " " 12g.		4/4	4	
1/4 " " " " " 8g.		1/2	3	6
1/4 " " " " " No. 2 ^o		2/10	7	6
1/4 " " " " " 1 ^o		2/9	6	
1/4 " " " " " 12g.		1/9	5	3
1/4 " " " " " 8g.		1/10	4	6
56 half Assorted Herbs		1/10	5	
54 dg. Assorted Masses		5/9	5	3
51dg. Sulfur Powder		30/9	110	
		5	30	3 8 1/2

Appendix V

Monthly Return of Diseases, Dr. A.J. Christie,
July, 1827. PAC, MG 24 19, Volume 6.

Names of Patients	Diseases	Days	Remarks
James Gould	Diarrhoea	7 Days	Healed cured
Thos Miller	Felvis cont	70	" "
Wm Gould	Diarrhoea	8	" "
John Taylor	Contusion	5	" "
Wm Barrett	Diarrhoea	6	" "
Samuel McCallen	Diarrhoea	3	" "
John McCallen	Contusion	9	" "
Wm Newton	Contusion	2	" "
John Lee	Diarrhoea	6	" "
Michael Egan	Diarrhoea	4	" "
Walt Stephens	"	3	" "
John Leonard	"	2	" "
Daniel Cannon	Contusion	6	" "
Francis Hulse	Felvis cont	"	" "
Wm Bigger	Worms	10	" relieved
John Johnston	Worms	6	" cured
John Dancy	Diarrhoea	5	" "
Philip Hurin	Felvis cont	15	" "
John Adams	Contusion	9	" "
Michael Kyle	Worms	19	" "
Wm Fawcett	Contusion	6	" "
John Glegg	Felvis cont	9	" "
J Stubbs	Worms	5	" relieved
John Brooks	Diarrhoea	4	" cured
Pat Mc Intyre	Contusion	2	" "
Richard Styles	Felvis cont	9	" "
Wm Ladd	" "	12	" "
James Knott	" "	10	" "
Thos O'Brien	Diarrhoea	6	" "
Wm Mc Phee	Stomach	15	" "
Wm Burnett	Contusion	4	" "
Thos Fowler	Worms	6	" "
Wm Cannon	Diarrhoea	5	" "
James Savage	"	4	" "
John Mason	"	3	" "
Donald Ewell	Contusion	3	" "
Wm Mc Gregor	Diarrhoea	2	" "
James Haril	"	4	" "
Wm Dwy	"	6	" "
Matthew Dwy	Felvis cont	4	" "
James Dwy	Diarrhoea	6	" "
James Barry	Stomach	9	" relieved
Wm Dwy	Felvis cont	10	" cured
Wm Dwy	Felvis cont	12	" "

Names of Patients	Diseases	Period of sickness	Remarks in July
Francis Powell	Diarrhoea	6 Days	Disch'd cured.
James Armstrong	Constipation	2 "	" "
James McGinty	Aberration	6 "	" "
James Brackett	Dysentery	8 "	" "
John Brackett	Diarrhoea	3 "	" "
John Hoome	"	4 "	" "
Hugh Darnitt	"	4 "	" "
Pat Larkins	Phlebotomy	13 "	" "
John Nailor	Valvula	6 "	" "
John Palmer	sore legs	12 "	" returned
Wm. Horn	Diarrhoea	6 "	" cured
Michael Dill	Febri's cont'd	9 "	" "
Thos Collins	"	6 "	" "
James Shert	Phthisis	4 "	" returned
Francis Cress	Febri's cont'd	8 "	" cured
John Kennedy	Diarrhoea	6 "	" "
John Fleming	"	2 "	" "
Edw. Shortlet	Febri's cont'd	12 "	" "
John McMartin	Febri's cont'd	6 "	" "
John Torney	Diarrhoea	5 "	" "
Thos Farrell	Febri's cont'd	15 "	" "
Wm Byrne	Valvula	7 "	" "
Timothy Balgo	Constipation	3 "	" "
Matthew Corbett	Diarrhoea	6 "	" "
Thomas Butler	Febri's cont'd	9 "	" "
Wm Byrne	Ophthalmia	7 "	" "
Nicholas Lefty	Enteritis	8 "	" "
Jermis Early	Valvula	12 "	" "
Samuel Adams	Diarrhoea	6 "	" "
Wm Griffin	Valvula	9 "	" "
Wm Apollinian	Diarrhoea	7 "	" "
Nick McKinchey	Febri's cont'd	21 "	" "
Pat Collins	Dysentery	10 "	"
John Dowling	Febri's cont'd	6 "	" "
Wm Hughes	Phlebotomy	9 "	"
Michael O'Hare	Valvula	6 "	" "
Pat Guin	sore legs	7 "	" returned
John Guin	Valvula	9 "	" cured
Nick Fortier	Diarrhoea	6 "	" "
Thos McFarter	"	5 "	" "
Peter O'Hare	"	4 "	" "
James Moore	Ophthalmia	6 "	" returned

Name of Patients	Disease	Period of Incubation	Remarks in July 1885
John Humbrecht	Diarthra	3 D.	disch. cured. XXVII 7
Wiles Mr. B. de	Thrombosis	12 D.	J. J.
Thomas Berry	Feb. cont.	9 D.	J. J.
James Lavel	Diarthra	5 D.	J. J.
John Raach	"	6 D.	J. J.
Thos. Buehler	"	5 D.	J. J.
Thos. Banet	Dysentery	6 D.	J. J.
Michael Lains	Feb. cont.	13 D.	J. J.
Pat. Gorman	Constipation	2 D.	J. J.
John Casey	Diarthra	6 D.	J. J.
James M. J. de	Feb. cont.	14 D.	J. J.
John Bennett	Dysentery	6 D.	J. J. +
Walt Gordan	Feb. cont.	3 D.	J. J.
Pat. Coakley	"	15 D.	J. J.
James Brumby	Diarthra	5 D.	J. J.
James Lappe	Thrombosis	9 D.	J. J.
Thos. Lullison	Diarthra	4 D.	J. J.
Daniel Keaton	"	3 D.	J. J.
Michael Selang	Constipation	2 D.	J. J.
Thos. Murphy	Feb. cont.	12 D.	J. J.
John Murphy	Diarthra	4 D.	J. J.
Rich. Labe	"	6 D.	J. J.
James Shea	Hulms	9 D.	J. J.
John Loney	Diarthra	5 D.	J. J. +
John Kelly	"	3 D.	J. J.
John Malady	Hemes	9 D.	J. reliev'd.
Thos. Wieldt	Cutis	6 D.	J. cured.
Michael Mach	Diarthra	4 D.	J. J.
Wm. Kennedy	Leucosis	9 D.	J. J.
Stephen Murphy	Dysentery	6 D.	J. J.
John Buraatti	Diarthra	4 D.	J. J.
Wm. Doyle	Alcohol. Sep.	12 D.	J. reliev'd.
Nicholas Fomels	Diarthra	3 D.	J. cured.
Marice M. Gartin	Constipation	6 D.	J. J.
Wm. Glanbissman	Cephalalgia	4 D.	J. J.
James Duff	Diarthra	3 D.	J. J.
Francis Wallis	Feb. cont.	9 D.	J. J.
Wm. Dain	Hulms	8 D.	J. J.
John Cuthbert	Dysentery	6 D.	J. J.
Beth Blake	Diarthra	4 D.	J. J.
John Pyle	"	3 D.	J. J.
Pat. Sullivan	"	4 D.	J. J.
Thos. McLaughlin	Feb. cont.	4 D.	disch.

Names of Patients	Diseases	Time of Duration	Remarks
John Scott	Feb. Colic	14 Days	Dischd cured
Samuel Brown	Abdomen	9 D.	do - do
Amos Chapman	Valvula	6 D.	F. F.
Robt Cook	Feb. Colic	9 D.	F. F.
E. M. Thurston	Diarrhoea	6 D.	F. F.
Robt Jones	Spththelma	4 D.	F. F.
James Boyle	Valvula	6 D.	F. F.
John Lewis	Core Lips	12 D.	F. F.
Ben Wheeler	Diarrhoea	6 D.	F. F.
Edw McGuire	"	4 D.	F. F.
David Mackie	Dysentery	9 D.	F. F.
Andrew Thomas	Diarrhoea	6 D.	F. F.
Thos Jamieson	Feb's Colic	4 D.	F. F.
James Williams	Diarrhoea	3 D.	F. F.
John Nickey	Hematemesis	12 D.	F. F.
Thos Lynch	Diarrhoea	6 D.	F. F.
James Cahley	"	4 D.	F. F.
Ben Graham	"	3 D.	F. F.
Thos Wagner	Valvula	9 D.	F. F.
Neil McKechnan	Feb. Colic	15 D.	F. F.
Alex McPherson	Spththelma	9 D.	F. F.
Matthew Maloy	Diarrhoea	6 D.	F. F.
John Roberts	Colic	9 D.	F. F.
Walter McPhaal	Diarrhoea	4 D.	F. F.
Robt Fairburn	Feb Colic	6 D.	F. F.
John Flin	Constipation	4 D.	F. F.
Joseph Hill	Diarrhoea	3 D.	F. F.
James Duffie	Hematemesis	9 D.	F. F.
John McLaughlin	Feb. Colic	6 D.	F. F.
Geo McPherson	Diarrhoea	4 D.	F. F.
John Lemont	Feb Colic	17 D.	F. F.
Ben Wright	Diarrhoea	6 D.	F. F.
J. Thompson	Colic	9 D.	F. F.
Pat Doonan	Constipation	6 D.	F. F.
Benjamin Campbell	Valvula	7 D.	F. F.
James Clarke	Diarrhoea	4 D.	F. F.
Samuel Naughton	"	6 D.	F. F.
Merrie McBeth	Feb. Colic	9 D.	F. F.
James Burke	Colic	6 D.	F. F.
John Baker	Diarrhoea	9 D.	F. F.
James Laist	Constipation	9 D.	F. F.

4 D.
 Dischd cured
 F. F.

Names of Patients	Diseases	Period of Sickness	Remarks
John Carter	Dysentery	6 Days	Recovered
John McCarty	Chronic Dysentery	12 "	" "
John M. Lane	Feb. Intermittent	7 "	" "
William Carter	Dysentery	6 "	" "
John Scott	Dysentery	9 "	" "
Joseph Kelly	Dysentery	4 "	" "
Richd. Murray	Dysentery	7 "	" "
John Becket	Dysentery	9 "	" "
John A. M. Ross	Dysentery	17 "	" "
Michael Donahue	Dysentery	"	" "
William Ham	Dysentery	4 Days	" "
James M. Kay	Feb. Intermittent	15 "	" "
John M. Gordon	Dysentery	6 "	" "
Daniel Donahue	Dysentery	9 "	" "
Daniel Callahan	Dysentery	10 "	" "
James Crawford	Dysentery	6 "	" "
David Tierney	Dysentery	2 "	" "
Richd. McPherson	"	4 "	" "
James M. Lane	Dysentery	6 "	" "
Joseph Scarff	Dysentery	4 "	" "
John Richardson	"	6 "	" "
Francis Poterbaugh	Dysentery	7 "	" "
John Long	Dysentery	6 "	" "
John Tyler	Dysentery	4 "	" "
Phillip Christen	"	6 "	" "
Thomas Donahue	"	5 "	" "
Thomas Madison	Dysentery	6 "	" "
Henry Chappell	Feb. Intermittent	5 "	" "
Francis Fox	Dysentery	9 "	" "
Samuel Crichton	Dysentery	7 "	" "
James Edmondson	Dysentery	8 "	" "
John Campbell	Dysentery	9 "	" "
Pat ^r Donahue	Dysentery	4 "	" "
Joseph James	Dysentery	9 "	" "
George Murray	Dysentery	6 "	" "
Stephen Murphy	Dysentery	4 "	" "
John Robertson	Dysentery	9 "	" "
Thomas Nowlin	Dysentery	7 "	" "

No.	2002	Names of Patients	Diseases	Names of Physicians	Remarks July
		James Grayson	Indigestion	2 Days	Tired cured.
		Robt Langford	Rheumatism	6 D.	F. — F.
		John Rogers	Indigestion	3 D.	F. F.
		James M. Grant	"	2 D.	F. F.
		Joseph de Bell	Pleuritis	6 D.	F. F.
		Thos Bancet	Phthorisis	4 D.	F. F.
		Pa & George	Constipation	2 D.	F. F.
		Chas Bonheur	Feb. contd	6 D.	F. F.
		Thos Bonheur	Vulnus	9 D.	F. relieved
		William Latta	Diarrhoea	4 D.	F. cured
		James Beeri	Vulnus	6 D.	F. F.
		James M. Lee	Indigestion	4 D.	F. F.
		John Holmes	Feb. contd	9 D.	F. F.
		Isaac Gray	Diarrhoea	3 D.	F. F.
		Richd Thomas	"	9 D.	F. F.
		Robt Beeri	Vulnus	6 D.	F. F.
		John Robertson	Dyspepsia	4 D.	F. F.
		John Langford	Constipation	6 D.	F. F.
		Wm. M. Brown	Indigestion	2 D.	F. F.
		Archd M. Gray	Diarrhoea	4 D.	F. F.
		John M. Gray	"	9 D.	F. F.
		Michael Reily	Diarrhoea	9 D.	F. F.
		George Merritt	Diarrhoea	4 D.	F. F.
		Michael Hannay	Feb. contd	4 D.	F. F.
		John St. Pierre	Dyspepsia	6 D.	F. F.
		James Mahone	Indigestion	9 D.	F. F.
		Thos Lepidoy	Pleuritis	7 D.	F. F.
		Wm. M. Larty	Diarrhoea	6 D.	F. F.
		Wm. Larral	"	5 D.	F. F.
		Samuel Cole	Feb. contd	12 D.	F. F.
		James Quinn	Diarrhoea	6 D.	F. F.
		John M. Guire	Rheumatism	4 D.	F. F.
		Joseph Laclat	Feb. contd	6 D.	F. relieved
		Francis Bonheur	Diarrhoea	4 D.	F. cured
		Thos Pouder	Constipation	9 D.	F. F.
		Pa. M. Bernach	Diarrhoea	4 D.	F. F.
		James Bonheur	Dyspepsia	7 D.	F. F.
		Wm. Byrne	Vulnus	5 D.	F. F.
		John Mace	Indigestion	2 D.	F. F.
		Michael Grebbato	Feb. contd	6 D.	F. F.
		Thos Priden	Diarrhoea	4 D.	F. F.

Names of Patients	Diseases	Period of Sickness	Recovered	Ch. XXXIX 9
John Brown	Measles	4 Days	9	9
Miss L. Esq	Measles	9	9	9
Francis Bancroft	Scarlet fever	1	9	9
Peter Clarke	Dysentery	9	9	9
Thos Hayes	Aberration	6	9	9
Jack Donnelly	Scarlet fever	9	9	9
James Archbold	Scarlet fever	7	9	9
John O'Brien	Dysentery	6	9	9
Joseph Farganeau	Scarlet fever	12	9	9
Pat Sullivan	Scarlet fever	9	9	9
Joseph Curran	Measles	3	9	9
Henry Moore	"	9	9	9
Michael Smith	Measles	9	9	9
John Golden	Fel: Can D	7	9	9
James Knight	Asthma	8	9	9

The influx of Emigrants during the past month has very materially augmented the sickness. The diseases have been more severe and of a more serious nature than heretofore: ~~owing in part to the sickness~~ ~~concomitant on emigrants on the first arrival~~ The numerous cases of fevers as well as the bowel complaint have however been chiefly confined to the laborers recently arrived - but both have been much aggravated from the miserable accommodation many of these people had and their inacquaintance with the modes of the country preventing their securing themselves in ^{proper} wooden huts (shanties) Every succeeding month shows the indisputable necessity for a place of reception for the sick - for although the complaints have been more of an epidemic nature than ^{contagious} ~~contagious~~ ~~group~~ ^{group} when the sick are crowded into a miserable hut every ^{other} ~~other~~ ^{the healthy} ~~one~~ well - contagious may be produced. The ~~weather~~ ^{rain} has been more frequent than during this month in former years. In addition to the deaths detailed one adult female and 4 children have died. Deaths

dirty

Appendix VI

Cure for the Cholera Morbus; Dr. A.J.
Christie, n.d. PAC, MG 24 19, vol.6.

Cure for the Cholera Morbus

Take 3 Table Spoonful of Soft Maple
Charcoal

2 Dr. ^{ms} Hoys. Lard

2 Dr. Maple Sugar

mix the whole together then give to the person
attacked in portions of two Spoonfuls at
a time If the person attacked be
Cramp'd or has Spasms immediately
rub them with warm Lye not so strong
as to burn or injure the skin after which
the person attacked may eat soup or any
thing he likes If great thirst water into
which live Coals have been thrown
Should vomiting take place a very
small cup of melted Hoys Lard
and if the first dose should be vomited
up a second or third portion can
be administered